OSHA Permissible Exposure Limits (PELs) are too Permissive.

by

Dr. Ronald N. Kostoff

Research Affiliate, School of Public Policy, Georgia Institute of Technology

Gainesville, VA, 20155

Email: rkostoff@gmail.com

KEYWORDS

Permissible Exposure Limits; Exposure Limits; No-adverse-effects-exposure-limits; Minimal Risk Levels; NOAEL; OSHA; NIOSH; ACGIH; ATSDR

CITATION TO MONOGRAPH

Kostoff RN. OSHA Permissible Exposure Limits (PELs) are too Permissive. Georgia Institute of Technology. 2018. PDF. http://hdl.handle.net/1853/60067

COPYRIGHT AND CREATIVE COMMONS LICENSE

COPYRIGHT

CREATIVE COMMONS LICENSE

DISCLAIMERS

The views in this monograph are solely those of the author, and do not represent the views of the Georgia Institute of Technology.

TABLE OF CONTENTS

ABSTRACT

The present monograph examines the differences (for selected toxic substances) between 1) the Federal legally enforceable occupational Permissible Exposure Limits (PELs) set by OSHA and 2) low-level exposures reported in the biomedical literature associated with serious adverse effects. In these selected cases, the PELs are ***orders of magnitude higher*** than what the premier biomedical literature would suggest is protective.

Our previous monograph [1] concluded that testing of single stressors (the main determinant of myriad types of Exposure Limits), rather than combinations of stressors, greatly under-estimates the toxicity of the stressors in real-world environments. When these 1) stressor combination conclusions are added to the 2) results from the present monograph, one can 3) seriously question whether present-day Exposure Limit regulations offer credible levels of occupational protection from ANY potentially toxic stressors.

INTRODUCTION

Background

A recent monograph [1] concluded there is little reason to believe that Exposure Limits on potentially toxic stimuli that have been set by ANY of the regulatory agencies are fully protective against serious adverse health effects. Existing Exposure Limits are based mainly on the results of *single stressor experiments*, whereas real-world exposures involve *combinations of stressors*. These combinations 1) typically lower the threshold constituent exposure levels associated with damage compared to 2) tests of combination constituents run in isolation. The enormous number of combinations possible for any stressor precludes testing more than a handful, and this under-representation of combination effects results in Exposure Limits that could greatly under-reflect the risks from any stressor.

Relation of Biomedical Literature Findings to Setting of Exposure Limits

In addition to uncertainties about Exposure Limits' adequacy based on minimal testing of stressor combinations, there are uncertainties stemming from how well

- existing data suffice for setting exposure limits
- existing data in the biomedical literature relevant to setting of Exposure Limits are fully taken into account, and
- existing data in the biomedical literature can be trusted for accuracy.

Consider the case of non-ionizing radiation, especially radiofrequency radiation (RFR). The Bioinitiative Report [2] and the recent Pall study [3] present copious examples of myriad types of adverse health impacts from athermal (non-heating) non-ionizing radiation, ranging from moderate to life-threatening. Yet, these athermal impacts are ignored completely by the FCC guidelines. For RFR, the FCC Exposure Limits (based on heating of tissue) are approximately ***six orders of magnitude*** above RFR exposures shown to cause adverse health effects from single and multi-stressor studies. For all practical purposes, the FCC guidelines are non-protective for athermal exposures!

Is the FCC's setting of RFR Exposure Limits ***many orders of magnitude*** above levels required for protection a unique case, or does it happen far more frequently than the public realizes? Answering that question, at least in part, will be the major focus of the present monograph.

Appendix 1 (taken from [1]) contains another example of experimental data not being taken into account for setting Exposure Limits, that of water fluoridation. According to the statements of a senior EPA toxicologist (who was fired for his remarks, then later re-instated), data from a single stressor experiment (which showed many instances of cancer associated with water fluoridation) were downgraded substantially from a cancer determination by the government research program manager.

References [4,5], from which some of the data for the Appendices were taken, provide other examples of data manipulation that could impact setting of Exposure Limits. There is little reason to believe that the above examples of discrepancies between 1) results from single and multi-stressor experiments already conducted and 2) Exposure Limits set eventually by regulatory agencies are rare, especially for substances that are commercially, militarily, or politically sensitive.

Types of Exposure Limits

There are myriad types of toxic substance Exposure Limits that have been published. Each country has its own lists of Exposure Limits, with at least one of the lists in each country being enforceable.

In the USA, the only legally enforceable ***occupational*** Exposure Limits at the Federal level are set by OSHA, and are called Permissible Exposure Limits (PELs) [6].

The National Institute for Occupational Safety and Health (NIOSH) has developed a set of Recommended Exposure Limits (RELs), and those RELs overlapping with PELs are listed in [6].

The American Conference of Governmental Industrial Hygienists (ACGIH) has developed sets of Exposure Limits called Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs), and those TLVs overlapping with PELs are listed in [6]. Most OSHA PELs were grandfathered in as initial OSHA PELs and came from the 1968 list of TLVs.

The Environmental Protection Agency (EPA) has developed sets of Exposure Limits called Inhalation Reference Concentrations (RfCs) and Oral Reference Doses (RfDs), and the Agency for Toxic Substances and Disease Registry (ATSDR) has developed Exposure Limits called Minimal Risk Levels (MRLs).

In addition, some of the States in the USA (e.g., CA) have set their own (usually more stringent than Federal) Exposure Limits.

The PELs and RELs are targeted for working adults, and exposures tend to focus on eight-hour days. The RfCs, RfDs, and MRLs are targeted for the broader population, can include children as well as adults, and their most stringent cases are for 24 hour day exposures for seventy years. The differences among these myriad Exposure Limits are described in some detail in Appendix 4 (Definitions), and the above paragraphs are hyperlinked to the relevant sections of Appendix 4.

Structure of Monograph

The main focus of the remainder of this monograph is to examine selected cases of PELs, and relate them to exposures shown in the biomedical literature to result in serious adverse effects.

The next section (**ANALYSIS**) summarizes the methodology and selection strategy for the substances analyzed. The following section (**RESULTS AND DISCUSSION**) examines the results, and the subsequent section (**CONCLUSIONS**) draws conclusions from the study.

The **REFERENCES** follow, and are themselves followed by the **APPENDICES.** The monograph ends with an extensive **BIBLIOGRAPHY** of Medline records that show health effects from exposures to the OSHA chemicals analyzed.

ANALYSIS

Overview

The goal of this study is to determine the gap between 1) toxic substance ***occupational*** Exposure Limits set by regulatory agencies and 2) ***occupational*** Exposure Limits that would fully reflect research reported in the premier biomedical literature.

There are thousands of toxic substances (including radiation types) that have been reported in the biomedical literature. Reference [5] lists ~8,000 substances that are contributing factors to disease, with perhaps 800 of those being pervasive (contributing to at least some threshold number of diseases). It was acknowledged in [6] that ***many*** more contributing factors could have been identified.

Each of these potentially toxic substances is associated with many published papers, in some cases perhaps thousands of papers. Clearly, only a minute fraction of these total toxic substances can be examined to identify the gaps between 1) the regulatory Exposure Limits on these toxic substances and 2) what the biomedical literature suggests should be protective Exposure Limits.

Substance Selection Strategy

Therefore, a strategy for selecting substances for analysis in this study is required. This substance selection strategy starts by randomly selecting a few toxic substances on the OSHA list of PELs. Then, a survey is performed of the research reported in the biomedical literature related to exposures and adverse effects for each of the selected substances. A query of the form

(substance name) AND (*toxic* OR expos*)

was used to retrieve documents from Medline. Obviously, a more complex query could have retrieved more records. The retrieval was supplemented by references in, and citations to, the retrieved documents, where warranted.

To limit the number of substances evaluated, a dynamic sampling strategy was employed. Substances were selected randomly (as stated above), and results were generated for each substance. When a pattern of results for the substances analyzed began to emerge, the selection process was terminated.

Those substances for which

- the biomedical literature identified Exposure Limits at least an order of magnitude less than ANY of those listed for the substance in [6], and
- the papers presenting these low Exposure Limits were judged to be credible

are shown in Table 1.

Table 1 - Comparison of Regulatory and Biomedical Literature Exposure Limits

1	2	3	4	5	6	7	8	9
	REGULATORY		**RECOMMENDED**			**BIOMEDICAL LITERATURE**		
	OSHA/PEL		CAL/	NIOSH	ACGIH			
SUBSTANCE	ppm	mg/m3	OSHA					
1. Acetaldehyde	200	360	C-25		C-25	10.5	0.4	0.1
(UNITS/REFS)			ppm		ppm	ppb [7]	ppm [8]	mg/m3 [9]
2. Trichloroethylene	100	537	25		10	8	8	0.02
(UNITS/REFS)			ppm		ppm	ppb [10]	ppb [11]	mg/m3 [12]
3. Naphthalene	10	50	0.1	10	10	0.01	0.01	0.01
(UNITS/REFS)			ppm	ppm	ppm	mg/m3 [13]	mg/m3 [14]	ppm [15]
4. Dimethylbenzene (x	100	435	100	100	100	0.05	14	0.1
(UNITS/REFS)			ppm	ppm	ppm	ppm [17]	ppm [18]	mg/m3 [19]
5. Carbon Disulfide	20		1	1	1	0.01	0.2	0.3
(UNITS/REFS)			ppm	ppm	ppm	ppm [20]	ppm [21]	ppm [22]
6. Ethyl Acetate	25	100	5		5	0.6	0.7	
(UNITS/REFS)			ppm		ppm	mg/m3 [23]	mg/m3 [24]	
7. Ethyl Benzene	100	435	5	100	20	0.06	1	
(UNITS/REFS)			ppm	ppm	ppm	ppm [25]	mg/m3 [26]	
8. Carbon Tetrachlori	10	63	2	ST-2	5	0.03	0.02	
(UNITS/REFS)			ppm	ppm	ppm	ppm [27]	ppm [28]	
9. Hydrogen Sulfide	C-20		10	C-10	1	0.02	0.002	
(UNITS/REFS)	ppm		ppm	ppm	ppm	ppm [29]	mg/m3 [30]	
10. Hexone (Methyl is	100	410	50	50	20	3	1	
(UNITS/REFS)			ppm	ppm	ppm	mg/m3 [31]	mg/m3 [32]	

Table 1 has nine columns. Column 1 shows the toxic substance being analyzed. Columns 2 and 3 contain the OSHA PELs, the legally enforceable Federal ***occupational*** Exposure Limits. Column 2 presents the PEL in parts per million (ppm), and Column 3 presents the PEL in mg/m^3. The PELs are typically 8-hour time weighted averages (TWAs).

Columns 4-6 contain recommended Exposure Limits by the three organizations shown alongside the OSHA list of PELs [6]. Column 4 contains the California Division of Occupational Safety and Health (CAL/OSHA) Permissible Exposure Limits (PELs), which are enforced in workplaces under its jurisdiction. Column 5 contains the National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limits (RELs), which are for up to 10-hour time-weighted averages (TWAs) during a 40-hour work week unless otherwise indicated. Column 6 contains the ACGIH Threshold Limit Values (TLVs).

In Columns 4-6, three types of exposures are possible, although values for each type are not always provided. They are TWA (essentially the average Exposure Limit for a work day), ST (short-term exposure limits, essentially the average Exposure Limit over a fifteen-minute period), and C (essentially the ceiling, or maximum Exposure Limit over any period of time). The default entry is the TWA.

Columns 7-9 contain Exposure Limits suggested in papers from the premier biomedical literature. These limits were not always expressed in the units of the OSHA PELs, so they were converted to the OSHA PEL units where possible.

RESULTS AND DISCUSSION

Each of the substances listed in Table 1 will be discussed briefly, and the gap between the Federal legally enforceable occupational PELs and the Exposure Limits suggested by the biomedical literature will be emphasized.

R-1. Acetaldehyde

Acetaldehyde is a chemical compound found widely in foods and nature, and produced in industry. It is listed by IARC as a Group 1 carcinogen.

The OSHA PEL values shown in Table 1 are 200 ppm (360 mg/m^3), and the other agency/organization Exposure Limits listed in Columns 4-6 of Table 1 are about an ***order of magnitude*** less.

Three references that showed serious adverse effects at low exposures were extracted from the biomedical literature:

- Reference [7] showed that acetaldehyde exposure of 10.5 ppb led to formation of DNA adducts in the lungs and brains of rats, which could be an important factor in the mechanism of mutagenesis and carcinogenesis.
- Reference [8] used a model of acetaldehyde pharmacokinetics in the nose to derive an inhalation reference concentration (RfC) of 0.4 ppm based on animal experiments.
- Reference [9] started with the results of credible rat studies, then applied
    - an interspecies factor of 1,
    - a factor of 10 for inter-individual variability, and
    - a factor of 2 to account for the higher respiratory rate of children compared to adults,

  to generate a health hazard guide value (RW II) of 1 mg acetaldehyde/m^3. The authors of [9] recommended a health precaution guide value (RW I) of 0.1 mg acetaldehyde/m^3.

Thus, the acetaldehyde Exposure Limits suggested by the premier biomedical literature are about ***three-four orders of magnitude*** more stringent than the OSHA PELs, and are ***two-three orders of magnitude*** more stringent than the other acetaldehyde Exposure Limits in Columns 4-6 of Table 1.

R-2. Trichloroethylene

Trichloroethylene is an industrial solvent of the halocarbon class that has been characterized by the EPA as a carcinogen. The OSHA PEL values shown in Table 1 are 100 ppm (537 mg/m^3), and the other Exposure Limits listed in Columns 4-6 of Table 1 are about an ***order of magnitude*** less.

Three references that showed serious adverse effects at low exposures were extracted from the biomedical literature:

- Metabolism investigation of trichloroethylene (TCE) in the early embryo showed strong upregulation of CYP2H1 transcripts in response to 8 ppb TCE exposure in the heart. Immunostaining for CYP2C subfamily expression confirmed protein expression and showed

localization in both myocardium and endothelium. TCE exposure increased protein expression in both tissues [10].

- Chick embryos exposed to 8 ppb TCE that survived to hatch exhibited a high incidence of muscular ventricular septal defects [11].
- "The Ad-hoc Working Group on Indoor Guidelines recommends 0.02mg trichloroethylene/m(3) [~4 ppb] as a risk-related guideline for indoor air" [12].

Thus, the trichloroethylene Exposure Limits suggested by the premier biomedical literature are about ***four orders of magnitude*** more stringent than the OSHA PELs, and are about ***three orders of magnitude*** more stringent than the other trichloroethylene Exposure Limits in Columns 4-6 of Table 1.

R-3. Naphthalene

Napthalene is a polycyclic aromatic hydrocarbon that has been classified by the IARC as a possible carcinogen (Group 2B). The OSHA PEL values shown in Table 1 are 10 ppm (50 mg/m^3); the CAL/OSHA value shown in Table 1 is ***two orders of magnitude*** less.

Three references that showed serious adverse effects at low exposures were extracted from the biomedical literature:

- "the Ad-hoc Working Group derived a chronic NAEC of 2.5 mg naphthalene/m(3). Time scaling was considered by a factor of 5.6 extrapolating from 6 to 24 h and 5 to 7 days, a factor of 2 applied for the use of F344 rats instead of the more sensitive Sprague-Dawley rats. Incorporating
  - an interspecies factor of 1,
  - an intraspecies factor of 10 and
  - a factor of 2 for insufficient data on the toxicity of naphthalene in children

  resulted in a precautionary value of 0.01 mg naphthalene/m(3) and a hazard-based guide value of 0.03 mg naphthalene/m(3)" [13].
- "Severe effects in terms of inflammation were observed in almost all rats exposed to the lowest (but still relatively high) naphthalene dose of 53 mg/m3.....this can be taken as a LOAEL, even though it is related to severe effects. Taking this LOAEL as a starting point and adjusting for continuous exposure (dividing by a factor of 24/6 and 7/5), a value of about 10 mg/m3 is obtained. Further, incorporating
  - a factor of 10 for using a LOAEL rather than a NOAEL,
  - a factor of 10 for inter-species variation and
  - a factor of 10 for inter-individual variation,

  a guideline value of 0.01 mg/m3 is established." [14]
- "Based on the consideration of this literature and based on our direct experience investigation health complaints due to workplace exposures to naphthalene OHCOW recommends that the OEL for naphthalene be lowered to a level below 0.5 ppm and preferably 0.01 ppm." [15].

Thus, the napthalene Exposure Limits suggested by the premier biomedical literature are about ***two-three orders of magnitude*** more stringent than the OSHA PELs, and are about ***one order of magnitude*** more stringent than the CAL/OSHA Exposure Limit in Column 4 of Table 1.

R-4. Dimethylbenzene (xylene)

Dimethylbenzene is a volatile liquid obtained from coal tar, and xylene is one or more of the three isomers of dimethylbenzene. The OSHA PEL values shown in Table 1 are 100 ppm (435 mg/m^3), identical to those of the three other organizations in Columns 4-6 of Table 1.

Three references that showed serious adverse effects at low exposures were extracted from the biomedical literature.

- The Agency for Toxic Substances and Disease Registry (ATSDR) provides MRLs (Minimum Risk Levels) for hazardous substances. An MRL is defined as "an estimate of the daily human exposure to a hazardous substance that is likely to be without appreciable risk of adverse non-cancer health effects over a specified duration of exposure." [16]. Reference [17] lists three inhalation MRLs for xylene based on three separate studies, ranging from 0.05-2 ppm.
- "Surveys were conducted in factories in China where workers were engaged in the production of rubber boots or plastic-coated wire or in printing work, and were exposed to xylene vapors....the sum of the three isomer concentrations was 14 ppm as a geometric mean and 21 ppm as an arithmetic mean....There was an increased prevalence of subjective symptoms in the exposed workers which were apparently related to the effects on the central nervous system and to the local effects on the eyes, the nose, and the throat" [18].
- "Conversion of experimental to continuous exposure leads to a LOAEC of 39 mg xylene/m(3) for the endpoint neurotoxicity. A health hazard guide value (RW II) of 0.8 mg xylene/m(3) is derived by applying
    - an interspecies factor of 2.5,
    - a factor of 10 for interindividual variability, and
    - a factor of 2 to account for the higher respiratory rate of children compared to adults.

  A health precaution guide value of 0.1 mg xylene/m(3) is recommended." [19].

Thus, the dimethylbenzene Exposure Limits suggested by the premier biomedical literature are about ***three orders of magnitude*** more stringent than both the OSHA PELs and the recommendations of the other organizations in Columns 4-6 of Table 1.

R-5. Carbon Disulfide

Carbon disulfide is a highly toxic inorganic solvent. The OSHA PEL value shown in Table 1 is 20 ppm; the other organization values shown in Columns 4-6 of Table 1 are 1 ppm, an ***order of magnitude*** less than the OSHA PEL.

Three references that showed serious adverse effects at low exposures were extracted from the biomedical literature.

- "The most sensitive endpoint for CS2 was DNT [Developmental Neurotoxicity].....(lowest NOEL = 0.01 ppm)" [20].
- Based on a thorough literature review, the EPA assigned an inhalation Reference Concentration (RfC) of 0.7 mg/m^3 (~0.2 ppm) to carbon disulfide. [21].

- Based on a thorough literature review, the ASTDR assigned a Minimal Risk Level (MRL) of 0.3 ppm to carbon disulfide [22].

Thus, the carbon disulfide Exposure Limits suggested by the premier biomedical literature are about ***two-three orders of magnitude*** more stringent than the OSHA PELs, and are about ***one order of magnitude*** more stringent than the other organization Exposure Limits in Columns 4-6 of Table 1.

Interim Summary

A clear pattern of results emerged from the five substance evaluations above. The Exposure Limits suggested by the biomedical literature were approximately ***two to four orders of magnitude*** less than the OSHA PELs, and ***one to two orders of magnitude*** less than the limits recommended by the entities in Columns 4-6 of Table 1.

In addition, the lowest Exposure Limits suggested typically were from EPA (Reference concentration for inhalation exposure-RfC, or reference dose for oral exposure-RfD), ATSDR (Minimal Risk Levels-MRL), and the German Working Group on Indoor Guidelines of the Federal Environment Agency (Health Hazard Guide-RW II, Health Precaution Guide-RW I). These three organizations start with an NOAEL or LOAEL, and then divide this number by an Uncertainty Factor to arrive at the final Exposure Limit recommendation.

Thus, the widest gap between the OSHA occupational PELs and the Exposure Limits suggested by the biomedical literature could be identified (for all practical purposes) by considering the results from the latter three organizations alone.

Substances 6-10 on Table 1 are enumerated using recommended Exposure Limits from one or more of these three organizations (not all organizations examined each PEL substance). The pattern that emerged from the analysis of substances 1-5 was applicable to substances 6-10 as well. The results for substances 6-10 will now be summarized.

R-6. Ethyl Acetate

Ethyl Acetate is an organic solvent, and the ester of ethanol and acetic acid. The OSHA PEL values shown in Table 1 are 25 ppm (100 mg/m^3), five times the CAL/OSHA and ACGIH amounts.

Two references that showed serious adverse effects at low exposures were extracted from the biomedical literature.

- "This study leads to a lowest observed adverse effect concentration (LOAEC) of 1280 mg ethyl acetate/m(3) indoor air, corresponding to a LAEC for continuous exposure of 230 mg ethyl acetate/m(3), for the endpoint nasal epithelium degeneration. By applying
    - an interspecies factor of 1,
    - a factor of 10 for interindividual variability and
    - a factor of 2 to account for the higher respiratory rate of children compared to adults,

  a health hazard guide value (RW II) of 6 mg ethyl acetate/m(3) is obtained. A health precaution guide value (RW I) of 0.6 mg ethyl acetate/m(3) indoor air is recommended" [23].

- Michigan's Department of Environmental Quality (MDEQ) converted from EPA's Provisional Peer Reviewed Toxicity Values (PPRTV) to generate a chronic provisional Reference Concentration (p-RfC) of 0.7 mg/m^3. The Uncertainty Factor used to derive this p-RfC is 3,000, based on 10 each for 1) interspecies variability, 2) use of a sub chronic study and 3) database deficiencies, and 3 for interspecies extrapolation. [24].

Thus, the ethyl acetate Exposure Limits suggested by the premier biomedical literature are about ***two orders of magnitude*** more stringent than the OSHA PELs, and are about ***one order of magnitude*** more stringent than the CAL/OSHA Exposure Limit in Column 4 of Table 1.

R-7. Ethyl Benzene

Ethyl Benzene is a flammable aromatic hydrocarbon whose main use is in the production of styrene. The OSHA PEL values shown in Table 1 are 100 ppm (435 mg/m^3), an ***order of magnitude*** greater than the CAL/OSHA amounts.

Two references that showed serious adverse effects at low exposures were extracted from the biomedical literature.

- Based on a thorough literature review, the ASTDR assigned a Minimal Risk Level (MRL) of 0.06 ppm (chronic exposure) to Ethyl Benzene [25].
- Based on a thorough literature review, the EPA assigned an inhalation Reference Concentration (RfC) of 1 mg/m^3 (~0.2 ppm) to Ethyl Benzene. The uncertainty factor used (300) reflects a factor of
    - 10 to protect unusually sensitive individuals,
    - 3 to adjust for interspecies conversion and
    - 10 to adjust for the absence of multigenerational reproductive and chronic studies. [26]

Thus, the ethyl benzene Exposure Limits suggested by the premier biomedical literature are about ***three orders of magnitude*** more stringent than the OSHA PELs, and are about ***two orders of magnitude*** more stringent than those listed in Columns 4-6 of Table 1.

R-8. Carbon Tetrachloride

Carbon Tetrachloride is a manufactured chemical that has been used as a solvent, refrigerant, and cleaning fluid. The OSHA PEL values shown in Table 1 are 10 ppm (63 mg/m^3), two to five times the amounts shown in Columns 4-6 of Table 1.

Two references that showed serious adverse effects at low exposures were extracted from the biomedical literature.

- Based on a thorough literature review, the ASTDR assigned a Minimal Risk Level (MRL) of 0.03 ppm (chronic exposure) to carbon tetrachloride [27].
- Based on a thorough literature review, the EPA assigned an inhalation Reference Concentration (RfC) of 0.1 mg/m^3 (~0.02 ppm) to carbon tetrachloride [28].

Thus, the carbon tetrachloride Exposure Limits suggested by the premier biomedical literature are about ***two-three orders of magnitude*** more stringent than the OSHA PELs, and are about ***one order of magnitude*** more stringent than the CAL/OSHA Exposure Limit in Column 4 of Table 1.

R-9. Hydrogen Sulfide

Hydrogen Sulfide is a foul-smelling gas 1) produced by the anaerobic digestion of organic matter and 2) used frequently in bioconversion to elemental sulfur. The OSHA PEL values shown in Table 1 are (C) 20 ppm (28 mg/m^3), an ***order of magnitude*** higher than the ACGIH amount.

Two references that showed serious adverse effects (e.g., respiratory failure, nasal inflammation) were extracted from the biomedical literature.

- Based on a thorough literature review, the ASTDR assigned a Minimal Risk Level (MRL) of 0.02 ppm (intermediate exposure) to hydrogen sulfide [29].
- Based on a thorough literature review, the EPA assigned an inhalation Reference Concentration (RfC) of 0.002 mg/m^3 (~0.0015 ppm) to hydrogen sulfide [30]

Thus, the hydrogen sulfide Exposure Limits suggested by the premier biomedical literature are about ***three-four orders of magnitude*** more stringent than the OSHA PELs, and are about ***two orders of magnitude*** more stringent than the ACGIH Exposure Limit in Column 6 of Table 1.

R-10. Methyl Isobutyl Ketone

Methyl isobutyl ketone is an organic compound, mainly used as a solvent. The OSHA PEL values shown in Table 1 are 25 ppm (~103 mg/m^3), two to five times the amounts shown in Columns 4-6 of Table 1.

Two references that showed serious adverse effects at low exposures were extracted from the biomedical literature.

- Based on a thorough literature review, the EPA assigned an inhalation Reference Concentration (RfC) of 3 mg/m^3 (~0.75 ppm) to methyl isobutyl ketone [31]
- "Using a benchmark approach the Working Group assessed a BMDL10 of 57 mg MIBK/m for continuous exposure for the endpoint nephrotoxicity. By applying
    - an interspecies factor of 2.5,
    - a factor of 10 for interindividual variability, and
    - a factor of 2 to account for the higher respiratory rate of children compared to adults,
- a health hazard guide value (RW II) of 1 mg MIBK/m3 indoor air is obtained. A precautionary guide value of 0.1 mg MIBK/m3 indoor air is recommended." [32]

Thus, the methyl isobutyl ketone Exposure Limits suggested by the premier biomedical literature are about ***two-three orders of magnitude*** more stringent than the OSHA PELs, and are about ***one order of magnitude*** more stringent than the recommended limits in Columns 4-6 of Table 1.

CONCLUSIONS

OSHA PELs vs other Organization Exposure Limit Recommendations

Ten chemicals were selected randomly from the list of OSHA PELs, and each chemical's PEL was compared with

- recommendations from three organizations (CAL/OSHA, NIOSH, ACGIH) for supposedly protective occupational Exposure Limits
- experiments from the biomedical literature showing adverse effects at low exposures and/or
- comprehensive evaluations of the exposure-adverse events literature by expert panels/organizational teams that resulted in minimal risk recommendations for Exposure Limits.

In general, the OSHA PELs were ***one-two orders of magnitude*** greater than the (CAL/OSHA, NIOSH, ACGIH) recommendations, and the OSHA PELs were ***three-four orders of magnitude*** greater than the recommendations of the expert panels/organizational teams. Essentially, a vast amount of data is being ignored by the OSHA when they formulate the legally enforceable PELS!

These conclusions apply only to chemicals to which PELs have been assigned. There are fewer than 500 such chemicals, while there are tens of thousands of chemicals to which workers are/could be exposed. Essentially, ***for those thousands of chemicals not assigned a PEL, the effective occupational Exposure Limits that are Federally enforceable are infinite!***

Uncertainty Factors in estimating Exposure Limits

An important analytical reason for the large gaps between the PELs and the recommendations of the expert panels/organizational teams is application of substantial Uncertainty Factors to the experimental results. The Uncertainty Factor serves to (typically) translate laboratory experimental results on animals to relevant results for human beings. In all the records surveyed for the present study, the Uncertainty Factors ranged from about a few tens to a few thousands, depending on the level of data uncertainty and type of extrapolation desired.

What is the Uncertainty Factor, and why is it used? "The uncertainty factor concept is integrated into health risk assessments for all aspects of public health practice.....The use of uncertainty factors is predicated on the assumption that a sufficient reduction in exposure from those at the boundary for the onset of adverse effects will yield a safe exposure level for at least the great majority of the exposed population, including vulnerable subgroups.....Five key uncertainties that are often examined include interspecies variability in response when extrapolating from animal studies to humans, response variability in humans, uncertainty in estimating a no-effect level from a dose where effects were observed, extrapolation from shorter duration studies to a full life-time exposure, and other insufficiencies in the overall health effects database indicating that the most sensitive adverse effect may not have been evaluated. In addition, a modifying factor is used by some organizations to account for other remaining uncertainties-typically related to exposure scenarios or accounting for the interplay among the five areas noted above." [33]

Uncertainty Factor components ignored

While the magnitudes of the different Uncertainty Factor components can be debated, as well as the method of how they should be combined, there are two key components that are missing from most of the Uncertainty Factors examined for the present study. Both of these missing Uncertainty Factor components will 1) increase the magnitude of the Uncertainty Factor substantially and 2) further widen the gap between the PELs and the exposures at which adverse effects can be discerned.

The first of these two components was addressed in a recent monograph [1]. Existing Exposure Limits are based mainly on the results of *single stressor experiments*, whereas real-world exposures involve *combinations of stressors*. These combinations 1) typically lower the threshold constituent exposure levels associated with damage compared to 2) tests of combination constituents run in isolation. Thus, an Uncertainty Factor component would have to be included that accounts for the ***reduction in 'safe' Exposure Limits when extrapolating from single stressor studies to combined stressor studies***.

The second of these two components involves uncertainty in the credibility of the data. For topics that are commercially, militarily, or politically sensitive, there are myriad incentives for sponsors and performers of research to enable predetermined agendas [4]. There are strong incentives to downplay and minimize the adverse effects of toxic materials. Appendices 1, 2, and 3 are examples of sponsor manipulation of research data to benefit both government and industry at the expense of the public. In all three of these examples, manipulation of the research results was not the result of a rogue Federal bureaucrat, but rather involved the complicity of high levels of management of the Federal Agency(s) involved.

If an Agency is willing to manipulate results for one toxic material in order to eventually benefit the corporate political donors, what would prevent the Agency from manipulating results for ***ANY*** toxic material under its purview?

Identifying data manipulation by either the sponsor and/or the performer is extremely difficult for anyone not involved directly in the research. Even the Gold Standard of research validation, replication by another organization, can be manipulated. If a sponsor funds multiple performers for a given topic, and the sponsor has a predetermined agenda, then there could be pressure on the performers to arrive at the desired results if they want long-term funding to continue.

In the three examples in the Appendices, the information about the data manipulation came from whistleblowers who were willing to sacrifice their careers to make the truth known. Except for these whistleblowers, the information about the data manipulation would never have seen the light of day. There is no reason to believe these three examples are isolated. Given the incentives to downplay adverse effects of toxic materials, and the strong disincentives for bringing the truth to the public, data manipulation may not be uncommon for substances that are commercially, militarily, or politically sensitive.

How do we incorporate these two additional sources of uncertainty (combination effects, data manipulation) into the methodology for extrapolating from the experimental data to real-world impacts on human beings? I don't know. I don't know how combination effects can be estimated without having run large numbers of combinations. I don't know how data manipulation can be estimated in the absence of insiders coming forth and risking their careers and finances to tell the truth.

The Bottom Line

The Federal legally enforceable OSHA PELs appear to exceed relatively safe exposure levels by ~3-4 orders of magnitude, depending on toxic substance. The CAL/OSHA, NIOSH, and ACGIH recommended Exposure Limits appear to exceed relatively safe exposure levels by ~1-3 orders of magnitude, depending on substance. And, these supposedly relatively 'safe' exposure levels are estimated 1) ignoring combination effects on initial appearance of adverse effects and 2) assuming that the data has not been manipulated by the sponsor or performer.

In the Introduction, the FCC's RFR Exposure Limits (based on tissue heating only) were estimated to be approximately ***six orders of magnitude*** above RFR exposures shown to cause adverse health effects from single and multi-stressor studies. It was concluded that for all practical purposes, the FCC guidelines are non-protective for athermal exposures!

We then asked whether the setting of legally enforceable RFR Exposure Limits ***six orders of magnitude*** above exposures shown to have adverse health effects was a unique case, or does it happen far more frequently than the public realizes? Based on the results of the present study, the RFR example is by no means unique. The difference between the RFR Exposure Limits set by the FCC and the RFR exposure levels where adverse effects start to appear may in fact mirror the discrepancies between the OSHA PELs and the toxic substance exposure levels where adverse effects begin to surface.

We examined ten toxic substances (randomly selected) for the present study. Should we have examined more before drawing the conclusions we did? Given the consistent discrepancies we found between PELs and (relatively) risk-free exposures, we can state: **ONE IS TOO MANY**!

REFERENCES

1. Kostoff RN. Effects of Toxic Stimuli Combinations on Determination of Exposure Limits. Georgia Institute of Technology. 2018. PDF. http://hdl.handle.net/1853/59719 https://smartech.gatech.edu/handle/1853/59719

2. Bioinitiative 2012. http://www.bioinitiative.org/

3. Pall ML. 5G: Great risk for EU, U.S. and International Health! Compelling Evidence for Eight Distinct Types of Great Harm Caused by Electromagnetic Field (EMF) Exposures and the Mechanism that Causes Them. (2018). https://www.radiationresearch.org/wp-content/uploads/2018/06/EU-EMF2018-6-11US3.pdf

4. Kostoff RN. Under-reporting of adverse events in the biomedical literature. Journal of Data and Information Science. 2016. 1:4. 10-32. DOI: 10.20309/jdis.201623. http://manu47.magtech.com.cn/Jwk3_jdis/EN/article/searchArticleResult.do#1

5. Permissible Exposure Limits - Annotated Tables. Occupational Safety and Health Administration. United States Department of Labor. https://www.osha.gov/dsg/annotated-pels/tablez-1.html

6. Kostoff RN. Pervasive Causes of Disease. Georgia Institute of Technology. 2015. PDF. < http://hdl.handle.net/1853/53714 >. http://hdl.handle.net/1853/53714

7. Sanchez AB, Garcia CCM, Freitas FP, Batista GL, Lopes FS, Carvalho VH, et al. DNA Adduct Formation in the Lungs and Brain of Rats Exposed to Low Concentrations of 13C2 -Acetaldehyde. Chemical research in toxicology. 2018;31(5):332-9.

8. Dorman DC, Struve MF, Wong BA, Gross EA, Parkinson C, Willson GA, et al. Derivation of an inhalation reference concentration based upon olfactory neuronal loss in male rats following subchronic acetaldehyde inhalation. Inhalation toxicology. 2008;20(3):245-56.

9. Indoor air guide values for acetaldehyde. Announcement of the German Ad-hoc Working Group on Indoor Guidelines of the Indoor Air Hygiene Committee and of the States' Supreme Health Authorities. Bundesgesundheitsblatt, Gesundheitsforschung, Gesundheitsschutz. 2013;56(10):1434-47.

10. Makwana O, Ahles L, Lencinas A, Selmin OI, Runyan RB. Low-dose trichloroethylene alters cytochrome P450-2C subfamily expression in the developing chick heart. Cardiovascular toxicology. 2013;13(1):77-84.

11. Rufer ES, Hacker TA, Flentke GR, Drake VJ, Brody MJ, Lough J, et al. Altered cardiac function and ventricular septal defect in avian embryos exposed to low-dose trichloroethylene. Toxicological sciences : an official journal of the Society of Toxicology. 2010;113(2):444-52.

12. Bekanntmachung des U. Health evaluation of trichloroethylene in indoor air : communication from the German ad-hoc working group on indoor guidelines of the Indoor Air Hygiene Committee and of the states' supreme health authorities. Bundesgesundheitsblatt, Gesundheitsforschung, Gesundheitsschutz. 2015;58(7):762-8.

13. Mitteilung A-H-A. Indoor air guide values for naphthalene and naphthalene-like compounds. Bundesgesundheitsblatt-Gesundheitsforschung-Gesundheitsschutz. 2013;56(10):1448-59.

14. WHO guidelines for indoor air quality: selected pollutants. http://www.euro.who.int/__data/assets/pdf_file/0009/128169/e94535.pdf?ua=1

15. Preventing Occupational Disease by Preventing Exposures. Occupational Health Clinics for Ontario Workers. (2016). http://www.ohcow.on.ca/edit/files/news/962016/OEL%20Updates%20-%20June%206%202016.pdf

16. Minimal Risk Levels - For Professionals - ATSDR https://www.atsdr.cdc.gov/mrls/index.asp

17. Regulations and Guidelines Applicable to Xylenes - ATSDR https://www.atsdr.cdc.gov/toxprofiles/tp71-c8.pdf

Expanded Version: https://www.atsdr.cdc.gov/ToxProfiles/tp71.pdf

18. Uchida Y, Nakatsuka H, Ukai H, Watanabe T, Liu YT, Huang MY, et al. Symptoms and signs in workers exposed predominantly to xylenes. International archives of occupational and environmental health. 1993;64(8):597-605.

19. Bekanntmachung des U. Indoor air guide values for dimethylbenzene: Communication from the Committee on Indoor air guide values. Bundesgesundheitsblatt, Gesundheitsforschung, Gesundheitsschutz. 2015;58(11-12):1378-89.

20. Silva M. A review of developmental and reproductive toxicity of CS2 and H2 S generated by the pesticide sodium tetrathiocarbonate. Birth defects research Part B, Developmental and reproductive toxicology. 2013;98(2):119-38.

21. EPA - Inhalation Reference concentration (RfC) for Carbon Disulfide. EPZhttps://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0217_summary.pdf

22. ASTDR Minimal Risk Levels (MRL) - Carbon Disulfide https://www.atsdr.cdc.gov/mrls/mrllist.asp#84tag

23. Indoor air guide values for ethyl acetate. Communication of the German Ad Hoc Working Group on Indoor Air Guidelines of the Indoor Air Hygiene Committee and the Supreme State Health Authorities. Bundesgesundheitsblatt-Gesundheitsforschung-Gesundheitsschutz. 2014;57(12):1442-50.

24. Michigan Department of Environmental Quality Chemical Update Worksheet for Ethyl Acetate. https://www.michigan.gov/documents/deq/deq-rrd-chem-EthylAcetateDatasheet_527945_7.pdf

25. ASTDR Minimal Risk Levels (MRL) - Ethyl Benzene https://www.atsdr.cdc.gov/mrls/mrllist.asp#66tag

26. EPA - Inhalation Reference concentration (RfC) for Ethyl Benzene. https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0051_summary.pdf

27. ASTDR Minimal Risk Levels (MRL) - Carbon Tetrachloride.
https://www.atsdr.cdc.gov/mrls/mrllist.asp#66tag

28. EPA - Inhalation Reference concentration (RfC) for Carbon Tetrachloride
https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0020_summary.pdf

29. ASTDR Minimal Risk Levels (MRL) - Hydrogen Sulfide
https://www.atsdr.cdc.gov/mrls/mrllist.asp#66tag

30. EPA - Inhalation Reference concentration (RfC) for Hydrogen Sulfide
https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0061_summary.pdf

31. EPA - Inhalation Reference concentration (RfC) for Methyl Isobutyl Ketone
https://cfpub.epa.gov/ncea/iris2/chemicalLanding.cfm?substance_nmbr=173

32. Indoor air guide values for methyl isobutyl ketone. Bundesgesundheitsblatt, Gesundheitsforschung, Gesundheitsschutz. 2013;56(1):148-58.

33. Dankovic DA, Naumann BD, Maier A, Dourson ML, Levy LS. The scientific basis of Uncertainty Factors used in setting occupational exposure limits. Journal of occupational and environmental hygiene. 2015;12(Suppl 1); Pages:S55-68; DOI:10.1080/15459624.2015.1060325

34. Interview. (1995). Interview with EPA's Dr. William Marcus on NTP's Fluoride/Cancer Study. http://fluoridealert.org/content/marcus-interview/.

35. Marcus W. (1990) Fluoride Conference to Review the NTP Draft Fluoride Report. Internal Memorandum, EPA. http://www.toxicteeth.org/health/cancer/ntp/marcus-memo.html

36. Hirzy, J.W. The National Treasury Employees Union. Why EPA's headquarters union of scientists opposes fluoridation. Fluoride. 1999; 32; 179–186.

37. Morgan Verkamp (2014). Morgan Verkamp, LLC. Press Release. Statement of William W. Thompson, Ph.D.: Regarding the 2004 article examining the possibility of a relationship between MMR vaccine and autism. Retrieved on September 22, 2016, from http://www.morganverkamp.com/august-27-2014-press-release-statement-of-william-w-thompson-ph-dregarding-the-2004-article-examining-the-possibility-of-a-relationship-between-mmrvaccine-and-autism/.

38. DeStefano F, Bhasin TK, Thompson WW, Yeargin-Allsopp M., Boyle C. Age at first measles-mumps-rubella vaccination in children with autism and school-matched control subjects: A population-based study in metropolitan Atlanta. Pediatrics, 2004;113(2), 259–266.

39. NaturalNews. CDC whistleblower's secret letter to Gerberding. 2014.
http://www.naturalnews.com/046597_CDC_whistleblower_secret_letter_Julie_Gerberding.html

40. Posey. 2015. Congressman Posey Presentation: CDC Whistleblower.
https://www.youtube.com/watch?v=qxr-cv-JuI8.

41. Oreskes N, Conway EM. 2011. Merchants of doubt: How a handful of scientists obscured the truth on issues from tobacco smoke to global warming. New York, NY: Bloomsbury Press.

42. Federal Register. 1993. 40 CFR Part 257 et al. Standards for the use or disposal of sewage sludge: Final rules. Retrieved on September 22, 2016, from http://water.epa.gov/scitech/wastetech/biosolids/upload/fr2-19-93.pdf.

43. Lewis, D.L. 2014. Science for Sale: How the US government uses powerful corporations and leading universities to support government policies, silence top scientists, jeopardize our health, and protect corporate profits. New York, NY: Skyhorse Publishing.

44. OSH Act of 1970.

https://www.osha.gov/laws-regs/oshact/completeoshact

45. Paustenbach DJ. Updating OSHA's permissible exposure limits: Putting politics aside. American Industrial Hygiene Association Journal; 1997; 58(12);845-849.

46. OSHA-RELs.

https://www.osha.gov/dsg/annotated-pels/

47. OSHA-TVLs/BEIs.

https://www.osha.gov/dsg/annotated-pels/

48. EPA-RfCs/RfDs.

https://epa-prgs.ornl.gov/chemicals/help/documents/METHODS_FOR_DERIVATION.PDF

49. Venman BC, Flaga C. Development of an acceptable factor to estimate chronic end points from acute toxicity data. Toxicology and industrial health. 1985; 1:4; 261-9.

50. ATSDR-MRLs.

https://www.atsdr.cdc.gov/mrls/index.asp

51. OSHA-Cal/OSHA PELs.

https://www.osha.gov/dsg/annotated-pels/

APPENDICES

Appendix 1 - EPA/NTP Study on Health Effects of Water Fluoridation

This appendix summarizes a single stressor study used as one component in the determination of water fluoridation safety. It derives from reference [4], where the example of EPA's addressing safety limits of fluoridation (p.19) was presented. The ussue was summarized as follows: "Dr. William Marcus was a toxicologist and Senior Science Advisor at EPA. He reported potential cover-up of cancers (by the National Toxicology Program) resulting from fluoride ingestion [34], and was fired in 1992. He challenged this decision in court, and was re-instated."

The cover-up (above) referred to re-stating the results of a study performed by an NTP contractor. Marcus wrote an internal memo describing an NTP contractor review meeting, where every one of the cancers reported by the contractor had been downgraded by the NTP [35].

At his 1995 interview [34], Dr. Marcus described the NTP actions at the review meeting thusly: "Now I've been in the toxicology business looking at studies of this nature for nearly 25 years and I've never seen that; never ever seen where every single endpoint that was a cancer endpoint had been down-graded.....I found that very suspicious and I went to see an investigator in the Congress at the suggestion of my friend Bob Carton. And this gentleman and his staff investigated very thoroughly and found out that ***the scientists at the NTP down at Research Triangle Park had been coerced to change their findings***."

In Senate testimony that included comments on the NTP final report on the contractor study [36], Dr. William Hirzy stated: "In 1990, the results of the National Toxicology Program cancer bioassay on sodium fluoride were published, ***the initial findings of which would have ended fluoridation***. But a special commission was hastily convened to review the findings, resulting in the salvation of fluoridation through systematic down-grading of the evidence of carcinogenicity. The final, published version of the NTP report says that there is, "equivocal evidence of carcinogenicity in male rats," changed from "clear evidence of carcinogenicity in male rats.""

There is no reason to believe that EPA is the only government organization that would manipulate results to achieve a predetermined agenda, or fluorine is the only toxic stimulus for which this was done. In reference [4], similar distortions of results by other Federal regulatory agencies were listed, and many more examples could have been presented had space been available.

Appendix 2 - CDC Study on Health Effects of MMR Vaccine

Background

This example addresses alleged CDC cover-up of an in-house study that showed potential links between 1) increased risk for autism and 2) MMR vaccine timing. A series of allegations from an employee of the Federal agency responsible for monitoring vaccine safety (CDC) suggested there may be a potential link between the MMR vaccine and autism, and documentation of the link had been suppressed deliberately. On August 27, 2014, the following excerpted statement by Dr. William Thompson (a CDC Senior Researcher) appeared on the website of Morgan Verkamp, LLC, a legal organization representing Dr. Thompson [37].

"I regret that my coauthors and I omitted statistically significant information in our 2004 article published in the journal Pediatrics. The omitted data suggested that African American males who received the MMR vaccine before age 36 months were at increased risk for autism. Decisions were made regarding which findings to report after the data were collected, and I believe that the final study protocol was not followed…My concern has been the decision to omit relevant findings in a particular study for a particular sub group for a particular vaccine. There have always been recognized risks for vaccination and I believe it is the responsibility of the CDC to properly convey the risks associated with receipt of those vaccines."

According to taped phone conversations between Dr. Brian Hooker and Dr. Thompson, not only were the African-American children who received the MMR vaccine at substantially greater risk for autism (as alleged by Dr. Thompson), but according to Dr. Hooker, Dr. Thompson mentioned that children of all races were shown to have an increased risk of 'Isolated Autism' (young children, regardless of race, who had (1) received the MMR vaccine on schedule, as recommended by the CDC, and (2) had no other factors sometimes observed to accompany autism, such as cerebral palsy, mental retardation, and birth defects.)

The MMR vaccine-autism study to which Dr. Thompson referred had been performed shortly after the turn of the new millennium, and the stated results (no link between MMR vaccine and autism) had been published in the journal Pediatrics [38]. As of mid-2018, the article has not been retracted by Pediatrics, despite the serious allegations of intentional omission of critical data by one of its co-authors.

Thus, according to Dr. Thompson's allegations of August 27, 2014, CDC had known for at least a decade that these two groups of children were at increased risk for autism from the MMR vaccine, and did not disclose this information to the public. Internal CDC memos also showed the highest levels of CDC management had been informed of these problems with the MMR vaccine since the early 21st century [39].

Impact

The alleged intentional withholding of the link between the MMR vaccine and autism from the public (for over a decade) resulted in many children (from specific sub-groups) being placed at higher risk for autism. These children could have minimized this risk through either alternative vaccinations, modified vaccination schedules, or no vaccinations, ***had their parents been informed of the potential increased risk***. Thus, there were potentially more children who suffered from autism as a result of the

alleged intentional withholding of this critical information, and there were resulting health and economic consequences that accompanied the additional potential cases of autism.

The following analysis summarizes the economic assessment performed of the costs of this alleged potential withholding of information [6]. The potential economic cost resulting from this alleged intentional withholding of critical information is the product of the number of children afflicted times the cost per victim.

For reasons enumerated in [6], the economic assessment started with an estimate of 100,000 African-American children who developed autism (between 2001 and 2015) due to the CDC's alleged intentional withholding of its findings of increased risk starting about 2001. The next question is: what are the economic costs associated with these 100,000 additional cases of autism? There are at least three main components of potential cost:

1) the cost of care for an autistic person;

2) the cost of medication and other medical treatments and services for an autistic person;

3) the wages lost over a lifetime by an autistic person.

For reasons shown in [6], a conservative estimate was used to arrive at a mean lifetime cost of $4M per capita for all USA autism afflicted. As will be shown in the next paragraph, both the $4M conservative lifetime cost per capita and the $2M extremely conservative lifetime cost per capita (shown in [6]) result in *astronomical* total costs.

For 100,000 African-American children in the USA over the period 2001-2015, using the approximate mean lifetime cost per capita of $4M from the above computations yields a total *lifetime* cost for the sub-group of roughly $400B! Using the approximate mean lifetime cost per capita of $2M would have yielded a total *lifetime* cost for the sub-group of roughly $200B. Either cost figure is astronomical, especially when the ***narrowness*** of the afflicted group is considered. Even if an undiscounted cost stream were used for the computations, total lifetime costs approaching $500B would have been obtained. The overall conclusions are essentially the same irrespective of which of these cost streams we assume; for purposes of further computation, the conservative assumption of $4M lifetime cost per capita will be used.

That $400B total lifetime cost estimate ***neglects*** the other sub-group identified at risk in the CDC study, children of all races who developed **Isolated Autism** from the MMR vaccine (according to Dr. Thompson's revelations to Dr. Hooker). This latter sub-group would be about seven or eight times as large as the African-American sub-group, since it includes ***all races***, and the economic costs could be numerically larger than the African-American sub-group, depending on the level of increased risk for **Isolated Autism**.

As a side note, the NVICP (National Vaccine Injury Compensation Program), which is a special Court set up to compensate the vaccine injured, has paid out approximately $3.2B since 1988 for injuries *from all vaccines*. Approximately 9% of all compensated claims were for the MMR vaccine, *for all groups*, so the ***total*** MMR compensation would be somewhat less (perhaps substantially less) than $1B since 1988. Compare that with the ~$400B cost estimate above for 1) African-American children for the 2) 2001-2015 time period for the 3) USA for the 4) MMR vaccine only.

That's a ***small fraction of one percent*** of the total costs being compensated for this one group over one period. Other sub-groups potentially injured from the MMR vaccine, such as children with Isolated Autism, are not included in the $400B estimate!

So, if the lifetime autism cost for this one afflicted sub-group is ~$400B over its lifetime, and the Trust Fund compensation has been on the order of one-tenth of one percent of the lifetime autism cost (or less), then on the order of 99.9% (or more) of the total lifetime autism costs are being borne by sources other than the Trust Fund. Who are these sources? The main sources would appear to be the afflicted (and their families) and the taxpayers, through their support of myriad social services.

Status

According to Dr. Thompson's statement above, thousands of documents have been turned over to Congress. On July 29, 2015, the Congressman to whom Dr. Thompson provided the documents, Rep. William Posey (R-FL), made a five minute speech on the Floor of the House [40], confirming and amplifying Dr. Thompson's revelations.

The CDC study results, according to Dr. Thompson's allegations, appear to contradict those of the large-scale open literature studies. It could be that the sample in the CDC study (metro Atlanta) was an anomaly relative to the samples in the large-scale studies. It could be there were errors in the data analysis in the CDC study. Or, as in the cases reported in Merchants of Doubt [41], it could be the large-scale studies were performed with the specific objective of showing vaccines were safe, particularly the MMR vaccine.

Given that a senior credible researcher, Dr. William Thompson (CDC), was willing to risk his reputation, career, and finances by coming forward with his allegations, his statements cannot be dismissed easily. If his allegations can be confirmed, with the implication that the CDC organization had the objective of proving the MMR vaccine safe, ***then the credibility of ANY CDC in-house or sponsored vaccine study has to be questioned***.

As of mid-2018, there has been no change in the status of the MMR vaccine issue. There have been no Congressional Hearings on this issue, and Dr. Thompson has not testified in any legal proceeding. The mainstream media has ignored or downplayed Dr. Thompson's allegations. The paper in Pediatrics has not been retracted.

Appendix 3 - EPA Distortion of Biosludge Science

This section is excerpted from references [4] and [5]. In 1993, EPA generated a sludge rule that allows very toxic biosolids, or treated sewage sludge, to be used for farms, forests, playgrounds, and parks, etc. [42]. Dr. David Lewis (ex-EPA senior researcher) exposed how EPA, in coordination with other Federal Agencies, research institutions, and advisory groups, suppressed public knowledge of potential biosludge adverse health effects for years [43].

He did this exposure through

- published research articles,
- testimony and depositions before Congress,
- testimony and depositions before Department of Labor hearings, and
- lawsuits that revealed (under oath) the detailed participation of EPA officials and others in the science distortions.

Dr. Lewis was forced to retire and, in 2014, published a book (recounting his experiences) entitled *Science for Sale* [43]. He

- implied that EPA-sponsored research had to support EPA policy,
- implied that there was selective funding of scientists who supported EPA's sludge rule,
- showed myriad ways the science was distorted to present biosludge as safe, and
- showed collusion among EPA and other agencies.

The book is unique in its portrayal of collusion among the diverse groups mentioned in its sub-title: "*How the US Government Uses Powerful Corporations and Leading Universities to Support Government Policies, Silence Top Scientists, Jeopardize Our Health, and Protect Corporate Profits*".

The data presented in the present study showing

- OSHA's ultra-permissive Exposure Limits for toxic occupational substances,
- the EPA's biosludge and Water Fluoridation examples shown in the appendices,
- the CDC's alleged manipulation of MMR vaccine-autism data shown in Appendix 2,
- the FCC's ultra-permissive Exposure Limits for wireless radiation that ignore the adverse effects reported in the literature,

and many other examples, provide strong evidence that what we have in practice (for these commercially, militarily, and politically sensitive topics) is a ***Government-Industrial-Media-Complex*** that effectively controls what the public knows and believes about these topics.

Appendix 4 - Definitions

4A. OSHA Permissible Exposure Limits (PELs)

The OSHA PELs derive from the OSH Act of 1970. Section 6(b)5 states [44]:

"The Secretary, in promulgating standards dealing with toxic materials or harmful physical agents under this subsection, shall set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that ***no employee will suffer material impairment of health or functional capacity*** even if such employee has regular exposure to the hazard dealt with by such standard for the period of his working life. Development of standards under this subsection shall be based upon research, demonstrations, experiments, and such other information as may be appropriate. In addition to the attainment of the ***highest degree of health and safety protection for the employee***, other considerations shall be the latest available scientific data in the field, the feasibility of the standards, and experience gained under this and other health and safety laws. Whenever practicable, the standard promulgated shall be expressed in terms of objective criteria and of the performance desired."

The main consideration in the Act is health and safety of the worker, although considerations of feasibility and scientific data are mentioned.

A 1997 article addressing new attempts to revise the PELs states, in part [45]:

"In 1970 OSHA created the first PELs by adopting the 1968 American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit values (TLVs) as allowed by Congress, ...***few PELs have been updated over the past 25 years***, and the changes that were made often involved time-consuming, costly, and litigious fights among the regulated community, OSHA, and organized labor. For example, only 16 rules for about 20 chemicals have been promulgated since 1975."

"In 1988 OSHA proposed to change 420 of them.....The new standards, promulgated in 1989, were based on recent scientific information and all but one of the PELs was lowered.....However, legal challenges to the standard by numerous labor and industry groups were heard in the Eleventh Circuit Court of Appeals in 1992, and the court overturned the new PELs. The court indicated that OSHA needed to perform ***quantitative analyses of risk*** for noncancer endpoints.....offer more extensive discussion of the evidence for adverse effects for each substance, and prepare ***more careful feasibility analyses*** for each of the new PELs."

Thus, risk assessment/risk management/acceptable levels of risk and feasibility of implementation need to be considered along with worker health and safety.

4B. National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limits (RELs).

OSHA describes the RELs as follows [46]:

"NIOSH RELs are authoritative Federal agency recommendations established according to the legislative mandate for NIOSH to recommend standards to OSHA. RELs are intended to limit exposure to hazardous substances in workplace air to protect worker health. In developing RELs and other recommendations to ***protect worker health***, NIOSH evaluates all available medical, biological,

engineering, chemical, and trade information relevant to the hazard. NIOSH transmits its recommendations to OSHA for use in developing legally enforceable standards."

4C. American Conference of Government Industrial Hygienists (ACGIH®) Threshold Limit Values (TLVs®) and Biological Exposure Indices (BEIs®).

OSHA describes the TLVs and BEIs as follows [47]:

"ACGIH® is a private, not-for-profit, nongovernmental corporation. It is not a standards setting body. ACGIH® is a scientific association that develops recommendations or guidelines to assist in the control of occupational health hazards. TLVs® and BEIs® are health-based values and are not intended to be used as legal standards.

Threshold Limit Values (TLVs®) refer to airborne concentrations of chemical substances and represent conditions under which it is believed that nearly all workers may be repeatedly exposed, day after day, over a working lifetime, without adverse effects.

Biological Exposure Indices (BEIs®) are guidance values for assessing biological monitoring results – concentrations of chemicals in biological media (e.g., blood, urine). BEIs® represent the levels of determinants that are most likely to be observed in specimens collected from healthy workers who have been exposed to chemicals in the same extent as workers with inhalation exposure at the TLV®.

Since ACGIH® TLVs® and BEIs® are based solely on health factors, there is no consideration given to economic or technical feasibility. ACGIH® does not believe that TLVs® and BEIs® should be adopted as standards without an analysis of other factors necessary to make appropriate risk management decisions (e.g., control options, technical and economic factors, etc.)."

4D. Environmental Protection Agency (EPA) Integrated Risk Information System (IRIS)

4D1. Inhalation Reference Concentration (RfC)

EPA describes its RfCs as follows [48]:

"An estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious noncancer health effects during a lifetime. It can be derived from a NOAEL, LOAEL, or benchmark concentration, with uncertainty factors generally applied to reflect limitations of the data used."

"In the simplest terms, the RfC derivation begins with the identification of a no-observed-adverse-effect level (NOAEL) and a lowest-observed-adverse-effect level (LOAEL), which are determined for the specified adverse effect from the exposure levels of a given individual study on the various species tested . The NOAEL is the highest level tested at which the specified adverse effect is not produced and is therefore, by definition, a subthreshold level.....This NOAEL/LOAEL approach, is also a function of the exposure levels used in the experimental design or is the function of designating a specified health effect measure.....in the case of some alternative modeling approaches, and thus, does not necessarily reflect the "true" biological threshold."

"The RfC methodology requires conversion by dosimetric adjustment of the NOAELs and LOAELs observed in laboratory animal experiments or in human epidemiological or occupational studies to human equivalent concentrations (HECs) for ambient exposure conditions . These conditions are currently assumed to ***be 24 h/day for a lifetime of 70 years.***

The dosimetric conversion to an HEC is necessary before the different adverse effects in the data array can be evaluated and compared."

4D1a. Lowest-Observed-Adverse-Effect Level (LOAEL)

"The lowest exposure level at which there are statistically and biologically significant increases in frequency or severity of adverse effects between the exposed population and its appropriate control group."

4D1b. No-Observed-Adverse-Effect Level (NOAEL)

"An exposure level at which there are no statistically and biologically significant increases in the frequency or severity of adverse effects between the exposed population and its appropriate control . Some effects may be produced at this level, but they are not considered as adverse, nor immediate precursors to specific adverse effects . In an experiment with several NOAELs, the assessment focus is primarily on the highest one for a given critical effect, leading to the common usage of the term NOAEL as the highest exposure without adverse effect."

4D1c. Uncertainty Factor (UF)

"One of several, generally 3- to 10-fold factors, used in operationally deriving the inhalation reference concentration (RfC) from experimental data. UFs are intended to account for (1) the variation in sensitivity among the members of the hum an population, (2) the uncertainty in extrapolating laboratory animal data to humans, (3) the uncertainty in extrapolating from data obtained in a study that is of less-than-lifetime exposure, (4) the uncertainty in using LOAEL data rather th an NOAEL data, and (5) the inability of any single study to adequately address all possible adverse outcomes in humans . The RfC methods use 3 for the UF for interspecies extrapolation due to the incorporation of default dosimetric adjustments."

Also, reference [49] provides an early perspective on the purpose and methodology of Uncertainty Factors.

4D2. Oral Reference Dose (RfD)

"An estimate (with uncertainty spanning perhaps an order of magnitude) of a daily oral exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime. It can be derived from a NOAEL, LOAEL, or benchmark dose, with uncertainty factors generally applied to reflect limitations of the data used."

The derivations and caveats for an RfD are similar to those for the RfC above, with the difference being the RfC is based on inhalation, and the RfD is based on oral ingestion.

4E. Agency for Toxic Substances and Disease Registry (ATSDR)

ATSDR describes its MRLs as follows [50]:

"The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) [42 U.S.C. 9604 et seq.], as amended by the Superfund Amendments and Reauthorization Act (SARA) [Pub. L. 99 499], requires that the Agency for Toxic Substances and Disease Registry (ATSDR) develop jointly with the U.S. Environmental Protection Agency (EPA), in order of priority, a list of hazardous substances most commonly found at facilities on the CERCLA National Priorities List (NPL) (42 U.S.C. 9604(i)(2)); prepare toxicological profiles for each substance included on the priority list of hazardous substances, and to ascertain significant human exposure levels (SHELs) for hazardous substances in the environment, and the associated acute, subacute, and chronic health effects (42 U.S.C. 9604(i)(3)); and assure the initiation of a research program to fill identified data needs associated with the substances (42 U.S.C. 9604(i)(5)).

The ATSDR Minimal Risk Levels (MRLs) were developed as an initial response to the mandate. Following discussions with scientists within the Department of Health and Human Services (HHS) and the EPA, ATSDR chose to adopt a practice similar to that of the EPA's Reference Dose (RfD) and Reference Concentration (RfC) for deriving substance specific health guidance levels for non-neoplastic endpoints. An MRL is an estimate of the daily human exposure to a hazardous substance that is likely to be without appreciable risk of adverse non-cancer health effects over a specified duration of exposure. These substance specific estimates, which are intended to serve as screening levels, are used by ATSDR health assessors and other responders to identify contaminants and potential health effects that may be of concern at hazardous waste sites. It is important to note that MRLs are not intended to define clean up or action levels for ATSDR or other Agencies.

The toxicological profiles include an examination, summary, and interpretation of available toxicological information and epidemiologic evaluations of a hazardous substance. During the development of toxicological profiles, MRLs are derived when ATSDR determines that reliable and sufficient data exist to identify the target organ(s) of effect or the most sensitive health effect(s) for a specific duration for a given route of exposure to the substance. MRLs are based on non-cancer health effects only and are not based on a consideration of cancer effects. Inhalation MRLs are exposure concentrations expressed in units of parts per million (ppm) for gases and volatiles, or milligrams per cubic meter (mg/m3) for particles. Oral MRLs are expressed as daily human doses in units of milligrams per kilogram per day (mg/kg/day). Radiation MRLs are expressed as external exposures in units of millisieverts.

ATSDR uses the no observed adverse effect level/uncertainty factor (NOAEL/UF) approach to derive MRLs for hazardous substances. They are set below levels that, based on current information, might cause adverse health effects in the people most sensitive to such substance-induced effects. MRLs are derived for acute (1-14 days), intermediate (>14-364 days), and chronic (365 days and longer) exposure durations, and for the oral and inhalation routes of exposure. Currently MRLs for the dermal route of exposure are not derived because ATSDR has not yet identified a method suitable for this route of exposure. MRLs are generally based on the most sensitive substance-induced end point considered to be of relevance to humans. ATSDR does not use serious health effects (such as irreparable damage to the liver or kidneys, or birth defects) as a basis for establishing MRLs. Exposure to a level above the MRL does not mean that adverse health effects will occur."

4F. California Division of Occupational Safety and Health (Cal/OSHA) Permissible Exposure Limits (PELs).

OSHA describes the Cal/OSHA PELs as follows [51]:

Cal/OSHA has established an extensive list of PELs that are enforced in workplaces under its jurisdiction. Cal/OSHA PELs are promulgated under statutory requirements for risk and feasibility that are no less protective than the OSH Act.

BIBLIOGRAPHY

Special Mention Article

The following article deserves special mention. It is an outstanding enumeration of the role of business and other institutions in influencing government regulations. While it focuses on electromagnetic pollution, its main message is widely applicable to many other substances subjected to government regulation.

The conflicts of interest may even be worse than suggested by the authors. There are documented and undocumented conflicts. The authors focus on the documented conflicts. But, for some members of these advisory and regulatory committees, their time on the committee/panel serves as a ***'job interview'*** for future funding and/or an eventual lucrative position in the industry impacted. The latter conflict is extremely difficult to identify a priori, bit it would certainly impact the nature of their contribution.

Angelo Gino Levis, Valerio Gennaro, Spiridione Garbisa. Business Bias as Usual: The Case of Electromagnetic Pollution. http://www.conradbiologic.com/pdfs/Electromagnetic-Business-Bias.pdf

Selected Chemical Exposure Effects

BIB-1. Acetaldehyde

Aberle NS, 2nd, Privratsky JR, Burd L, Ren J. Combined acetaldehyde and nicotine exposure depresses cardiac contraction in ventricular myocytes: prevention by folic acid. Neurotoxicology and teratology. 2003;25(6):731-6.

Aberle NS, 2nd, Ren J. Short-term acetaldehyde exposure depresses ventricular myocyte contraction: role of cytochrome P450 oxidase, xanthine oxidase, and lipid peroxidation. Alcoholism, clinical and experimental research. 2003;27(4):577-83.

Acevedo MB, D'Aloisio G, Haymal OB, Molina JC. Brain Acetaldehyde Exposure Impacts upon Neonatal Respiratory Plasticity and Ethanol-Related Learning in Rodents. Frontiers in behavioral neuroscience. 2017;11:39.

Alha AR, Hjelt E, Tamminen V. Disulfiram-alcohol intoxication; investigation of five fatal cases and the chemical determination of disulfiram and blood acetaldehyde. Acta pharmacologica et toxicologica. 1957;13(3):277-88.

Alieva RM, Tusupbekova GA. Effect of toxic compounds on the respiratory and dehydrogenase activity of sludge in acetaldehyde production. Mikrobiologiia. 1987;56(1):154-5.

Altomare E, Grattagliano I, Didonna D, Gentile A, Vendemiale G. Gastric and intestinal ethanol toxicity in the rat. Effect on glutathione level and role of alcohol and acetaldehyde metabolisms. Italian journal of gastroenterology and hepatology. 1998;30(1):82-90.

Appelman LM, Woutersen RA, Feron VJ. Inhalation toxicity of acetaldehyde in rats. I. Acute and subacute studies. Toxicology. 1982;23(4):293-307.

Appelman LM, Woutersen RA, Feron VJ, Hooftman RN, Notten WR. Effect of variable versus fixed exposure levels on the toxicity of acetaldehyde in rats. Journal of applied toxicology : JAT. 1986;6(5):331-6.

Aranda A, del Olmo M-l. Exposure of Saccharomyces cerevisiae to acetaldehyde induces sulfur amino acid metabolism and polyamine transporter genes, which depend on Met4p and Haa1p transcription factors, respectively. Applied and environmental microbiology. 2004;70(4):1913-22.

Baker RN, Alenty AL, Zack JF, Jr. Toxic volatiles in alcoholic coma. A report of simultaneous determination of blood methanol, ethanol, isopropanol, acetaldehyde and acetone by gas chromatography. Bulletin of the Los Angeles neurological societies. 1968;33(3):140-4.

Balbo S, Juanes RC, Khariwala S, Baker EJ, Daunais JB, Grant KA. Increased levels of the acetaldehyde-derived DNA adduct N 2-ethyldeoxyguanosine in oral mucosa DNA from Rhesus monkeys exposed to alcohol. Mutagenesis. 2016;31(5):553-8.

Bankowski E, Pawlicka E, Sobolewski K. Liver collagen of rats submitted to chronic intoxication with acetaldehyde. Molecular and cellular biochemistry. 1993;121(1):37-43.

Bariliak IR, Kozachuk SI. Embryotoxic and mutagenic activity of ethanol and acetaldehyde in intra-amniotic exposure. TSitologiia i genetika. 1983;17(5):57-60.

Beck O, Tyler A, Faull K. Serotonin condensation product 5-hydroxymethtryptoline: evidence for in vivo formation from acetaldehyde during intoxication using deuterium labelled ethanol. Alcohol and alcoholism (Oxford, Oxfordshire) Supplement. 1987;1:743-7.

Berry JF, Stotz E. Acetylcholine and acetoin in brain during acetaldehyde intoxication. Quarterly journal of studies on alcohol. 1956;17(2):190-4.

Blasiak J, Trzeciak A, Malecka-Panas E, Drzewoski J, Wojewodzka M. In vitro genotoxicity of ethanol and acetaldehyde in human lymphocytes and the gastrointestinal tract mucosa cells. Toxicology in vitro : an international journal published in association with BIBRA. 2000;14(4):287-95.

Booze TF, Oehme FW. An investigation of metaldehyde and acetaldehyde toxicities in dogs. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1986;6(3):440-6.

Bozhko GK, Boiko TP. Acetaldehyde in the cardiotoxic mechanism of action of alcohol: effects on cardiac and adrenal catecholamines. Kardiologiia. 1991;31(9):73-5.

Bradman A, Gaspar F, Castorina R, Williams J, Hoang T, Jenkins PL, et al. Formaldehyde and acetaldehyde exposure and risk characterization in California early childhood education environments. Indoor air. 2017;27(1):104-13.

Brecher AS, Hellman K, Basista MH. A perspective on acetaldehyde concentrations and toxicity in man and animals. Alcohol (Fayetteville, NY). 1997;14(5):493-6.

Brooks PJ, Schuebel K. Timeless insights into prevention of acetaldehyde genotoxicity? Cell cycle (Georgetown, Tex). 2017;16(4):308-9.

Bruinen de Bruin Y, Koistinen K, Kephalopoulos S, Geiss O, Tirendi S, Kotzias D. Characterisation of urban inhalation exposures to benzene, formaldehyde and acetaldehyde in the European Union: comparison of measured and modelled exposure data. Environmental science and pollution research international. 2008;15(5):417-30.

Cascales M, Cerdan S, Santos-Ruiz MR, Feijoo B, Santos-Ruiz A. Alcohol and aldehyde dehydrogenase on chronic ethanol intoxication. Effect of acetaldehyde and fat diet proceedings. Archives of toxicology Supplement = Archiv fur Toxikologie Supplement. 1979(2):497.

Cassee FR, de Burbure CY, Rambali B, Vleeming W, van de Kuil A, van Steeg H, et al. Subchronic inhalation of mixtures of cigarette smoke constituents in Xpa-/-p53+/- knock-out mice: a comparison of intermittent with semi-continuous exposure to acetaldehyde, formaldehyde, and acrolein. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2008;46(2):527-36.

Cassee FR, Groten JP, Feron VJ. Changes in the nasal epithelium of rats exposed by inhalation to mixtures of formaldehyde, acetaldehyde, and acrolein. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1996;29(2):208-18.

Chen D, Fang L, Li H, Jin C. The effects of acetaldehyde exposure on histone modifications and chromatin structure in human lung bronchial epithelial cells. Environmental and molecular mutagenesis. 2018.

Collins MA, Bigdeli MG. Tetrahydroisoquinolines in vivo. I. Rat brain formation of salsolinol, a condensation product of dopamine and acetaldehyde, under certain conditions during ethanol intoxication. Life sciences. 1975;16(4):585-601.

Conduah Birt JE, Shuker DE, Farmer PB. Stable acetaldehyde--protein adducts as biomarkers of alcohol exposure. Chemical research in toxicology. 1998;11(2):136-42.

Corsini GU, Zuddas A, Bonuccelli U, Schinelli S, Kopin IJ. 1-Methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) neurotoxicity in mice is enhanced by ethanol or acetaldehyde. Life sciences. 1987;40(9):827-32.

D'Addario C, Johansson S, Candeletti S, Romualdi P, Ogren SO, Terenius L, et al. Ethanol and acetaldehyde exposure induces specific epigenetic modifications in the prodynorphin gene promoter in a human neuroblastoma cell line. FASEB journal : official publication of the Federation of American Societies for Experimental Biology. 2011;25(3):1069-75.

David JR, Daly K, Van Herrewege J. Acetaldehyde utilization and toxicity in Drosophila adults lacking alcohol dehydrogenase or aldehyde oxidase. Biochemical genetics. 1984;22(11-12):1015-29.

De Jongh DK. The effect of tetraethylthiuramdisulfide (T.T.S.) upon the toxicity of acetaldehyde in rats. Archives internationales de pharmacodynamie et de therapie. 1952;90(1):113-5.

Dembiec D, MacNamee D, Cohen G. The effect of pargyline and other monoamine oxidase inhibitors on blood acetaldehyde levels in ethanol-intoxicated mice. The Journal of pharmacology and experimental therapeutics. 1976;197(2):332-9.

Dvornikov VE, Mogilevskii VM. Changes in the cardiac function of rabbits in response to ethanol and acetaldehyde administration in intact animals and animals in chronic alcoholic intoxication. Patologicheskaia fiziologiia i eksperimental'naia terapiia. 1988(2):53-5.

Elamin E, Masclee A, Troost F, Dekker J, Jonkers D. Cytotoxicity and metabolic stress induced by acetaldehyde in human intestinal LS174T goblet-like cells. American journal of physiology Gastrointestinal and liver physiology. 2014;307(3):G286-94.

Eriksson CJ, Fukunaga T, Sarkola T, Lindholm H, Ahola L. Estrogen-related acetaldehyde elevation in women during alcohol intoxication. Alcoholism, clinical and experimental research. 1996;20(7):1192-5.

Eriksson CJ, Hillbom ME, Sovijarvi AR. Difficulties in measuring human blood acetaldehyde concentrations during ethanol intoxication. Advances in experimental medicine and biology. 1980;126:439-51.

Eysseric H, Gonthier B, Soubeyran A, Bessard G, Saxod R, Barret L. Characterization of the production of acetaldehyde by astrocytes in culture after ethanol exposure. Alcoholism, clinical and experimental research. 1997;21(6):1018-23.

Eysseric H, Gonthier B, Soubeyran A, Richard MJ, Daveloose D, Barret L. Effects of chronic ethanol exposure on acetaldehyde and free radical production by astrocytes in culture. Alcohol (Fayetteville, NY). 2000;21(2):117-25.

Fadel RA, Persaud TV. Ossification of the vertebral column in the offspring of rats exposed to alcohol, acetaldehyde and caffeine. Experimental and toxicologic pathology : official journal of the Gesellschaft fur Toxikologische Pathologie. 1993;45(1):51-4.

Feron VJ. Effects of exposure to acetaldehyde in syrian hamsters simultaneously treated with benzo(a)pyrene or diethylnitrosamine. Progress in experimental tumor research. 1979;24:162-76.

Feron VJ, Kruysse A, Woutersen RA. Respiratory tract tumours in hamsters exposed to acetaldehyde vapour alone or simultaneously to benzo(a)pyrene or diethylnitrosamine. European journal of cancer & clinical oncology. 1982;18(1):13-31.

Fisher SJ, Lee IJ, Swaan PW, Eddington ND. Evaluation of the effect of ethanol's toxic metabolite acetaldehyde on the gastrointestinal oligopeptide transporter, PEPT1: in vitro and in vivo studies. Alcoholism, clinical and experimental research. 2008;32(1):162-70.

Fort DJ, McLaughlin DW, Rogers RL, Buzzard BO. Evaluation of the developmental toxicities of ethanol, acetaldehyde, and thioacetamide using FETAX. Drug and chemical toxicology. 2003;26(1):23-34.

Friedman MA, Eaton LR, Bailey W. Influence of acetaldehyde, dietary protein, carbon tetrachloride and butylatedhydroxytoluene on the toxicity of methylmercury in rats. Bulletin of environmental contamination and toxicology. 1978;20(1):102-10.

Fujiwara N, Suwa Y, Yoshizumi H, Yamatodani A, Wada H. Preventive effects of L-alanine and L-glutamic acid on acute toxicity of acetaldehyde in mice. Arukoru kenkyu to yakubutsu izon = Japanese journal of alcohol studies & drug dependence. 1988;23(1):58-69.

Fukunaga T, Sillanaukee P, Eriksson CJ. Occurrence of blood acetaldehyde in women during ethanol intoxication: preliminary findings. Alcoholism, clinical and experimental research. 1993;17(6):1198-200.

Garcia CCM, Batista GL, Freitas FP, Lopes FS, Sanchez AB, Gutz IGR, et al. Quantification of DNA adducts in lungs, liver and brain of rats exposed to acetaldehyde. Free radical biology & medicine. 2014;75 Suppl 1:S41.

Gavaler JS, Gay V, Egler K, Van Thiel DH. Evaluation of the differential in vivo toxic effects of ethanol and acetaldehyde on the hypothalamic-pituitary-gonadal axis using 4-methylpyrazole. Alcoholism, clinical and experimental research. 1983;7(3):332-6.

Gawlikowski T, Piekoszewski W, Gomolka E, Krol A. Acetaldehyde concentration in acute ethanol-intoxicated patients addicted to alcohol. Przeglad lekarski. 2004;61(4):310-3.

Gaztanaga M, Angulo-Alcalde A, Spear NE, Chotro MG. The Role of Acetaldehyde in the Increased Acceptance of Ethanol after Prenatal Ethanol Exposure. Frontiers in behavioral neuroscience. 2017;11:14.

Gilani S, Persaud TV. Embryonic development in the chick following exposure to ethanol, acetaldehyde and cyanamide. Annals of anatomy = Anatomischer Anzeiger : official organ of the Anatomische Gesellschaft. 1992;174(4):305-8.

Gonthier B, Jeunet A, Barret L. Electron spin resonance study of free radicals produced from ethanol and acetaldehyde after exposure to a Fenton system or to brain and liver microsomes. Alcohol (Fayetteville, NY). 1991;8(5):369-75.

Gonzalez-Flesca N, Cicolella A, Bates M, Bastin E. Pilot study of personal, indoor and outdoor exposure to benzene, formaldehyde and acetaldehyde. Environmental science and pollution research international. 1999;6(2):95-102.

Gosepath J, Brieger J, Muttray A, Best S, Pourianfar M, Jung D, et al. mRNA induction and cytokine release of inflammatory mediators during in vitro exposure of human nasal respiratory epithelia to acetaldehyde. Inhalation toxicology. 2006;18(14):1083-90.

Hard ML, Einarson TR, Koren G. The role of acetaldehyde in pregnancy outcome after prenatal alcohol exposure. Therapeutic drug monitoring. 2001;23(4):427-34.

He SM, Lambert B. Induction and persistence of SCE-inducing damage in human lymphocytes exposed to vinyl acetate and acetaldehyde in vitro. Mutation research. 1985;158(3):201-8.

Hellstrom PM, Hendolin P, Kaihovaara P, Kronberg L, Meierjohann A, Millerhovf A, et al. Slow-release L-cysteine capsule prevents gastric mucosa exposure to carcinogenic acetaldehyde: results of a randomised single-blinded, cross-over study of Helicobacter-associated atrophic gastritis. Scandinavian journal of gastroenterology. 2017;52(2):230-7.

Henzel K, Thorborg C, Hofmann M, Zimmer G, Leuschner U. Toxicity of ethanol and acetaldehyde in hepatocytes treated with ursodeoxycholic or tauroursodeoxycholic acid. Biochimica et biophysica acta. 2004;1644(1):37-45.

Hillbom ME, Sarviharju MS, Lindros KO. Potentiation of ethanol toxicity by cyanamide in relation to acetaldehyde accumulation. Toxicology and applied pharmacology. 1983;70(1):133-9.

Holownia A, Chwiecko M, Farbiszewski R. The changes in activities of some ammonia metabolizing enzymes in liver and brain of rats intoxicated by chronic administration of acetaldehyde. Biochemical pharmacology. 1989;38(17):2935-7.

Holownia A, Ledig M, Braszko JJ, Menez JF. Acetaldehyde cytotoxicity in cultured rat astrocytes. Brain research. 1999;833(2):202-8.

Hu CC, Chen WK, Liao PH, Yu WC, Lee YJ. Synergistic effect of cadmium chloride and acetaldehyde on cytotoxicity and its prevention by quercetin and glycyrrhizin. Mutation research. 2001;496(1-2):117-27.

Hui JY, Beery JT, Higley NA, Taylor SL. Comparative subchronic oral toxicity of sulphite and acetaldehyde hydroxysulphonate in rats. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 1989;27(6):349-59.

Hult EL, Willem H, Price PN, Hotchi T, Russell ML, Singer BC. Formaldehyde and acetaldehyde exposure mitigation in US residences: in-home measurements of ventilation control and source control. Indoor air. 2015;25(5):523-35.

Imai T, Omoto M. Effects of acetaldehyde exposure on maternal rats and their offspring. Arukoru kenkyu to yakubutsu izon = Japanese journal of alcohol studies & drug dependence. 1992;27(3):334-54.

Inoue K, Fukunaga M, Ohbora Y, Kiriyama T, Komura S. Interaction between acetaldehyde and sulfhydryl compounds in human blood during ethanol intoxication. Arukoru kenkyu to yakubutsu izon = Japanese journal of alcohol studies & drug dependence. 1984;19(1):74-82.

Isse T, Oyama T, Matsuno K, Ogawa M, Narai-Suzuki R, Yamaguchi T, et al. Paired acute inhalation test reveals that acetaldehyde toxicity is higher in aldehyde dehydrogenase 2 knockout mice than in wild-type mice. The Journal of toxicological sciences. 2005;30(4):329-37.

Jamal M, Ameno K, Ameno S, Morishita J, Wang W, Kumihashi M, et al. Changes in cholinergic function in the frontal cortex and hippocampus of rat exposed to ethanol and acetaldehyde. Neuroscience. 2007;144(1):232-8.

Jung TW, Lee JY, Shim WS, Kang ES, Kim JS, Ahn CW, et al. Adiponectin protects human neuroblastoma SH-SY5Y cells against acetaldehyde-induced cytotoxicity. Biochemical pharmacology. 2006;72(5):616-23.

Jung TW, Lee JY, Shim WS, Kang ES, Kim SK, Ahn CW, et al. Rosiglitazone protects human neuroblastoma SH-SY5Y cells against acetaldehyde-induced cytotoxicity. Biochemical and biophysical research communications. 2006;340(1):221-7.

Jurvelin J, Vartiainen M, Jantunen M, Pasanen P. Personal exposure levels and microenvironmental concentrations of formaldehyde and acetaldehyde in the Helsinki metropolitan area, Finland. Journal of the Air & Waste Management Association (1995). 2001;51(1):17-24.

Kadirova ZC, Hojamberdiev M, Katsumata K-i, Isobe T, Matsushita N, Nakajima A, et al. Photodegradation of gaseous acetaldehyde and methylene blue in aqueous solution with titanium dioxide-loaded activated carbon fiber polymer materials and aquatic plant ecotoxicity tests. Environmental science and pollution research international. 2014;21(6):4309-19.

Kakuma S, Leevy CM, Frank O, Baker H. Protection of pyridoxal 5'-phosphate against toxicity of acetaldehyde to hepatocytes. Proceedings of the Society for Experimental Biology and Medicine Society for Experimental Biology and Medicine (New York, NY). 1981;168(3):325-9.

Kawai T, Mihara T, Kawashima I, Fujita Y, Ikeda C, Negishi H, et al. Endogenous acetaldehyde toxicity during antral follicular development in the mouse ovary. Reproductive toxicology (Elmsford, NY). 2012;33(3):322-30.

Kayani MA, Parry JM. The in vitro genotoxicity of ethanol and acetaldehyde. Toxicology in vitro : an international journal published in association with BIBRA. 2010;24(1):56-60.

Kharchenko NK, Sinitskii VN. Aldehyde dehydrogenase activity of blood serum exposed to different concentrations of acetaldehyde. Ukrainskii biokhimicheskii zhurnal (1978). 1993;65(5):53-8.

Kolber MA, Terabayashi H. Cytotoxic T lymphocytes can be generated against acetaldehyde-modified syngeneic cells. Alcohol and alcoholism (Oxford, Oxfordshire) Supplement. 1991;1:277-80.

Konovko OO, Morozov YE, Kalinichenko SG, Dyuzen IV, Motavkin PA. Induction of NO-synthase and acetaldehyde dehydrogenase in neurons of human cerebellar cortex during chronic alcohol intoxication. Bulletin of experimental biology and medicine. 2004;137(2):211-4.

Kortelainen ML, Lapinlampi T, Huttunen P. Hypothalamic and serum catecholamines in ethanol and acetaldehyde treated guinea-pigs. Relation to moderate short-term cold exposure. Alcohol (Fayetteville, NY). 1986;3(6):351-5.

Kruysse A, Feron VJ, Til HP. Repeated exposure to acetaldehyde vapor. Studies in Syrian golden hamsters. Archives of environmental health. 1975;30(9):449-52.

Kunugita N, Isse T, Oyama T, Kitagawa K, Ogawa M, Yamaguchi T, et al. Increased frequencies of micronucleated reticulocytes and T-cell receptor mutation in Aldh2 knockout mice exposed to acetaldehyde. The Journal of toxicological sciences. 2008;33(1):31-6.

Lachenmeier DW, Gill JS, Chick J, Rehm J. The total margin of exposure of ethanol and acetaldehyde for heavy drinkers consuming cider or vodka. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2015;83:210-4.

Lachenmeier DW, Monakhova YB. Short-term salivary acetaldehyde increase due to direct exposure to alcoholic beverages as an additional cancer risk factor beyond ethanol metabolism. Journal of experimental & clinical cancer research : CR. 2011;30:3.

Lacroix G, Tissot S, Rogerieux F, Beaulieu R, Cornu L, Gillet C, et al. Decrease in ovalbumin-induced pulmonary allergic response by benzaldehyde but not acetaldehyde exposure in a Guinea pig model. Journal of toxicology and environmental health Part A. 2002;65(14):995-1012.

Lam CW, Casanova M, Heck HD. Decreased extractability of DNA from proteins in the rat nasal mucosa after acetaldehyde exposure. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1986;6(3):541-50.

Latge C, Lamboeuf Y, Roumec C, de Saint Blanquat G. Effect of chronic acetaldehyde intoxication on ethanol tolerance and membrane fatty acids. Drug and alcohol dependence. 1987;20(1):47-55.

Lauterburg BH, Bilzer M. Mechanisms of acetaldehyde hepatotoxicity. Journal of hepatology. 1988;7(3):384-90.

Lee RD, An SM, Kim SS, Rhee GS, Kwack SJ, Seok JH, et al. Neurotoxic effects of alcohol and acetaldehyde during embryonic development. Journal of toxicology and environmental health Part A. 2005;68(23-24):2147-62.

Lee YJ, Aroor AR, Shukla SD. Temporal activation of p42/44 mitogen-activated protein kinase and c-Jun N-terminal kinase by acetaldehyde in rat hepatocytes and its loss after chronic ethanol exposure. The Journal of pharmacology and experimental therapeutics. 2002;301(3):908-14.

Lee YJ, Shukla SD. Pro- and anti-apoptotic roles of c-Jun N-terminal kinase (JNK) in ethanol and acetaldehyde exposed rat hepatocytes. European journal of pharmacology. 2005;508(1-3):31-45.

Lee YJ, Shukla SD. Histone H3 phosphorylation at serine 10 and serine 28 is mediated by p38 MAPK in rat hepatocytes exposed to ethanol and acetaldehyde. European journal of pharmacology. 2007;573(1-3):29-38.

Lester D, Greenberg LA. The role of acetaldehyde in the toxicity of tetraethylthiuram disulfide and alcohol; with a method for the determination of acetaldehyde in 0.20 Ml. of blood. Quarterly journal of studies on alcohol. 1950;11(2):391-5.

Lieber CS, Baraona E, Matsuda Y, Salaspuro M, Hasumura Y, Matsuzaki S. Hepatotoxicity of acetaldehyde. Advances in experimental medicine and biology. 1980;126:397-411.

Lin RC, Fillenwarth MJ, Du X. Cytotoxic effect of 7alpha-hydroxy-4-cholesten-3-one on HepG2 cells: hypothetical role of acetaldehyde-modified delta4-3-ketosteroid-5beta-reductase (the 37-kd-liver protein) in the pathogenesis of alcoholic liver injury in the rat. Hepatology (Baltimore, Md). 1998;27(1):100-7.

Lin RC, Fillenwarth MJ, Minter R, Lumeng L. Formation of the 37-kD protein-acetaldehyde adduct in primary cultured rat hepatocytes exposed to alcohol. Hepatology (Baltimore, Md). 1990;11(3):401-7.

Lin RC, Lumeng L. Formation of a protein-acetaldehyde adduct in liver during chronic alcohol exposure. Advances in experimental medicine and biology. 1991;283:139-49.

Linderborg K, Marvola T, Marvola M, Salaspuro M, Farkkila M, Vakevainen S. Reducing carcinogenic acetaldehyde exposure in the achlorhydric stomach with cysteine. Alcoholism, clinical and experimental research. 2011;35(3):516-22.

Linderborg K, Salaspuro M, Vakevainen S. A single sip of a strong alcoholic beverage causes exposure to carcinogenic concentrations of acetaldehyde in the oral cavity. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2011;49(9):2103-6.

Lindros KO, Hillbom ME. Acetaldehyde in cerebrospinal fluid: its near-absence in ethanol-intoxicated alcoholics. Medical biology. 1979;57(4):246-7.

Liu J, Sato C, Miyakawa H, Kamiyama T, Tajiri K, Goto M, et al. Inhibition of acetaminophen hepatotoxicity by acetaldehyde in the rat. Toxicology letters. 1992;62(2-3):287-92.

Liu Y, Yamanaka M, Abe-Kanoh N, Liu X, Zhu B, Munemasa S, et al. Benzyl isothiocyanate ameliorates acetaldehyde-induced cytotoxicity by enhancing aldehyde dehydrogenase activity in murine hepatoma Hepa1c1c7 cells. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2017;108(Pt A):305-13.

Lopez-Islas A, Chagoya-Hazas V, Perez-Aguilar B, Palestino-Dominguez M, Souza V, Miranda RU, et al. Cholesterol Enhances the Toxic Effect of Ethanol and Acetaldehyde in Primary Mouse Hepatocytes. Oxidative medicine and cellular longevity. 2016;2016:9209825.

Lorenzo de la Pena L, Montero Santos JM, Benito Lozano M, Martin Cabrera F. Acetaldehyde syndrome after laboral exposition to hydrogen cyanamide. Medicina clinica. 2006;127(18):717-8.

Lumeng L, Lin RC. Formation of a 37 kilodalton liver protein-acetaldehyde adduct in vivo and in liver cell culture during chronic alcohol exposure. Annals of the New York Academy of Sciences. 1991;625:793-801.

Mabuchi R, Kurita A, Miyoshi N, Yokoyama A, Furuta T, Goda T, et al. Analysis of N(epsilon) -ethyllysine in human plasma proteins by gas chromatography-negative ion chemical ionization/mass spectrometry as a biomarker for exposure to acetaldehyde and alcohol. Alcoholism, clinical and experimental research. 2012;36(6):1013-20.

MacLeod LD. Acetaldehyde in relation to intoxication by ethyl alcohol. Quarterly journal of studies on alcohol. 1950;11(2):385-90.

Madden MC, Thomas MJ, Ghio AJ. Acetaldehyde (CH3CHO) production in rodent lung after exposure to metal-rich particles. Free radical biology & medicine. 1999;26(11-12):1569-77.

Madrigal-Bujaidar E, Velazquez-Guadarrama N, Morales-Ramirez P, Mendiola MT. Effect of disulfiram on the genotoxic potential of acetaldehyde in mouse spermatogonial cells. Teratogenesis, carcinogenesis, and mutagenesis. 2002;22(2):83-91.

Manzardo S, Coppi G. Protective action of some compounds against the toxicity of acetaldehyde, acrolein and formaldehyde in the rat. Bollettino chimico farmaceutico. 1991;130(10):399-401.

Mapoles JE, Iwahashi M, Lucas D, Zimmerman BT, Simon FR. Acetaldehyde exposure causes growth inhibition in a Chinese hamster ovary cell line that expresses alcohol dehydrogenase. Alcoholism, clinical and experimental research. 1994;18(3):632-9.

March SM, Cullere ME, Abate P, Hernandez JI, Spear NE, Molina JC. Acetaldehyde reinforcement and motor reactivity in newborns with or without a prenatal history of alcohol exposure. Frontiers in behavioral neuroscience. 2013;7:69.

Matias A, Soares-da-Silva P, Azevedo I. Neurotoxicity and induction of fibroblast proliferation by acetaldehyde in the rabbit liver. Journal of autonomic pharmacology. 1993;13(4):275-80.

Matsuzaki S, Sieber CS. Increased susceptibility of hepatic mitochondria to the toxicity of acetaldehyde after chronic ethanol consumption. Biochemical and biophysical research communications. 1977;75(4):1059-65.

Matysiak-Budnik T, Jokelainen K, Karkkainen P, Makisalo H, Ohisalo J, Salaspuro M. Hepatotoxicity and absorption of extrahepatic acetaldehyde in rats. The Journal of pathology. 1996;178(4):469-74.

McCaskill ML, Kharbanda KK, Tuma DJ, Reynolds JD, DeVasure JM, Sisson JH, et al. Hybrid malondialdehyde and acetaldehyde protein adducts form in the lungs of mice exposed to alcohol and cigarette smoke. Alcoholism, clinical and experimental research. 2011;35(6):1106-13.

Menegola E, Broccia ML, Di Renzo F, Giavini E. Acetaldehyde in vitro exposure and apoptosis: a possible mechanism of teratogenesis. Alcohol (Fayetteville, NY). 2001;23(1):35-9.

Menegola E, Broccia ML, Prati M, Ricolfi R, Giavini E. Glutathione and N-acetylcysteine protection against acetaldehyde embryotoxicity in rat embryos developing in vitro. Toxicology in vitro : an international journal published in association with BIBRA. 1995;9(5):633-41.

Mikeska JA, Klemm WR. Evidence against a role of acetaldehyde in electroencephalographic signs of ethanol-induced intoxication. Science (New York, NY). 1979;203(4377):276-9.

Mitina LV, Khokhlov AL. The evaluation of the efficacy of carbamazepine and valproic acid in the alcohol postintoxication syndrome based on ethanol and acetaldehyde kinetics and the content of biogenic monoamines. Farmakologiia i toksikologiia. 1991;54(5):60-2.

Mizoi Y, Ohga N. Studies on the acetaldehyde concentration of blood in alcohol intoxication. Nihon hoigaku zasshi = The Japanese journal of legal medicine. 1963;17:9-22.

Moeller BC, Recio L, Green A, Sun W, Wright FA, Bodnar WM, et al. Biomarkers of exposure and effect in human lymphoblastoid TK6 cells following 13C2 -acetaldehyde exposure. Toxicological sciences : an official journal of the Society of Toxicology. 2013;133(1):1-12.

Moreb JS, Gabr A, Vartikar GR, Gowda S, Zucali JR, Mohuczy D. Retinoic acid down-regulates aldehyde dehydrogenase and increases cytotoxicity of 4-hydroperoxycyclophosphamide and acetaldehyde. The Journal of pharmacology and experimental therapeutics. 2005;312(1):339-45.

Morris JB. Dosimetry, toxicity and carcinogenicity of inspired acetaldehyde in the rat. Mutation research. 1997;380(1-2):113-24.

Moura D, Azevedo I, Osswald W. Hepatotoxicity of the condensation product of adrenaline with acetaldehyde. The Journal of pharmacy and pharmacology. 1977;29(4):255-6.

Muttray A, Gosepath J, Brieger J, Faldum A, Pribisz A, Mayer-Popken O, et al. No acute effects of an exposure to 50 ppm acetaldehyde on the upper airways. International archives of occupational and environmental health. 2009;82(4):481-8.

Nagasawa HT, Goon DJ, DeMaster EG. 2,5,5-Trimethylthiazolidine-4-carboxylic acid, a D(-)-penicillamine-directed pseudometabolite of ethanol. Detoxication mechanism for acetaldehyde. Journal of medicinal chemistry. 1978;21(12):1274-9.

Neiman J, Hillbom M, Jones AW, Benthin G, Lowbeer C. Platelet function during acetaldehyde intoxication in healthy male volunteers. Alcohol and alcoholism (Oxford, Oxfordshire) Supplement. 1987;1:587-90.

Neiman J, Hillbom M, Jones AW, Benthin G, Lowbeer C, Sippel H. Effects of a small dose of ethanol and calcium carbimide-induced acetaldehyde intoxication on human platelet aggregation, associated thromboxane formation and urinary excretion of 2,3-dinor-6-keto prostaglandin F1 alpha. Journal of toxicology Clinical toxicology. 1987;25(3):185-98.

Ni R, Leo MA, Zhao J, Lieber CS. Toxicity of beta-carotene and its exacerbation by acetaldehyde in HepG2 cells. Alcohol and alcoholism (Oxford, Oxfordshire). 2001;36(4):281-5.

Niemela O, Parkkila S, Koll M, Preedy VR. Generation of protein adducts with malondialdehyde and acetaldehyde in muscles with predominantly type I or type II fibers in rats exposed to ethanol and the acetaldehyde dehydrogenase inhibitor cyanamide. The American journal of clinical nutrition. 2002;76(3):668-74.

Nikiforova EE. Features of the distribution of lymphoid tissue in the walls of the trachea and principal bronchi after exposure to acetaldehyde vapors. Morfologiia (Saint Petersburg, Russia). 1998;114(5):93-5.

Nuutinen HU, Salaspuro MP, Valle M, Lindros KO. Blood acetaldehyde concentration gradient between hepatic and antecubital venous blood in ethanol-intoxicated alcoholics and controls. European journal of clinical investigation. 1984;14(4):306-11.

O'Neill PJ, Rahwan RG. Protection against acute toxicity of acetaldehyde in mice. Research communications in chemical pathology and pharmacology. 1976;13(1):125-8.

Ogawa M, Isse T, Oyama T, Kunugita N, Yamaguchi T, Kinaga T, et al. Urinary 8-hydoxydeoxyguanosine (8-OHdG) and plasma malondialdehyde (MDA) levels in Aldh2 knock-out mice under acetaldehyde exposure. Industrial health. 2006;44(1):179-83.

Otsuka M, Mine T, Ohuchi K, Ohmori S. A detoxication route for acetaldehyde: metabolism of diacetyl, acetoin, and 2,3-butanediol in liver homogenate and perfused liver of rats. Journal of biochemistry. 1996;119(2):246-51.

Owe-Larsson A, Skog E. The effect of tetraethylthiuramdisulphide (disulfiram) upon the toxicity of lower aliphatic aldehydes (formaldehyde, acetaldehyde, propionaldehyde, butyraldehyde, acrolein and crotonaldehyde). Acta pharmacologica et toxicologica. 1951;7(3):220-6.

Oyama T, Isse T, Ogawa M, Muto M, Uchiyama I, Kawamoto T. Susceptibility to inhalation toxicity of acetaldehyde in Aldh2 knockout mice. Frontiers in bioscience : a journal and virtual library. 2007;12:1927-34.

Pawlicka E, Bankowski E, Sobolewski K. Chronic intoxication with acetaldehyde stimulates collagen biosynthesis in rat liver. Archives of toxicology. 1991;65(8):678-80.

Phillips SC. The toxicity to rat cerebral cortex or topical applications of acetaldehyde, ammonia or bilirubin. Neuropathology and applied neurobiology. 1981;7(3):205-16.

Phillips SC. Cytoprotective value of lysine, penicillamine, and pyridoxal phosphate against the neurotoxicity of acetaldehyde. Toxicology and applied pharmacology. 1989;98(3):553-60.

Pigolkina EI, Morozov IE, Tarasov II. Acetaldehyde: neuromodulator of alcohol intoxication. Sudebno-meditsinskaia ekspertiza. 2002;45(4):40-6.

Plescia F, Brancato A, Marino RAM, Vita C, Navarra M, Cannizzaro C. Effect of Acetaldehyde Intoxication and Withdrawal on NPY Expression: Focus on Endocannabinoidergic System Involvement. Frontiers in psychiatry. 2014;5:138.

Poggi P, Rota MT, Boratto R. Microtubules and vimentin associated filaments (VIFs) in cultured human gingival fibroblasts (HGFs) after exposure to acrolein and acetaldehyde. Annals of anatomy = Anatomischer Anzeiger : official organ of the Anatomische Gesellschaft. 2001;183(2):159-63.

Prisiazhniuk VE. Toxic effect on the organism of simultaneous air pollution by vinylacetate and acetaldehyde. Gigiena i sanitariia. 1971;36(12):13-6.

Pron'ko PS, Satanovskaia VI, Gorenshtein BI, Kuz'mich AB, Pyzhik TN. Effect of pyruvate, threonine, and phosphoethanolamine on acetaldehyde metabolism in rats with toxic liver injury. Voprosy meditsinskoi khimii. 2002;48(3):278-85.

Rahwan RG. Toxic effects of ethanol: possible role of acetaldehyde, tetrahydroisoquinolines, and tetrahydro-beta-carbolines. Toxicology and applied pharmacology. 1975;34(1):3-27.

Redmond G, Cohen G. Induction of liver acetaldehyde dehydrogenase: possible role in ethanol tolerance after exposure tobarbiturates. Science (New York, NY). 1971;171(3969):387-9.

Reimers MJ, Flockton AR, Tanguay RL. Ethanol- and acetaldehyde-mediated developmental toxicity in zebrafish. Neurotoxicology and teratology. 2004;26(6):769-81.

Sanchez AB, Garcia CCM, Freitas FP, Batista GL, Lopes FS, Carvalho VH, et al. DNA Adduct Formation in the Lungs and Brain of Rats Exposed to Low Concentrations of 13C2 -Acetaldehyde. Chemical research in toxicology. 2018;31(5):332-9.

Santucci L, Graham TJ, Van Thiel DH. Inhibition of testosterone production by rat Leydig cells with ethanol and acetaldehyde: prevention of ethanol toxicity with 4-methylpyrazole. Alcoholism, clinical and experimental research. 1983;7(2):135-9.

Sarc L, Lipnik-Stangelj M. Comparison of ethanol and acetaldehyde toxicity in rat astrocytes in primary culture. Arhiv za higijenu rada i toksikologiju. 2009;60(3):297-305.

Schneider FH. Effects of length of exposure to and concentration of acetaldehyde on the release of catecholamines. Biochemical pharmacology. 1974;23(2):223-9.

Schupp T, Bolt HM, Hengstler JG. Maximum exposure levels for xylene, formaldehyde and acetaldehyde in cars. Toxicology. 2005;206(3):461-70.

Silva P. Complications of various types of acetaldehyde poisoning in treatment of chronic alcoholism. Medicina contemporanea (Lisbon, Portugal). 1954;72(6):295-301.

Singh NP, Khan A. Acetaldehyde: genotoxicity and cytotoxicity in human lymphocytes. Mutation research. 1995;337(1):9-17.

Sisson JH, Tuma DJ. Vapor phase exposure to acetaldehyde generated from ethanol inhibits bovine bronchial epithelial cell ciliary motility. Alcoholism, clinical and experimental research. 1994;18(5):1252-5.

Skog E. A toxicological investigation of lower aliphatic aldehydes. I. Toxicity of formaldehyde, acetaldehyde; propionaldehyde and butyraldehyde; as well as of acrolein and crotonaldehyde. Acta pharmacologica et toxicologica. 1950;6(4):299-318.

Skosyreva AM. Comparative study of the direct embryotoxic effect of alcohol and its metabolite acetaldehyde during organogenesis. Akusherstvo i ginekologiia. 1982(1):49-50.

Skrzydlewski Z, Worowski K, Skrzydlewska E. Release of acid proteolytic activity from lysosomes and degradation of protein in organs of rats intoxicated with ethanol and acetaldehyde. Acta biochimica Polonica. 1985;32(3):271-7.

Smolarek Z, Kossowski O. Severe intoxication probably caused by acetaldehyde as the result of the disulfiram-ethanol reaction. Wiadomosci lekarskie (Warsaw, Poland : 1960). 1976;29(22):2043-5.

Speit G, Frohler-Keller M, Schutz P, Neuss S. Low sensitivity of the comet assay to detect acetaldehyde-induced genotoxicity. Mutation research. 2008;657(2):93-7.

Sprince H, Parker CM, Smith GG. Comparison of protection by L-ascorbic acid, L-cysteine, and adrenergic-blocking agents against acetaldehyde, acrolein, and formaldehyde toxicity: implications in smoking. Agents and actions. 1979;9(4):407-14.

Sprince H, Parker CM, Smith GG, Gonzales LJ. Protection against acetaldehyde toxicity in the rat by L-cysteine, thiamin and L-2-methylthiazolidine-4-carboxylic acid. Agents and actions. 1974;4(2):125-30.

Sprince H, Parker CM, Smith GG, Gonzales LJ. Protective action of ascorbic acid and sulfur compounds against acetaldehyde toxicity: implications in alcoholism and smoking. Agents and actions. 1975;5(2):164-73.

Stein S, Lao Y, Yang I-Y, Hecht SS, Moriya M. Genotoxicity of acetaldehyde- and crotonaldehyde-induced 1,N2-propanodeoxyguanosine DNA adducts in human cells. Mutation research. 2006;608(1):1-7.

Stornetta A, Guidolin V, Balbo S. Alcohol-Derived Acetaldehyde Exposure in the Oral Cavity. Cancers. 2018;10(1).

Stornetta A, Guidolin V, Balbo S. Correction: Alessia Stornetta et al. Alcohol-Derived Acetaldehyde Exposure in the Oral Cavity. Cancers 2018, 10, 20. Cancers. 2018;10(3).

Stowell A, Hillbom M, Salaspuro M, Lindros KO. Low acetaldehyde levels in blood, breath and cerebrospinal fluid of intoxicated humans as assayed by improved methods. Advances in experimental medicine and biology. 1980;132:635-45.

Strubelt O, Younes M, Urch T, Breining H, Pentz R. Hepatotoxicity of acetaldehyde in rats. Toxicology letters. 1987;39(1):77-84.

Sumi H, Yatagai C, Wada H, Yoshida E, Maruyama M. Effect of Bacillus natto-fermented product (BIOZYME) on blood alcohol, aldehyde concentrations after whisky drinking in human volunteers, and acute toxicity of acetaldehyde in mice. Arukoru kenkyu to yakubutsu izon = Japanese journal of alcohol studies & drug dependence. 1995;30(2):69-79.

Swaminathan K, Clemens DL, Dey A. Inhibition of CYP2E1 leads to decreased malondialdehyde-acetaldehyde adduct formation in VL-17A cells under chronic alcohol exposure. Life sciences. 2013;92(6-7):325-36.

Tacconi EM, Lai X, Folio C, Porru M, Zonderland G, Badie S, et al. BRCA1 and BRCA2 tumor suppressors protect against endogenous acetaldehyde toxicity. EMBO molecular medicine. 2017;9(10):1398-414.

Takeuchi M, Saito T. Cytotoxicity of acetaldehyde-derived advanced glycation end-products (AA-AGE) in alcoholic-induced neuronal degeneration. Alcoholism, clinical and experimental research. 2005;29(12 Suppl):220S-4S.

Takeuchi M, Watai T, Sasaki N, Choei H, Iwaki M, Ashizawa T, et al. Neurotoxicity of acetaldehyde-derived advanced glycation end products for cultured cortical neurons. Journal of neuropathology and experimental neurology. 2003;62(5):486-96.

Tanaka K, Whelan KA, Chandramouleeswaran PM, Kagawa S, Rustgi SL, Noguchi C, et al. ALDH2 modulates autophagy flux to regulate acetaldehyde-mediated toxicity thresholds. American journal of cancer research. 2016;6(4):781-96.

Tardif R, Liu L, Raizenne M. Exhaled ethanol and acetaldehyde in human subjects exposed to low levels of ethanol. Inhalation toxicology. 2004;16(4):203-7.

Tatarkin SV, Shafirkin AV, Mukhamedieva LN, Barantseva MI, Ivanova SM. Adaptation processes in mice during chronic combined exposure to radiation and chemical compounds (acetone, ethanol, acetaldehyde) innate to exploration missions. Aviakosmicheskaia i ekologicheskaia meditsina = Aerospace and environmental medicine. 2012;46(3):20-7.

Terabayashi H, Kolber MA. The generation of cytotoxic T lymphocytes against acetaldehyde-modified syngeneic cells. Alcoholism, clinical and experimental research. 1990;14(6):893-9.

Thomas M, Peters TJ. Acetaldehyde: its role in alcoholic toxicity and dependence. British journal of addiction. 1981;76(4):375-8.

Til HP, Woutersen RA, Feron VJ, Clary JJ. Evaluation of the oral toxicity of acetaldehyde and formaldehyde in a 4-week drinking-water study in rats. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 1988;26(5):447-52.

Tomaru A, Mizorogi F, Fujita K, Nishiyama N, Miura Y, Matsuda F, et al. Alcoholic cardiomyopathy--acetaldehyde poisoning rat: myocardial and serum enzyme changes in acute exposure. Japanese circulation journal. 1983;47(6):649-60.

Tsukamoto S, Kanegae T, Nagoya T, Shimamura M, Mieda Y, Nomura M, et al. Effects of amino acids on acute alcohol intoxication in mice--concentrations of ethanol, acetaldehyde, acetate and acetone in blood and tissues. Arukoru kenkyu to yakubutsu izon = Japanese journal of alcohol studies & drug dependence. 1990;25(5):429-40.

Uemura T, Tanaka Y, Higashi K, Miyamori D, Takasaka T, Nagano T, et al. Acetaldehyde-induced cytotoxicity involves induction of spermine oxidase at the transcriptional level. Toxicology. 2013;310:1-7.

Ueta CB, Campos JC, Albuquerque RPE, Lima VM, Disatnik M-H, Sanchez AB, et al. Cardioprotection induced by a brief exposure to acetaldehyde: role of aldehyde dehydrogenase 2. Cardiovascular research. 2018;114(7):1006-15.

Uysal M, Ozdemirler G, Kutalp G, Oz H. Mitochondrial and microsomal lipid peroxidation in rat liver after acute acetaldehyde and ethanol intoxication. Journal of applied toxicology : JAT. 1989;9(3):155-8.

Vaca CE, Nilsson JA, Fang JL, Grafstrom RC. Formation of DNA adducts in human buccal epithelial cells exposed to acetaldehyde and methylglyoxal in vitro. Chemico-biological interactions. 1998;108(3):197-208.

Vasil'eva EV, Morozov IE, Lopatkin ON, Zarubin VV, Mamedov VK. Acetaldehyde and some biochemical parameters in alcoholic intoxications. Sudebno-meditsinskaia ekspertiza. 2004;47(2):23-7.

Von Wartburg JP, Buhler R, Maring JA, Pestalozzi D. The polymorphisms of alcohol and aldehyde dehydrogenase and their significance for acetaldehyde toxicity. Pharmacology, biochemistry, and behavior. 1983;18 Suppl 1:123-5.

Walia AS, Lamon EW. In vitro effects of ethanol and acetaldehyde on cell-mediated cytotoxicity. Progress in clinical and biological research. 1990;325:145-53.

Walia AS, Pruitt KM, Dillehay DL, Marshall GM, Lamon EW. In vitro effect of acetaldehyde on cell-mediated cytotoxicity by murine spleen cells. Alcoholism, clinical and experimental research. 1989;13(6):766-71.

Wan JY, Wang JY, Wang Y. A comparison between acute exposures to ethanol and acetaldehyde on neurotoxicity, nitric oxide production and NMDA-induced excitotoxicity in primary cultures of cortical neurons. The Chinese journal of physiology. 2000;43(3):131-8.

Wanderley MI, Udrisar DP. Inhibitory action of in vitro ethanol and acetaldehyde exposure on LHRH-and phorbol ester-stimulated testosterone secretion by rat testicular interstitial cells. Acta physiologica, pharmacologica et therapeutica latinoamericana : organo de la Asociacion Latinoamericana de Ciencias Fisiologicas y [de] la Asociacion Latinoamericana de Farmacologia. 1994;44(4):135-41.

Weishaar R, Bertuglia S, Ashikawa K, Sarma JS, Bing RJ. Comparative effects of chronic ethanol and acetaldehyde exposure on myocardial function in rats. Journal of clinical pharmacology. 1978;18(8-9):377-87.

Wickramasinghe SN, Hasan R, Khalpey Z. Differences in the serum levels of acetaldehyde and cytotoxic acetaldehyde-albumin complexes after the consumption of red and white wine: in vitro effects of flavonoids, vitamin E, and other dietary antioxidants on cytotoxic complexes. Alcoholism, clinical and experimental research. 1996;20(5):799-803.

Wickramasinghe SN, Mawas F, Hasan R, Brown IN, Goldin RD. Macrophages are a major source of acetaldehyde in circulating acetaldehyde-albumin complexes formed after exposure of mice to ethanol. Alcoholism, clinical and experimental research. 1994;18(6):1463-7.

Williams AJ, Moule SK, McGivan JD, Barry RE. Acetaldehyde-modified albumin as hepatotoxic factor. Lancet (London, England). 1987;1(8528):327.

Willis MS, Klassen LW, Tuma DJ, Sorrell MF, Thiele GM. In vitro exposure to malondialdehyde-acetaldehyde adducted protein inhibits cell proliferation and viability. Alcoholism, clinical and experimental research. 2002;26(2):158-64.

Woutersen RA, Appelman LM, Feron VJ, Van der Heijden CA. Inhalation toxicity of acetaldehyde in rats. II. Carcinogenicity study: interim results after 15 months. Toxicology. 1984;31(2):123-33.

Woutersen RA, Appelman LM, Van Garderen-Hoetmer A, Feron VJ. Inhalation toxicity of acetaldehyde in rats. III. Carcinogenicity study. Toxicology. 1986;41(2):213-31.

Woutersen RA, Feron VJ. Inhalation toxicity of acetaldehyde in rats. IV. Progression and regression of nasal lesions after discontinuation of exposure. Toxicology. 1987;47(3):295-305.

Yan T, Zhao Y, Zhang X. Acetaldehyde Induces Cytotoxicity of SH-SY5Y Cells via Inhibition of Akt Activation and Induction of Oxidative Stress. Oxidative medicine and cellular longevity. 2016;2016:4512309.

Yan T, Zhao Y, Zhang X, Lin X. Astaxanthin Inhibits Acetaldehyde-Induced Cytotoxicity in SH-SY5Y Cells by Modulating Akt/CREB and p38MAPK/ERK Signaling Pathways. Marine drugs. 2016;14(3).

Yokoyama A, Kamada Y, Imazeki H, Hayashi E, Murata S, Kinoshita K, et al. Effects of ADH1B and ALDH2 Genetic Polymorphisms on Alcohol Elimination Rates and Salivary Acetaldehyde Levels in Intoxicated Japanese Alcoholic Men. Alcoholism, clinical and experimental research. 2016;40(6):1241-50.

Yu H-S, Oyama T, Isse T, Kitagawa K, Pham T-T-P, Tanaka M, et al. Formation of acetaldehyde-derived DNA adducts due to alcohol exposure. Chemico-biological interactions. 2010;188(3):367-75.

Yuki T, Hashimoto T, Ohkuma S, Tamura J, Kuriyama K. Alteration of acetaldehyde metabolism in carbon tetrachloride-intoxicated rat liver: analysis using liver perfusion system. Alcohol and alcoholism (Oxford, Oxfordshire). 1984;19(2):101-7.

Zeng XG. The toxic interaction between acetaldehyde and crotonaldehyde. Zhonghua yu fang yi xue za zhi [Chinese journal of preventive medicine]. 1985;19(5):278-80.

Zenki KC, Mussulini BHM, Rico EP, de Oliveira DL, Rosemberg DB. Effects of ethanol and acetaldehyde in zebrafish brain structures: an in vitro approach on glutamate uptake and on toxicity-related parameters. Toxicology in vitro : an international journal published in association with BIBRA. 2014;28(5):822-8.

Zuddas A, Corsini GU, Schinelli S, Barker JL, Kopin IJ, di Porzio U. Acetaldehyde directly enhances MPP+ neurotoxicity and delays its elimination from the striatum. Brain research. 1989;501(1):11-22.

[No authors listed]. Shifts in the mice blood-forming system and energy exchange of erythrocytes due to chronic exposure to chemical agents (acetone, ethanol, acetaldehyde) and radiation in concentrations and doses modeling the conditions in extended orbital mission. Aviakosmicheskaia i ekologicheskaia meditsina = Aerospace and environmental medicine. 2012;46(2):21-8.

BIB-2. Trichloroethylene

Abe T, Wakui C. Necessity for total trichloride compound measurement in screening tests for workers exposed to trichloroethylene or 1,1,1,-trichloroethane. Sangyo igaku Japanese journal of industrial health. 1984;26(6):492-9.

Abecia E, Martinez-Jarreta B, Pinilla I, Larrosa M, Castellano M, Honrubia M. Bilateral optic neuritis in occupational exposure to trichloroethylene. La Medicina del lavoro. 1996;87(5):432-6.

Abusoglu S, Celik HT, Tutkun E, Yilmaz H, Serdar MA, Bal CD, et al. 8-hydroxydeoxyguanosine as a useful marker for determining the severity of trichloroethylene exposure. Archives of environmental & occupational health. 2014;69(3):180-6.

Adamek R, Krupinski B. Acute intoxication with trichloroethylene--a case report. Przeglad lekarski. 2007;64(4-5):331-3.

Adams EM, Spencer HC, Rowe VK, McCollister DD, Irish DD. Vapor toxicity of trichloroethylene determined by experiments on laboratory animals. AMA archives of industrial hygiene and occupational medicine. 1951;4(5):469-81.

Ahlmark A, Forssman S. Evaluating trichloroethylene exposures by urinalyses for trichloroacetic acid. AMA archives of industrial hygiene and occupational medicine. 1951;3(4):386-98.

Albahary C, Guyot Jeannin C, Flaisler A, Thiaucourt P. Transaminases and occupational exposure to trichloroethylene. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1959;20:421-6.

Albee RR, Spencer PJ, Johnson KA, Bradley GJ, Marable BR, Wilmer JW, et al. Lack of trigeminal nerve toxicity in rats exposed to trichloroethylene vapor for 13 weeks. International journal of toxicology. 2006;25(6):531-40.

Alexander DD, Kelsh MA, Mink PJ, Mandel JH, Basu R, Weingart M. A meta-analysis of occupational trichloroethylene exposure and liver cancer. International archives of occupational and environmental health. 2007;81(2):127-43.

Alexander DD, Mink PJ, Mandel JH, Kelsh MA. A meta-analysis of occupational trichloroethylene exposure and multiple myeloma or leukaemia. Occupational medicine (Oxford, England). 2006;56(7):485-93.

Alexander HC, McCarty WM, Bartlett EA. Toxicity of Perchloroethylene, Trichloroethylene, 1,1,1-trichloroethane, and Methylene Chloride to Fathead Minnows. Bulletin of environmental contamination and toxicology. 1978;20(3):344-52.

Ali F, Khan AQ, Khan R, Sultana S. Trichloroethylene-mediated cytotoxicity in human epidermal keratinocytes is mediated by the rapid accumulation of intracellular calcium: Interception by naringenin. Human & experimental toxicology. 2016;35(2):147-61.

Ali F, Sultana S. Repeated short-term stress synergizes the ROS signalling through up regulation of NFkB and iNOS expression induced due to combined exposure of trichloroethylene and UVB rays. Molecular and cellular biochemistry. 2012;360(1-2):133-45.

Allemand H, Pessayre D, Descatoire V, DeGott C, Feldmann G, Benhamou JP. Metabolic activation of trichloroethylene into a chemically reactive metabolite toxic to the liver. The Journal of pharmacology and experimental therapeutics. 1978;204(3):714-23.

Altmann L, Welge P, Mensing T, Lilienthal H, Voss B, Wilhelm M. Chronic exposure to trichloroethylene affects neuronal plasticity in rat hippocampal slices. Environmental toxicology and pharmacology. 2002;12(3):157-67.

Alvarez-Cohen L, McCarty PL. Effects of toxicity, aeration, and reductant supply on trichloroethylene transformation by a mixed methanotrophic culture. Applied and environmental microbiology. 1991;57(1):228-35.

Alvarez-Cohen L, McCarty PL. Product toxicity and cometabolic competitive inhibition modeling of chloroform and trichloroethylene transformation by methanotrophic resting cells. Applied and environmental microbiology. 1991;57(4):1031-7.

Anagnostopoulos G, Sakorafas GH, Grigoriadis K, Margantinis G, Kostopoulos P, Tsiakos S, et al. Hepatitis caused by occupational chronic exposure to trichloroethylene. Acta gastro-enterologica Belgica. 2004;67(4):355-7.

Anand SS, Mumtaz MM, Mehendale HM. Dose-dependent liver regeneration in chloroform, trichloroethylene and allyl alcohol ternary mixture hepatotoxicity in rats. Archives of toxicology. 2005;79(11):671-82.

Andersson A. Health risks in exposure to trichloroethylene in industry; clinical, experimental and industrial hygienic investigation. Acta medica Scandinavica Supplementum. 1957;323:1-220.

Annau Z. The neurobehavioral toxicity of trichloroethylene. Neurobehavioral toxicology and teratology. 1981;3(4):417-24.

Arai H. Studies of trichloroethylene-induced glycosuria: blood glucose and renal glucose reabsorption in rats exposed to trichloroethylene. Sangyo igaku Japanese journal of industrial health. 1989;31(2):52-61.

Arai H, Nomiyama H, Saito K, Nomiyama K. Health effects of high concentration of trichloroethylene exposure for 12 weeks in rats. Sangyo igaku Japanese journal of industrial health. 1988;30(5):410-1.

Arai H, Tanaka M, Horiguchi M, Kimura K, Nomiyama H, Nomiyama K, et al. A case of pneumatosis cystoides coli with a history of occupational exposure to trichloroethylene. Nihon Shokakibyo Gakkai zasshi = The Japanese journal of gastro-enterology. 1985;82(7):1786-90.

Archer NP, Bradford CM, Villanacci JF, Crain NE, Corsi RL, Chambers DM, et al. Relationship between vapor intrusion and human exposure to trichloroethylene. Journal of environmental science and health Part A, Toxic/hazardous substances & environmental engineering. 2015;50(13):1360-8.

Arito H, Takahashi M, Ishikawa T. Effect of subchronic inhalation exposure to low-level trichloroethylene on heart rate and wakefulness-sleep in freely moving rats. Sangyo igaku Japanese journal of industrial health. 1994;36(1):1-8.

Astrand I, Ovrum P. Exposure to trichloroethylene I. Uptake and distribution in man. Scandinavian journal of work, environment & health. 1976;2(4):199-211.

Au Yeung J. Unusual case of anxiety: trichloroethylene neurotoxicity. BMJ case reports. 2017;2017.

Auzepy P, Cloup M, Verger C. Acute trichloroethylene poisoning. La Revue du praticien. 1979;29(15):1285-6, 9-91.

Auzepy P, Verger C, Deparis M. Current status of acute trichloroethylene poisoning in adults. Apropos of 17 cases. Annales de medecine interne. 1976;127(11):817-22.

Axelson O, Andersson K, Hogstedt C, Holmberg B, Molina G, de Verdier A. A cohort study on trichloroethylene exposure and cancer mortality. Journal of occupational medicine : official publication of the Industrial Medical Association. 1978;20(3):194-6.

Bachelier, Brune A, Viallier J. Experimental trichloroethylene poisoning in guinea pigs; effect of combination of trichloroethylene and methyl alcohol. Comptes rendus des seances de la Societe de biologie et de ses filiales. 1956;150(4):726-7.

Baelum J. Acute symptoms during non-inhalation exposure to combinations of toluene, trichloroethylene, and n-hexane. International archives of occupational and environmental health. 1999;72(6):408-10.

Bahr DE, Aldrich TE, Seidu D, Brion GM, Tollerud DJ, Muldoon S, et al. Occupational exposure to trichloroethylene and cancer risk for workers at the Paducah Gaseous Diffusion Plant. International journal of occupational medicine and environmental health. 2011;24(1):67-77.

Baker AB. The nervous system in trichloroethylene intoxication; an experimental study. Journal of neuropathology and experimental neurology. 1958;17(4):649-55.

Bakke B, Stewart PA, Waters MA. Uses of and exposure to trichloroethylene in U.S. industry: a systematic literature review. Journal of occupational and environmental hygiene. 2007;4(5):375-90.

Bal C, Buyuksekerci M, Koca C, Agis ER, Erdogan S, Baran P, et al. The compromise of dynamic disulfide/thiol homeostasis as a biomarker of oxidative stress in trichloroethylene exposure. Human & experimental toxicology. 2016;35(9):915-20.

Bardodej Z, Krivucova M, Pokorny F. Attempted biochemical interpretation of intolerance to alcohol in trichloroethylene intoxication. Pracovni lekarstvi. 1955;7(5):263-7.

Barni M, Fabroni F, Gentili M. Sudden death in chronic trichloroethylene poisoning. La Medicina del lavoro. 1968;59(6):425-32.

Barret L, Arsac P, Vincent M, Faure J, Garrel S, Reymond F. Evoked trigeminal nerve potential in chronic trichloroethylene intoxication. Journal of toxicology Clinical toxicology. 1982;19(4):419-23.

Barret L, Faure J, Guilland B, Chomat D, Didier B, Debru JL. Trichloroethylene occupational exposure: elements for better prevention. International archives of occupational and environmental health. 1984;53(4):283-9.

Barret L, Garrel S, Arsac P, Vincent M, Thony C, Debru JL, et al. Value of the study of trigeminal nerve evoked potentials in chronic trichloroethylene poisoning. Preliminary results. Toxicological European research Recherche europeenne en toxicologie. 1982;4(3):159-62.

Barret L, Garrel S, Danel V, Debru JL. Chronic trichloroethylene intoxication: a new approach by trigeminal-evoked potentials? Archives of environmental health. 1987;42(5):297-302.

Barton HA, Das S. Alternatives for a risk assessment on chronic noncancer effects from oral exposure to trichloroethylene. Regulatory toxicology and pharmacology : RTP. 1996;24(3):269-85.

Barton HA, Flemming CD, Lipscomb JC. Evaluating human variability in chemical risk assessment: hazard identification and dose-response assessment for noncancer oral toxicity of trichloroethylene. Toxicology. 1996;111(1-3):271-87.

Bartosiewicz M, Penn S, Buckpitt A. Applications of gene arrays in environmental toxicology: fingerprints of gene regulation associated with cadmium chloride, benzo(a)pyrene, and trichloroethylene. Environmental health perspectives. 2001;109(1):71-4.

Basalaev AV. Experience in the use of large-frame fluorography in examining the bones of workers exposed to unsaturated hydrocarbons of the ethylene series (olefins) and their chlorine derivatives (chlorovinyl, trichloroethylene). Gigiena truda i professional'nye zabolevaniia. 1970;14(11):34-7.

Bassig BA, Zhang L, Tang X, Vermeulen R, Shen M, Smith MT, et al. Occupational exposure to trichloroethylene and serum concentrations of IL-6, IL-10, and TNF-alpha. Environmental and molecular mutagenesis. 2013;54(6):450-4.

Bassig BA, Zhang L, Vermeulen R, Tang X, Li G, Hu W, et al. Comparison of hematological alterations and markers of B-cell activation in workers exposed to benzene, formaldehyde and trichloroethylene. Carcinogenesis. 2016;37(7):692-700.

Bauer M, Rabens SF. Cutaneous manifestations of trichloroethylene toxicity. Archives of dermatology. 1974;110(6):886-90.

Bauer M, Rabens SF. Trichloroethylene toxicity. International journal of dermatology. 1977;16(2):113-6.

Berre, Curet. Fatal poisoning caused by ingestion of trichloroethylene. Le Medecin d'usine; revue d'hygiene industrielle et des maladies professionnelles. 1953;15(5):259-60.

Blain L, Lachapelle P, Molotchnikoff S. The effect of acute trichloroethylene exposure on electroretinogram components. Neurotoxicology and teratology. 1990;12(6):633-6.

Blain L, Lachapelle P, Molotchnikoff S. Evoked potentials are modified by long term exposure to trichloroethylene. Neurotoxicology. 1992;13(1):203-6.

Blain L, Lachapelle P, Molotchnikoff S. Electroretinal responses are modified by chronic exposure to trichloroethylene. Neurotoxicology. 1994;15(3):627-31.

Blair A, Hartge P, Stewart PA, McAdams M, Lubin J. Mortality and cancer incidence of aircraft maintenance workers exposed to trichloroethylene and other organic solvents and chemicals: extended follow up. Occupational and environmental medicine. 1998;55(3):161-71.

Bloemen LJ, Tomenson J. Increased incidence of renal cell tumours in a cohort of cardboard workers exposed to trichloroethylene. Archives of toxicology. 1995;70(2):129-33.

Blossom SJ, Cooney CA, Melnyk SB, Rau JL, Swearingen CJ, Wessinger WD. Metabolic changes and DNA hypomethylation in cerebellum are associated with behavioral alterations in mice exposed to trichloroethylene postnatally. Toxicology and applied pharmacology. 2013;269(3):263-9.

Blossom SJ, Doss JC. Trichloroethylene alters central and peripheral immune function in autoimmune-prone MRL(+/+) mice following continuous developmental and early life exposure. Journal of immunotoxicology. 2007;4(2):129-41.

Blossom SJ, Doss JC, Gilbert KM. Chronic exposure to a trichloroethylene metabolite in autoimmune-prone MRL+/+ mice promotes immune modulation and alopecia. Toxicological sciences : an official journal of the Society of Toxicology. 2007;95(2):401-11.

Blossom SJ, Doss JC, Hennings LJ, Jernigan S, Melnyk S, James SJ. Developmental exposure to trichloroethylene promotes CD4+ T cell differentiation and hyperactivity in association with oxidative stress and neurobehavioral deficits in MRL+/+ mice. Toxicology and applied pharmacology. 2008;231(3):344-53.

Blossom SJ, Gilbert KM. Exposure to a metabolite of the environmental toxicant, trichloroethylene, attenuates CD4+ T cell activation-induced cell death by metalloproteinase-dependent FasL shedding. Toxicological sciences : an official journal of the Society of Toxicology. 2006;92(1):103-14.

Blossom SJ, Melnyk SB, Li M, Wessinger WD, Cooney CA. Inflammatory and oxidative stress-related effects associated with neurotoxicity are maintained after exclusively prenatal trichloroethylene exposure. Neurotoxicology. 2017;59:164-74.

Blossom SJ, Melnyk S, Cooney CA, Gilbert KM, James SJ. Postnatal exposure to trichloroethylene alters glutathione redox homeostasis, methylation potential, and neurotrophin expression in the mouse hippocampus. Neurotoxicology. 2012;33(6):1518-27.

Bogdanik T. Acute poisoning with trichloroethylene, toluene and xylene--toxicokinetic mathematical models and clinical experiments. Postepy higieny i medycyny doswiadczalnej. 1992;46(4):431-48.

Bogen KT, Gold LS. Trichloroethylene cancer risk: simplified calculation of PBPK-based MCLs for cytotoxic end points. Regulatory toxicology and pharmacology : RTP. 1997;25(1):26-42.

Bogen KT, Keating GA, Meissner S, Vogel JS. Initial uptake kinetics in human skin exposed to dilute aqueous trichloroethylene in vitro. Journal of exposure analysis and environmental epidemiology. 1998;8(2):253-71.

Bolt HM, Lammert M, Selinski S, Bruning T. Urinary alpha1-microglobulin excretion as biomarker of renal toxicity in trichloroethylene-exposed persons. International archives of occupational and environmental health. 2004;77(3):186-90.

Bond GR. Hepatitis, rash and eosinophilia following trichloroethylene exposure: a case report and speculation on mechanistic similarity to halothane induced hepatitis. Journal of toxicology Clinical toxicology. 1996;34(4):461-6.

Boulange P. Trichloroethylene poisoning. Le Medecin d'usine; revue d'hygiene industrielle et des maladies professionnelles. 1953;15(2):86.

Bourret J, Viallier J, Tolot F, Robillard J. Polyneuritis by simultaneous exposure to trichloroethylene and gasoline. Revue medicale de la Suisse romande. 1968;88(3):173-81.

Boverhof DR, Krieger SM, Hotchkiss JA, Stebbins KE, Thomas J, Woolhiser MR. Assessment of the immunotoxic potential of trichloroethylene and perchloroethylene in rats following inhalation exposure. Journal of immunotoxicology. 2013;10(3):311-20.

Boyes WK, Bushnell PJ, Crofton KM, Evans M, Simmons JE. Neurotoxic and pharmacokinetic responses to trichloroethylene as a function of exposure scenario. Environmental health perspectives. 2000;108 Suppl 2:317-22.

Boyes WK, Evans MV, Eklund C, Janssen P, Simmons JE. Duration adjustment of acute exposure guideline level values for trichloroethylene using a physiologically-based pharmacokinetic model. Risk analysis : an official publication of the Society for Risk Analysis. 2005;25(3):677-86.

Brauch H, Weirich G, Hornauer MA, Storkel S, Wohl T, Bruning T. Trichloroethylene exposure and specific somatic mutations in patients with renal cell carcinoma. Journal of the National Cancer Institute. 1999;91(10):854-61.

Brauch H, Weirich G, Klein B, Rabstein S, Bolt HM, Bruning T. VHL mutations in renal cell cancer: does occupational exposure to trichloroethylene make a difference? Toxicology letters. 2004;151(1):301-10.

Brown LP, Farrar DG, de Rooij CG. Health risk assessment of environmental exposure to trichloroethylene. Regulatory toxicology and pharmacology : RTP. 1990;11(1):24-41.

Bruckner JV, Davis BD, Blancato JN. Metabolism, toxicity, and carcinogenicity of trichloroethylene. Critical reviews in toxicology. 1989;20(1):31-50.

Bruning T, Bolt HM. Renal toxicity and carcinogenicity of trichloroethylene: key results, mechanisms, and controversies. Critical reviews in toxicology. 2000;30(3):253-85.

Bruning T, Golka K, Makropoulos V, Bolt HM. Preexistence of chronic tubular damage in cases of renal cell cancer after long and high exposure to trichloroethylene. Archives of toxicology. 1996;70(3-4):259-60.

Bruning T, Mann H, Melzer H, Sundberg AG, Bolt HM. Pathological excretion patterns of urinary proteins in renal cell cancer patients exposed to trichloroethylene. Occupational medicine (Oxford, England). 1999;49(5):299-305.

Bruning T, Sundberg AG, Birner G, Lammert M, Bolt HM, Appelkvist EL, et al. Glutathione transferase alpha as a marker for tubular damage after trichloroethylene exposure. Archives of toxicology. 1999;73(4-5):246-54.

Bruning T, Pesch B, Wiesenhutter B, Rabstein S, Lammert M, Baumuller A, et al. Renal cell cancer risk and occupational exposure to trichloroethylene: results of a consecutive case-control study in Arnsberg, Germany. American journal of industrial medicine. 2003;43(3):274-85.

Buben JA, O'Flaherty EJ. Delineation of the role of metabolism in the hepatotoxicity of trichloroethylene and perchloroethylene: a dose-effect study. Toxicology and applied pharmacology. 1985;78(1):105-22.

Buhagen M, Gronskag A, Ragde SF, Hilt B. Association Between Kidney Cancer and Occupational Exposure to Trichloroethylene. Journal of occupational and environmental medicine. 2016;58(9):957-9.

Bukowski J. Critical review of the epidemiologic literature regarding the association between congenital heart defects and exposure to trichloroethylene. Critical reviews in toxicology. 2014;44(7):581-9.

Burg JR, Gist GL. Health effects of environmental contaminant exposure: an intrafile comparison of the Trichloroethylene Subregistry. Archives of environmental health. 1999;54(4):231-41.

Caldwell JC, Keshava N, Evans MV. Difficulty of mode of action determination for trichloroethylene: An example of complex interactions of metabolites and other chemical exposures. Environmental and molecular mutagenesis. 2008;49(2):142-54.

Caldwell PT, Manziello A, Howard J, Palbykin B, Runyan RB, Selmin O. Gene expression profiling in the fetal cardiac tissue after folate and low-dose trichloroethylene exposure. Birth defects research Part A, Clinical and molecular teratology. 2010;88(2):111-27.

Calvet J, Planques J, Ribet A, Coll J. Acute poisoning by trichloroethylene; cure. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1959;20(3):297-9.

Calvi LA. The toxic action of trichloroethylene on the nervous system. Clinical contribution. Sistema nervoso. 1961;13:288-93.

Campos-Outcalt D. Trichloroethylene: environmental and occupational exposure. American family physician. 1992;46(2):495-500.

Candura SM, Faustman EM. Trichloroethylene: toxicology and health hazards. Giornale italiano di medicina del lavoro. 1991;13(1-6):17-25.

Carlson GP. Enhancement of the hepatotoxicity of trichloroethylene by inducers of drug metabolism. Research communications in chemical pathology and pharmacology. 1974;7(3):637-40.

Carney EW, Thorsrud BA, Dugard PH, Zablotny CL. Developmental toxicity studies in Crl:CD (SD) rats following inhalation exposure to trichloroethylene and perchloroethylene. Birth defects research Part B, Developmental and reproductive toxicology. 2006;77(5):405-12.

Carrieri M, Magosso D, Piccoli P, Zanetti E, Trevisan A, Bartolucci GB. Acute, nonfatal intoxication with trichloroethylene. Archives of toxicology. 2007;81(7):529-32.

Castaing R, Liermain A, Ferrus L, Cardinaud JP, Favarel-Garrigues JC. Acute intoxication due to trichloroethylene (apropos of 6 cases) (experimental study of elimination of the substance). Journal de medecine de Bordeaux et du Sud-Ouest. 1967;144(4):549-64.

Cavanagh JB, Buxton PH. Trichloroethylene cranial neuropathy: is it really a toxic neuropathy or does it activate latent herpes virus? Journal of neurology, neurosurgery, and psychiatry. 1989;52(3):297-303.

Centers for Disease C. Trichloroethylene exposure--Pennsylvania. MMWR Morbidity and mortality weekly report. 1981;30(19):226, 31-3.

Chakrabarti SK, Tuchweber B. Studies of acute nephrotoxic potential of trichloroethylene in Fischer 344 rats. Journal of toxicology and environmental health. 1988;23(2):147-58.

Channel SR, Latendresse JR, Kidney JK, Grabau JH, Lane JW, Steel-Goodwin L, et al. A subchronic exposure to trichloroethylene causes lipid peroxidation and hepatocellular proliferation in male B6C3F1 mouse liver. Toxicological sciences : an official journal of the Society of Toxicology. 1998;43(2):145-54.

Charbonneau M, Perreault F, Greselin E, Brodeur J, Plaa GL. Assessment of the minimal effective dose of acetone for potentiation of the hepatotoxicity induced by trichloroethylene-carbon tetrachloride mixtures. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1988;10(3):431-8.

Charbotel B, Fevotte J, Martin JL, Bergeret A. Renal cell carcinoma and exposure to trichloroethylene: are the French limits of occupational exposure relevant? Revue d'epidemiologie et de sante publique. 2009;57(1):41-7.

Charbotel B, Fevotte J, Hours M, Martin J-L, Bergeret A. Case-control study on renal cell cancer and occupational exposure to trichloroethylene. Part II: Epidemiological aspects. The Annals of occupational hygiene. 2006;50(8):777-87.

Charbotel B, Gad S, Caiola D, Beroud C, Fevotte J, Bergeret A, et al. Trichloroethylene exposure and somatic mutations of the VHL gene in patients with Renal Cell Carcinoma. Journal of occupational medicine and toxicology (London, England). 2007;2:13.

Charbotel B, Massardier-Pilonchery A, Fort E, Dananche B, Fevotte J, Confavreux-Romestaing C, et al. Occupational trichloroethylene exposure and cervical pathology: a case-control study. The Annals of occupational hygiene. 2013;57(3):407-16.

Cheng J, Shi J, Liu Q, Niu Y, Wang Y, Liu N, et al. Association between trichloroethylene exposure and chromosomal damage in peripheral lymphocytes among occupational exposed workers. Wei sheng yan jiu = Journal of hygiene research. 2012;41(4):551-4.

Cherrie JW, Kromhout H, Semple S. The importance of reliable exposure estimates in deciding whether trichloroethylene can cause kidney cancer. Journal of cancer research and clinical oncology. 2001;127(6):400-4.

Chia SE, Goh VH, Ong CN. Endocrine profiles of male workers with exposure to trichloroethylene. American journal of industrial medicine. 1997;32(3):217-22.

Chia SE, Ong CN, Tsakok MF, Ho A. Semen parameters in workers exposed to trichloroethylene. Reproductive toxicology (Elmsford, NY). 1996;10(4):295-9.

Chittasobhaktra T, Wannanukul W, Wattanakrai P, Pramoolsinsap C, Sohonslitdsuk A, Nitiyanant P. Fever, skin rash, jaundice and lymphadenopathy after trichloroethylene exposure: a case report. Journal of the Medical Association of Thailand = Chotmaihet thangphaet. 1997;80 Suppl 1:S144-8.

Chiu WA, Micallef S, Monster AC, Bois FY. Toxicokinetics of inhaled trichloroethylene and tetrachloroethylene in humans at 1 ppm: empirical results and comparisons with previous studies. Toxicological sciences : an official journal of the Society of Toxicology. 2007;95(1):23-36.

Chiu WA, Okino MS, Evans MV. Characterizing uncertainty and population variability in the toxicokinetics of trichloroethylene and metabolites in mice, rats, and humans using an updated database, physiologically based pharmacokinetic (PBPK) model, and Bayesian approach. Toxicology and applied pharmacology. 2009;241(1):36-60.

Cho I-H, Park J-H, Kim Y-G. Oxidative degradation and toxicity reduction of trichloroethylene (TCE) in water using TiO2/solar light: comparative study of TiO2 slurry and immobilized systems. Journal of environmental science and health Part A, Toxic/hazardous substances & environmental engineering. 2005;40(5):1033-44.

Christensen JM, Rasmussen K. Exposure of Danish workers to trichloroethylene during the period 1947-1987. Ugeskrift for laeger. 1990;152(7):464-6.

Chu KH, Alvarez-Cohen L. Evaluation of toxic effects of aeration and trichloroethylene oxidation on methanotrophic bacteria grown with different nitrogen sources. Applied and environmental microbiology. 1999;65(2):766-72.

Cichocki JA, Guyton KZ, Guha N, Chiu WA, Rusyn I, Lash LH. Target Organ Metabolism, Toxicity, and Mechanisms of Trichloroethylene and Perchloroethylene: Key Similarities, Differences, and Data Gaps. The Journal of pharmacology and experimental therapeutics. 2016;359(1):110-23.

Clay P. Assessment of the genotoxicity of trichloroethylene and its metabolite, S-(1,2-dichlorovinyl)-L-cysteine (DCVC), in the comet assay in rat kidney. Mutagenesis. 2008;23(1):27-33.

Clearfield HR. Hepatorenal toxicity from sniffing spot-remover (trichloroethylene). Report of 2 cases. The American journal of digestive diseases. 1970;15(9):851-6.

Coberly S, Oudiz DJ, Overstreet JW, Wiley LM. Effects of maternal exposure to trichloroethylene (TCE) on cell proliferation in the mouse preimplantation embryo. Reproductive toxicology (Elmsford, NY). 1992;6(3):241-5.

Cocco P, Vermeulen R, Flore V, Nonne T, Campagna M, Purdue M, et al. Occupational exposure to trichloroethylene and risk of non-Hodgkin lymphoma and its major subtypes: a pooled InterLymph correction of IinterLlymph analysis. Occupational and environmental medicine. 2013;70(11):795-802.

Cohen HP, Cohen MM, Lin S, Baker AB. Tissue levels of trichloroethylene after acute or chronic exposure. Anesthesiology. 1958;19(2):188-96.

Cohen-Solal J. POISONING BY TRICHLOROETHYLENE AND SOLVENTS. La Medecine infantile. 1963;70:455-62.

Cojocel C, Beuter W, Muller W, Mayer D. Lipid peroxidation: a possible mechanism of trichloroethylene-induced nephrotoxicity. Toxicology. 1989;55(1-2):131-41.

Colmeiro-Laforet C. Toxicology of trichloroethylene. Acta gynaecologica et obstetrica Hispano-Lusitana. 1953;3(4):294-301.

Colmeiro-Laforet C. Toxicology of trichloroethylene. Revista de obstetricia y ginecologia de Venezuela. 1953;13(2):235-42.

Commandeur JN, Boogaard PJ, Mulder GJ, Vermeulen NP. Mutagenicity and cytotoxicity of two regioisomeric mercapturic acids and cysteine S-conjugates of trichloroethylene. Archives of toxicology. 1991;65(5):373-80.

Conde-Salazar L, Guimaraens D, Romero LV, Sanchez Yus E. Subcorneal pustular eruption and erythema from occupational exposure to trichloroethylene. Contact dermatitis. 1983;9(3):235-7.

Cooper GS, Makris SL, Nietert PJ, Jinot J. Evidence of autoimmune-related effects of trichloroethylene exposure from studies in mice and humans. Environmental health perspectives. 2009;117(5):696-702.

Coopman VAE, Cordonnier JACM, De Letter EA, Piette MHA. Tissue distribution of trichloroethylene in a case of accidental acute intoxication by inhalation. Forensic science international. 2003;134(2-3):115-9.

Coppola A, Rizzo A. On the toxicity of trichloroethylene. Clinical contribution. Folia medica Folia medica (Naples, Italy). 1966;49(5):376-86.

Cosby NC, Dukelow WR. Toxicology of maternally ingested trichloroethylene (TCE) on embryonal and fetal development in mice and of TCE metabolites on in vitro fertilization. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1992;19(2):268-74.

Crebelli R, Carere A. Genetic toxicology of 1,1,2-trichloroethylene. Mutation research. 1989;221(1):11-37.

Creyx M, Leng-Levy J, David-Chausse J, Malineau R, Carles. Two cases of accidental poisoning by trichloroethylene. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1952;13(4):366-8.

Crofton KM, Zhao X. Mid-frequency hearing loss in rats following inhalation exposure to trichloroethylene: evidence from reflex modification audiometry. Neurotoxicology and teratology. 1993;15(6):413-23.

Crofton KM, Zhao X. The ototoxicity of trichloroethylene: extrapolation and relevance of high-concentration, short-duration animal exposure data. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1997;38(1):101-6.

Cui Y, Choudhury SR, Irudayaraj J. Epigenetic Toxicity of Trichloroethylene: A Single-Molecule Perspective. Toxicology research. 2016;5(2):641-50.

Cummings BS, Lash LH. Metabolism and toxicity of trichloroethylene and S-(1,2-dichlorovinyl)-L-cysteine in freshly isolated human proximal tubular cells. Toxicological sciences : an official journal of the Society of Toxicology. 2000;53(2):458-66.

Cummings BS, Parker JC, Lash LH. Role of cytochrome P450 and glutathione S-transferase alpha in the metabolism and cytotoxicity of trichloroethylene in rat kidney. Biochemical pharmacology. 2000;59(5):531-43.

Cummings BS, Zangar RC, Novak RF, Lash LH. Cytotoxicity of trichloroethylene and S-(1, 2-dichlorovinyl)-L-cysteine in primary cultures of rat renal proximal tubular and distal tubular cells. Toxicology. 2000;150(1-3):83-98.

Czirjak L, Schlammadinger J, Szegedi G. Systemic sclerosis and exposure to trichloroethylene. Dermatology (Basel, Switzerland). 1993;186(3):236-7.

Dai Y, Leng S, Li L, Niu Y, Huang H, Liu Q, et al. Effects of genetic polymorphisms of N-Acetyltransferase on trichloroethylene-induced hypersensitivity dermatitis among exposed workers. Industrial health. 2009;47(5):479-86.

Das RM, Scott JE. Trichloroethylene-induced pneumotoxicity in fetal and neonatal mice. Toxicology letters. 1994;73(3):227-39.

Davidson IW, Beliles RP. Consideration of the target organ toxicity of trichloroethylene in terms of metabolite toxicity and pharmacokinetics. Drug metabolism reviews. 1991;23(5-6):493-599.

Decrop M. Acute trichloroethylene poisoning. Maroc medical. 1951;30(311):451.

Defalque RJ. Pharmacology and toxicology of trichloroethylene. A critical review of the literature. Clinical pharmacology and therapeutics. 1961;2:665-88.

Derobert L. Death in addictive inhalation of trichloroethylene. Annales de medecine legale, criminologie, police scientifique et toxicologie. 1956;36(6):293-4.

Desoille H, Pinchon RA, Jans M, Bourguignon A. Acute experimental trichloroethylene poisoning aggravating effects of associated chronic alcoholic intoxication. Experimental electroencephalographic study in the rabbit. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1962;23:653-64.

Dimitrova M, Usheva G, Pavlova S. The work environment;s influence on the cardiovascular system. Polycardiographic investigations in workers exposed to trichloroethylene. Internationales Archiv fur Arbeitsmedizin. 1974;32(1):145-8.

Dmochowska-Mroczek H. Severe arrhythmia in a case of acute intoxication with trichloroethylene ("tri"). Kardiologia polska. 1972;15(3):343-5.

Dobrev ID, Andersen ME, Yang RSH. In silico toxicology: simulating interaction thresholds for human exposure to mixtures of trichloroethylene, tetrachloroethylene, and 1,1,1-trichloroethane. Environmental health perspectives. 2002;110(10):1031-9.

Dorfmueller MA, Henne SP, York RG, Bornschein RL, Manson JM. Evaluation of teratogenicity and behavioral toxicity with inhalation exposure of maternal rats to trichloroethylene. Toxicology. 1979;14(2):153-66.

Drake VJ, Koprowski SL, Hu N, Smith SM, Lough J. Cardiogenic effects of trichloroethylene and trichloroacetic acid following exposure during heart specification of avian development. Toxicological sciences : an official journal of the Society of Toxicology. 2006;94(1):153-62.

Drake VJ, Koprowski SL, Lough J, Hu N, Smith SM. Trichloroethylene exposure during cardiac valvuloseptal morphogenesis alters cushion formation and cardiac hemodynamics in the avian embryo. Environmental health perspectives. 2006;114(6):842-7.

Droz PO, Fernandez JG. Trichloroethylene exposure. Biological monitoring by breath and urine analyses. British journal of industrial medicine. 1978;35(1):35-42.

Ducluzeau R, Bouletreau P, Motin J, Vincent V, Demiaux JP, Rouzioux JM. Poisoning due to trichloroethylene. Lyon medical. 1967;217(21):1559-65.

DuTeaux SB, Berger T, Hess RA, Sartini BL, Miller MG. Male reproductive toxicity of trichloroethylene: sperm protein oxidation and decreased fertilizing ability. Biology of reproduction. 2004;70(5):1518-26.

El Ghawabi SM, Mansoor MB, El Gamel MS, El Saharti AA, El Enany FF. Chronic trichloroethylene exposure. The Journal of the Egyptian Medical Association. 1973;56(11-12):715-24.

el-Masri HA, Tessari JD, Yang RS. Exploration of an interaction threshold for the joint toxicity of trichloroethylene and 1,1-dichloroethylene: utilization of a PBPK model. Archives of toxicology. 1996;70(9):527-39.

Ertle T, Henschler D, Muller G, Spassowski M. Metabolism of trichloroethylene in man. I. The significance of trichloroethanol in long-term exposure conditions. Archiv fur Toxikologie. 1972;29(3):171-88.

Escallier F, Dalac S, Blettery B, Lambert D. Dermatosis caused by trichloroethylene in a drug addict. Presse medicale (Paris, France : 1983). 1987;16(17):833.

Ettema JH, Zielhuis RL, Burer E, Meier HA, Kleerekoper L, de Graaf MA. Effects of alcohol, carbon monoxide and trichloroethylene exposure on mental capacity. International archives of occupational and environmental health. 1975;35(2):117-32.

Eveleth DF, Goldsby AI. Toxicosis of chickens caused by trichloroethylene-extracted soybean meal. Journal of the American Veterinary Medical Association. 1953;123(916):38-9.

Eveleth DF, Holm GC. Feed toxicity similar to that caused by trichloroethylene-extracted soybean oil meal. Journal of the American Veterinary Medical Association. 1953;122(914):377-8.

Evreux JC, Ducluzeau R, Vincent V, Arcadio F, Motin J. Cardiac disorders in the course of acute poisoning by trichloroethylene. Experimental study of their treatment. Lyon medical. 1968;219(3):167-70 passim.

Evstaf'eva NI, Demin IM, Sheina NI, Kurnaeva VP, Kolbeneva LI. Morphofunctional changes in the main components of the endocrine system after combined exposure to noise and trichloroethylene. Gigiena truda i professional'nye zabolevaniia. 1986(11):15-9.

Fabre R, Truhaut R. Contribution to the study of the toxicity of trichloroethylene. I. Determination in biological media. British journal of industrial medicine. 1951;8(4):275-8.

Fabre R, Truhaut R. Contribution to the study of the toxicity of trichloroethylene. II. Results of experimental studies on animals. British journal of industrial medicine. 1952;9(1):39-43.

Fahrig R, Madle S, Baumann H. Genetic toxicology of trichloroethylene (TCE). Mutation research. 1995;340(1):1-36.

Fantuzzi G, Aggazzotti G, Righi E, Predieri G, Giacobazzi P, Kanitz S, et al. Exposure to organic halogen compounds in drinking water of 9 Italian regions: exposure to chlorites, chlorates, thrihalomethanes, trichloroethylene and tetrachloroethylene. Annali di igiene : medicina preventiva e di comunita. 2007;19(4):345-54.

Fechter LD, Liu Y, Herr DW, Crofton KM. Trichloroethylene ototoxicity: evidence for a cochlear origin. Toxicological sciences : an official journal of the Society of Toxicology. 1998;42(1):28-35.

Feldman RG, Chirico-Post J, Proctor SP. Blink reflex latency after exposure to trichloroethylene in well water. Archives of environmental health. 1988;43(2):143-8.

Feldman RG, Mayer RM, Taub A. Evidence for peripheral neurotoxic effect of trichloroethylene. Neurology. 1970;20(6):599-606.

Feldman RG, Niles C, Proctor SP, Jabre J. Blink reflex measurement of effects of trichloroethylene exposure on the trigeminal nerve. Muscle & nerve. 1992;15(4):490-5.

Feldman RG, White RF, Currie JN, Travers PH, Lessell S. Long-term follow-up after single toxic exposure to trichloroethylene. American journal of industrial medicine. 1985;8(2):119-26.

Fernandez JG, Droz PO, Humbert BE, Caperos JR. Trichloroethylene exposure. Simulation of uptake, excretion, and metabolism using a mathematical model. British journal of industrial medicine. 1977;34(1):43-55.

Fevotte J, Charbotel B, Muller-Beaute P, Martin J-L, Hours M, Bergeret A. Case-control study on renal cell cancer and occupational exposure to trichloroethylene. Part I: Exposure assessment. The Annals of occupational hygiene. 2006;50(8):765-75.

Fisher JW. Estimating the risks of liver and lung cancer in humans exposed to trichloroethylene using a physiological model. Toxicology letters. 1993;68(1-2):127-9.

Fisher JW, Allen BC. Evaluating the risk of liver cancer in humans exposed to trichloroethylene using physiological models. Risk analysis : an official publication of the Society for Risk Analysis. 1993;13(1):87-95.

Fisher JW, Whittaker TA, Taylor DH, Clewell HJ, 3rd, Andersen ME. Physiologically based pharmacokinetic modeling of the pregnant rat: a multiroute exposure model for trichloroethylene and its metabolite, trichloroacetic acid. Toxicology and applied pharmacology. 1989;99(3):395-414.

Fisher JW, Whittaker TA, Taylor DH, Clewell HJ, 3rd, Andersen ME. Physiologically based pharmacokinetic modeling of the lactating rat and nursing pup: a multiroute exposure model for trichloroethylene and its metabolite, trichloroacetic acid. Toxicology and applied pharmacology. 1990;102(3):497-513.

Forand SP, Lewis-Michl EL, Gomez MI. Adverse birth outcomes and maternal exposure to trichloroethylene and tetrachloroethylene through soil vapor intrusion in New York State. Environmental health perspectives. 2012;120(4):616-21.

Ford ES, Rhodes S, McDiarmid M, Schwartz SL, Brown J. Deaths from acute exposure to trichloroethylene. Journal of occupational and environmental medicine. 1995;37(6):749-54.

Forkert PG, Birch DW. Pulmonary toxicity of trichloroethylene in mice. Covalent binding and morphological manifestations. Drug metabolism and disposition: the biological fate of chemicals. 1989;17(1):106-13.

Forkert P-G, Lash LH, Nadeau V, Tardif R, Simmonds A. Metabolism and toxicity of trichloroethylene in epididymis and testis. Toxicology and applied pharmacology. 2002;182(3):244-54.

Forkert P-G, Lash L, Tardif R, Tanphaichitr N, Vandevoort C, Moussa M. Identification of trichloroethylene and its metabolites in human seminal fluid of workers exposed to trichloroethylene. Drug metabolism and disposition: the biological fate of chemicals. 2003;31(3):306-11.

Forkert P-G, Millen B, Lash LH, Putt DA, Ghanayem BI. Pulmonary bronchiolar cytotoxicity and formation of dichloroacetyl lysine protein adducts in mice treated with trichloroethylene. The Journal of pharmacology and experimental therapeutics. 2006;316(2):520-9.

Fort DJ, Stover EL, Rayburn JR, Hull M, Bantle JA. Evaluation of the developmental toxicity of trichloroethylene and detoxification metabolites using Xenopus. Teratogenesis, carcinogenesis, and mutagenesis. 1993;13(1):35-45.

Fossa AA, White JF, Carlson GP. Antiarrhythmic effects of disulfiram on epinephrine-induced cardiac arrhythmias in rabbits exposed to trichloroethylene. Toxicology and applied pharmacology. 1982;66(1):109-17.

Fournier E, Destee A, Furon D, Warot P. Unusual clinical aspects of a case of acute trichloroethylene poisoning. Physiopathological hypotheses. Lille medical : journal de la Faculte de medecine et de pharmacie de l'Universite de Lille. 1978;23(7):478-80.

Frant R, Westendorp J. Medical control on exposure of industrial workers to trichloroethylene. Archives of industrial hygiene and occupational medicine. 1950;1(3):308-18.

Friborska A. The phosphatases of peripheral white blood cells in workers exposed to trichloroethylene and perchloroethylene. British journal of industrial medicine. 1969;26(2):159-61.

Fujita H, Koizumi A, Yamamoto M, Kumai M, Sadamoto T, Ikeda M. Inhibition of delta-aminolevulinate dehydratase in trichloroethylene-exposed rats, and the effects on heme regulation. Biochimica et biophysica acta. 1984;800(1):1-10.

Fujita H, Nishitani C, Ogawa K. Regulatory heme and trichloroethylene intoxication: A possible explanation of the case of "A Civil Action". Environmental health and preventive medicine. 2002;7(3):103-12.

Gade A, Jensen HH. State-dependent learning during chronic trichloroethylene exposure. Scandinavian journal of work, environment & health. 1985;11(6):495-7.

Gamberale F, Annwall G, Olson BA. Exposure to trichloroethylene III. Psychological functions. Scandinavian journal of work, environment & health. 1976;2(4):220-4.

Garrel S, Barret L. Somatosensory evoked potentials of the trigeminal nerve in chronic trichloroethylene poisoning. Revue d'electroencephalographie et de neurophysiologie clinique. 1986;16(2):133-9.

Gash DM, Rutland K, Hudson NL, Sullivan PG, Bing G, Cass WA, et al. Trichloroethylene: Parkinsonism and complex 1 mitochondrial neurotoxicity. Annals of neurology. 2008;63(2):184-92.

Gazzaniga G, Crovato E. Biological measurements on humans as indices of exposure to trichloroethylene. Preliminary note. Bollettino della Societa italiana di biologia sperimentale. 1975;51(5):242-7.

Genevois M, Marin A. Lung diseases caused by phosgene in work exposed to trichloroethylene. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1957;18(3):307-8.

Gilbert KM, Bai S, Barnette D, Blossom SJ. Exposure Cessation During Adulthood Did Not Prevent Immunotoxicity Caused by Developmental Exposure to Low-Level Trichloroethylene in Drinking Water. Toxicological sciences : an official journal of the Society of Toxicology. 2017;157(2):429-37.

Gilbert KM, Blossom SJ, Erickson SW, Broadfoot B, West K, Bai S, et al. Chronic exposure to trichloroethylene increases DNA methylation of the Ifng promoter in CD4+ T cells. Toxicology letters. 2016;260:1-7.

Gilbert KM, Blossom SJ, Erickson SW, Reisfeld B, Zurlinden TJ, Broadfoot B, et al. Chronic exposure to water pollutant trichloroethylene increased epigenetic drift in CD4(+) T cells. Epigenomics. 2016;8(5):633-49.

Gilbert KM, Blossom SJ, Pumford NR. Comments on "Lifetime exposure to trichloroethylene (TCE) does not accelerate autoimmune disease in MRL+/- mice. Journal of environmental science and health Part A, Toxic/hazardous substances & environmental engineering. 2009;44(1):116; author reply 7-22.

Gilbert KM, Nelson AR, Cooney CA, Reisfeld B, Blossom SJ. Epigenetic alterations may regulate temporary reversal of CD4(+) T cell activation caused by trichloroethylene exposure. Toxicological sciences : an official journal of the Society of Toxicology. 2012;127(1):169-78.

Gilbert KM, Reisfeld B, Zurlinden TJ, Kreps MN, Erickson SW, Blossom SJ. Modeling toxicodynamic effects of trichloroethylene on liver in mouse model of autoimmune hepatitis. Toxicology and applied pharmacology. 2014;279(3):284-93.

Gilbert KM, Rowley B, Gomez-Acevedo H, Blossom SJ. Coexposure to mercury increases immunotoxicity of trichloroethylene. Toxicological sciences : an official journal of the Society of Toxicology. 2011;119(2):281-92.

Gilbert KM, Woodruff W, Blossom SJ. Differential immunotoxicity induced by two different windows of developmental trichloroethylene exposure. Autoimmune diseases. 2014;2014:982073.

Gimenez C. Trichloroethylene intoxication. Revue de l'infirmiere. 1991;41(17):47-8.

Gindre G, Le Gall S, Condat P, Bazin JE. Late ventricular fibrillation after trichloroethylene poisoning. Annales francaises d'anesthesie et de reanimation. 1997;16(2):202-3.

Goel SK, Rao GS, Pandya KP, Shanker R. Trichloroethylene toxicity in mice: a biochemical, hematological and pathological assessment. Indian journal of experimental biology. 1992;30(5):402-6.

Goeptar AR, Commandeur JN, van Ommen B, van Bladeren PJ, Vermeulen NP. Metabolism and kinetics of trichloroethylene in relation to toxicity and carcinogenicity. Relevance of the mercapturic acid pathway. Chemical research in toxicology. 1995;8(1):3-21.

Goh CL, Ng SK. A cutaneous manifestation of trichloroethylene toxicity. Contact dermatitis. 1988;18(1):59-61.

Goh VH, Chia SE, Ong CN. Effects of chronic exposure to low doses of trichloroethylene on steroid hormone and insulin levels in normal men. Environmental health perspectives. 1998;106(1):41-4.

Goldsworthy TL, Lyght O, Burnett VL, Popp JA. Potential role of alpha-2 mu-globulin, protein droplet accumulation, and cell replication in the renal carcinogenicity of rats exposed to trichloroethylene, perchloroethylene, and pentachloroethane. Toxicology and applied pharmacology. 1988;96(2):367-79.

Grandjean E. THE EFFECTS OF SHORT EXPOSURES TO TRICHLOROETHYLENE ON SWIMMING PERFORMANCES AND MOTOR ACTIVITY OF RATS. American Industrial Hygiene Association journal. 1963;24:376-9.

Graovac Leposavic L, Milosavljevic Z, Ilic V. LIVER FUNCTION TESTS IN WORKERS EXPOSED TO TRICHLOROETHYLENE. Arhiv za higijenu rada i toksikologiju. 1964;15:93-7.

Green LC, Lash TL. Re: "Renal cell cancer correlated with occupational exposure to trichloroethylene". Journal of cancer research and clinical oncology. 1999;125(7):430-2.

Green T. Pulmonary toxicity and carcinogenicity of trichloroethylene: species differences and modes of action. Environmental health perspectives. 2000;108 Suppl 2:261-4.

Green T, Dow J, Ellis MK, Foster JR, Odum J. The role of glutathione conjugation in the development of kidney tumours in rats exposed to trichloroethylene. Chemico-biological interactions. 1997;105(2):99-117.

Green T, Dow J, Foster JR, Hext PM. Formic acid excretion in rats exposed to trichloroethylene: a possible explanation for renal toxicity in long-term studies. Toxicology. 1998;127(1-3):39-47.

Green T, Dow J, Ong CN, Ng V, Ong HY, Zhuang ZX, et al. Biological monitoring of kidney function among workers occupationally exposed to trichloroethylene. Occupational and environmental medicine. 2004;61(4):312-7.

Green T, Dow J, Foster J. Increased formic acid excretion and the development of kidney toxicity in rats following chronic dosing with trichloroethanol, a major metabolite of trichloroethylene. Toxicology. 2003;191(2-3):109-19.

Greim H, Wolff T, Hofler M, Lahaniatis E. Formation of dichloroacetylene from trichloroethylene in the presence of alkaline material--possible cause of intoxication after abundant use of chloroethylene-containing solvents. Archives of toxicology. 1984;56(2):74-7.

Guberan E. Proposed biological threshold limit values for industrial exposure to trichloroethylene vapor. Scandinavian journal of work, environment & health. 1977;3(2):80-90.

Guyotjeannin C. Biological changes observed in workers exposed to vapors of trichloroethylene. Cahiers de medecine interprofessionnelle. 1962;2:33.

Guyotjeannin C, Guyotjeannin N. Study of blood coagulation in workers exposed to trichloroethylene vapors. Folia medica Folia medica (Naples, Italy). 1959;42:924-9.

Haddad S, Tardif G-C, Tardif R. Development of physiologically based toxicokinetic models for improving the human indoor exposure assessment to water contaminants: trichloroethylene and trihalomethanes. Journal of toxicology and environmental health Part A. 2006;69(23):2095-136.

Hadengue A, Facquet J, Colvez P, Jullien JL. Intoxication by nitrobenzene and trichloroethylene. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1960;21:43-5.

Halsey KH, Sayavedra-Soto LA, Bottomley PJ, Arp DJ. Trichloroethylene degradation by butane-oxidizing bacteria causes a spectrum of toxic effects. Applied microbiology and biotechnology. 2005;68(6):794-801.

Hansen BL, Isager H. A scleroderma-resembling disease--exposure to trichloroethylene and trichloroethane, is there a causal connection? Ugeskrift for laeger. 1988;150(13):805.

Hansen J, Raaschou-Nielsen O, Christensen JM, Johansen I, McLaughlin JK, Lipworth L, et al. Cancer incidence among Danish workers exposed to trichloroethylene. Journal of occupational and environmental medicine. 2001;43(2):133-9.

Hansen J, Sallmen M, Selden AI, Anttila A, Pukkala E, Andersson K, et al. Risk of cancer among workers exposed to trichloroethylene: analysis of three Nordic cohort studies. Journal of the National Cancer Institute. 2013;105(12):869-77.

Hantson P, Vandenplas O, Dive A, Mahieu P. Trichloroethylene and cardiac toxicity: report of two consecutive cases. Acta clinica Belgica. 1990;45(1):34-7.

Hanusova V, Michalova C. Considerations on the higher nervous function and on various humoral aspects in workers exposed to trichloroethylene. Casopis lekaru ceskych. 1956;95(42):1167-72.

Hayashi N, Igarashi A, Matsuyama T, Harada S. Eosinophilic fasciitis following exposure to trichloroethylene: successful treatment with cyclosporin. The British journal of dermatology. 2000;142(4):830-2.

Heald S, Jenkins RO. Trichloroethylene removal and oxidation toxicity mediated by toluene dioxygenase of Pseudomonas putida. Applied and environmental microbiology. 1994;60(12):4634-7.

Healy TE, Poole TR, Hopper A. Rat fetal development and maternal exposure to trichloroethylene 100 p.p.m. British journal of anaesthesia. 1982;54(3):337-41.

Heining P, Hoffmann RW. Light- and electron microscopical studies on the prolonged toxicity of trichloroethylene on rainbow trout (Oncorhynchus mykiss). Experimental and toxicologic pathology : official journal of the Gesellschaft fur Toxikologische Pathologie. 1993;45(2-3):167-76.

Hellweg S, Demou E, Scheringer M, McKone TE, Hungerbuhler K. Confronting workplace exposure to chemicals with LCA: examples of trichloroethylene and perchloroethylene in metal degreasing and dry cleaning. Environmental science & technology. 2005;39(19):7741-8.

Hendriksen PJM, Freidig AP, Jonker D, Thissen U, Bogaards JJP, Mumtaz MM, et al. Transcriptomics analysis of interactive effects of benzene, trichloroethylene and methyl mercury within binary and ternary mixtures on the liver and kidney following subchronic exposure in the rat. Toxicology and applied pharmacology. 2007;225(2):171-88.

Henry SM, Grbic-Galic D. Influence of endogenous and exogenous electron donors and trichloroethylene oxidation toxicity on trichloroethylene oxidation by methanotrophic cultures from a groundwater aquifer. Applied and environmental microbiology. 1991;57(1):236-44.

Hermann H. Cardiac syncope from toxic association of trichloroethylene with adrenaline. Anesthesie et analgesie. 1950;7(2):227-8.

Heydari M, Ahmadizadeh M, Ahmadi Angali K. Ameliorative effect of vitamin E on trichloroethylene-induced nephrotoxicity in rats. Journal of nephropathology. 2017;6(3):168-73.

Hisanaga N, Jonai H, Yu X, Ogawa Y, Mori I, Kamijima M, et al. Stevens-Johnson syndrome accompanied by acute hepatitis in workers exposed to trichloroethylene or tetrachloroethylene. Sangyo eiseigaku zasshi = Journal of occupational health. 2002;44(2):33-49.

Hobara T, Kobayashi H, Higashihara E, Kawamoto T, Sakai T. Experimental studies of trichloroethylene toxicity. Part I. The absorption and excretion of trichloroethylene by the lungs. Nihon eiseigaku zasshi Japanese journal of hygiene. 1982;37(5):820-6.

Hobara T, Kobayashi H, Higashihara E, Kawamoto T, Sakai T. Experimental studies of trichloroethylene toxicity. II. Changes in trichloroethylene metabolites in blood serum and in urine during and after exposure to trichloroethylene. Nihon eiseigaku zasshi Japanese journal of hygiene. 1983;38(4):772-9.

Hong W-X, Huang A, Lin S, Yang X, Yang L, Zhou L, et al. Differential expression profile of membrane proteins in L-02 cells exposed to trichloroethylene. Toxicology and industrial health. 2016;32(10):1774-83.

Honma T, Hasegawa H, Sato M, Sudo A. Changes of free amino acid content in rat brain after exposure to trichloroethylene and tetrachloroethylene. Industrial health. 1980;18(1):1-7.

Honma T, Sudo A, Miyagawa M, Sato M, Hasegawa H. Effects of exposure to trichloroethylene and tetrachloroethylene on the contents of acetylcholine, dopamine, norepinephrine and serotonin in rat brain. Industrial health. 1980;18(4):171-8.

Hosgood HD, 3rd, Zhang L, Tang X, Vermeulen R, Qiu C, Shen M, et al. Decreased Numbers of CD4(+) Naive and Effector Memory T Cells, and CD8(+) Naive T Cells, are Associated with Trichloroethylene Exposure. Frontiers in oncology. 2011;1:53.

Houde M, Douville M, Gagnon P, Sproull J, Cloutier F. Exposure of Daphnia magna to trichloroethylene (TCE) and vinyl chloride (VC): evaluation of gene transcription, cellular activity, and life-history parameters. Ecotoxicology and environmental safety. 2015;116:10-8.

Hu C, Jiang L, Geng C, Zhang X, Cao J, Zhong L. Possible involvement of oxidative stress in trichloroethylene-induced genotoxicity in human HepG2 cells. Mutation research. 2008;652(1):88-94.

Huang H, Kamijima M, Wang H, Li S, Yoshikawa T, Lai G, et al. Human herpesvirus 6 reactivation in trichloroethylene-exposed workers suffering from generalized skin disorders accompanied by hepatic dysfunction. Journal of occupational health. 2006;48(6):417-23.

Huang P, Li X, Liu W, Liu J. Advances in non-carcinogenic toxicity of trichloroethylene. Zhonghua yu fang yi xue za zhi [Chinese journal of preventive medicine]. 2015;49(9):844-8.

Hubner G, Pannier R, Behning I, Schulz G. Results of biological exposure tests in relation to passive dosimetry measurements of room air concentrations in occupational exposure to trichloroethylene at metal cleaning sites. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1987;33(6):296-9.

Humperdinck K. Toxic effect of trichloroethylene on liver. Medizinische Klinik. 1951;46(43):1129-30.

Iavicoli I, Marinaccio A, Carelli G. Effects of occupational trichloroethylene exposure on cytokine levels in workers. Journal of occupational and environmental medicine. 2005;47(5):453-7.

Ikeda M, Otsuji H, Imamura T, Komoike Y. Urinary excretion of total trichloro-compounds, trichloroethanol, and trichloroacetic acid as a measure of exposure to trichloroethylene and tetrachloroethylene. British journal of industrial medicine. 1972;29(3):328-33.

Ikeda T, Kishi R, Miyake H. Effects of long term exposure to trichloroethylene on learning behaviour in rats. Developments in toxicology and environmental science. 1980;8:91-4.

Ikeda T, Nagano C, Okada A. Hepatotoxic effect of trichloroethylene and perchloroethylene in rats and mice. Igaku to seibutsugaku Medicine and biology. 1969;79(3):123-9.

Imbriani M, Niu Q, Negri S, Ghittori S. Trichloroethylene in urine as biological exposure index. Industrial health. 2001;39(3):225-30.

Inderjit, Asakawa C, Kakuta H. Phytotoxicity and fate of 1,1,2-trichloroethylene: a laboratory study. Journal of chemical ecology. 2003;29(6):1329-35.

Inoue O, Seiji K, Kawai T, Jin C, Liu YT, Chen Z, et al. Relationship between vapor exposure and urinary metabolite excretion among workers exposed to trichloroethylene. American journal of industrial medicine. 1989;15(1):103-10.

Irving RM, Pinkerton ME, Elfarra AA. Characterization of the chemical reactivity and nephrotoxicity of N-acetyl-S-(1,2-dichlorovinyl)-L-cysteine sulfoxide, a potential reactive metabolite of trichloroethylene. Toxicology and applied pharmacology. 2013;267(1):1-10.

Isaacson LG, Taylor DH. Maternal exposure to 1,1,2-trichloroethylene affects myelin in the hippocampal formation of the developing rat. Brain research. 1989;488(1-2):403-7.

Ishida H, Nakamura K. Trichloroethylene degradation by Ralstonia sp. KN1-10A constitutively expressing phenol hydroxylase: transformation products, NADH limitation, and product toxicity. Journal of bioscience and bioengineering. 2000;89(5):438-45.

Jaspers RM, Muijser H, Lammers JH, Kulig BM. Mid-frequency hearing loss and reduction of acoustic startle responding in rats following trichloroethylene exposure. Neurotoxicology and teratology. 1993;15(6):407-12.

Jiang Y, Chen J, Tong J, Chen T. Transcriptomic profiling of trichloroethylene exposure in male mouse liver. Genomics data. 2015;3:140-2.

Jiang Y, Wang D, Zhang G, Wang G, Tong J, Chen T. Disruption of cardiogenesis in human embryonic stem cells exposed to trichloroethylene. Environmental toxicology. 2016;31(11):1372-80.

Jimeno Valdes A, Canas Canas MT, Jimeno Bulnes N, Ruiz Corral I. A case of toxic psychosis caused by trichloroethylene. Archivos de neurobiologia. 1989;52(4):198-202.

Jouglard J, Ohresser P, Gerin J, Laurent Y, Terrasson de Fougeres P. Acute trichloroethylene poisoning. Marseille medical. 1970;107(11):879-90.

Juntunen J. Occupational toxicology of trichloroethylene with special reference to neurotoxicity. Developments in toxicology and environmental science. 1986;12:189-200.

Kadry AM, Farghali H, Abdel-Rahman MS. Toxicity and metabolism of trichloroethylene in rat hepatocytes. Archives of environmental contamination and toxicology. 1989;18(6):888-94.

Kadry AM, Turkall RM, Skowronski GA, Abdel-Rahman MS. Soil adsorption alters kinetics and bioavailability of trichloroethylene in orally exposed female rats. Toxicology letters. 1991;58(3):337-46.

Kamijima M, Hisanaga N, Wang H, Nakajima T. Occupational trichloroethylene exposure as a cause of idiosyncratic generalized skin disorders and accompanying hepatitis similar to drug hypersensitivities. International archives of occupational and environmental health. 2007;80(5):357-70.

Kan FWK, Forkert PG, Wade MG. Trichloroethylene exposure elicits damage in epididymal epithelium and spermatozoa in mice. Histology and histopathology. 2007;22(9):977-88.

Kaneko T, Saegusa M, Tasaka K, Sato A. Immunotoxicity of trichloroethylene: a study with MRL-lpr/lpr mice. Journal of applied toxicology : JAT. 2000;20(6):471-5.

Kanje M, Kjellstrand P, Fex K, Walldorf A. Neurotransmitter metabolizing enzymes and plasma butyrylcholinesterase in mice exposed to trichloroethylene. Acta pharmacologica et toxicologica. 1981;49(3):205-9.

Karami S, Bassig B, Stewart PA, Lee K-M, Rothman N, Moore LE, et al. Occupational trichloroethylene exposure and risk of lymphatic and haematopoietic cancers: a meta-analysis. Occupational and environmental medicine. 2013;70(8):591-9.

Karami S, Lan Q, Rothman N, Stewart PA, Lee K-M, Vermeulen R, et al. Occupational trichloroethylene exposure and kidney cancer risk: a meta-analysis. Occupational and environmental medicine. 2012;69(12):858-67.

Kato H, Nakazawa Y. Carbon tetrachloride and trichloroethylene toxicities to rat hepatocytes in primary monolayer culture: its relationship to the level of cytochrome P-450. Toxicology letters. 1986;34(1):55-66.

Kay RW. Survey of toxic hazards during vapour degreasing with trichloroethylene and 1,1,1-trichloroethane. The Annals of occupational hygiene. 1973;16(4):417-9.

Kefalas V, Stacey NH. Potentiation of carbon tetrachloride-induced lipid peroxidation by trichloroethylene in isolated rat hepatocytes: no role in enhanced toxicity. Toxicology and applied pharmacology. 1989;101(1):158-69.

Kefalas V, Stacey NH. Use of primary cultures of rat hepatocytes to study interactive toxicity: Carbon tetrachloride and trichloroethylene. Toxicology in vitro : an international journal published in association with BIBRA. 1993;7(3):235-40.

Keil DE, Peden-Adams MM, Wallace S, Ruiz P, Gilkeson GS. Assessment of trichloroethylene (TCE) exposure in murine strains genetically-prone and non-prone to develop autoimmune disease. Journal of environmental science and health Part A, Toxic/hazardous substances & environmental engineering. 2009;44(5):443-53.

Keller DA, Heck HD. Mechanistic studies on chloral toxicity: relationship to trichloroethylene carcinogenesis. Toxicology letters. 1988;42(2):183-91.

Kelsh MA, Alexander DD, Mink PJ, Mandel JH. Occupational trichloroethylene exposure and kidney cancer: a meta-analysis. Epidemiology (Cambridge, Mass). 2010;21(1):95-102.

Keshava N, Caldwell JC. Key issues in the role of peroxisome proliferator-activated receptor agonism and cell signaling in trichloroethylene toxicity. Environmental health perspectives. 2006;114(9):1464-70.

Khan S, Priyamvada S, Khan SA, Khan W, Farooq N, Khan F, et al. Effect of trichloroethylene (TCE) toxicity on the enzymes of carbohydrate metabolism, brush border membrane and oxidative stress in kidney and other rat tissues. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2009;47(7):1562-8.

Kilburn KH, Warshaw RH. Prevalence of symptoms of systemic lupus erythematosus (SLE) and of fluorescent antinuclear antibodies associated with chronic exposure to trichloroethylene and other chemicals in well water. Environmental research. 1992;57(1):1-9.

Kilburn KH. Is neurotoxicity associated with environmental trichloroethylene (TCE)? Archives of environmental health. 2002;57(2):113-20.

Kim I, Ha J, Lee J-H, Yoo K-M, Rho J. The Relationship between the Occupational Exposure of Trichloroethylene and Kidney Cancer. Annals of occupational and environmental medicine. 2014;26:12.

Kimmerle G, Eben A. Metabolism, excretion and toxicology of trichloroethylene after inhalation. 1. Experimental exposure on rats. Archiv fur Toxikologie. 1973;30(2):115-26.

Kimmerle G, Eben A. Metabolism, excretion and toxicology of trichloroethylene after inhalation. 2. Experimental human exposure. Archiv fur Toxikologie. 1973;30(2):127-38.

Kirkpatrick R. Trichloroethylene exposure. American family physician. 1993;47(8):1713; author reply 4.

Kitahara M. A case report of pneumatosis cystoides intestinalis accompanied with gastric ulcer resulting from occupational trichloroethylene exposure. Sangyo igaku Japanese journal of industrial health. 1987;29(5):388-9.

Kjellstrand P. Comment on the interpretation of effects caused by chronic trichloroethylene exposure. Scandinavian journal of work, environment & health. 1986;12(2):154-5.

Kjellstrand P, Bjerkemo M, Mortensen I, Mansson L, Lanke J, Holmquist B. Effects of long-term exposure to trichloroethylene on the behavior of Mongolian gerbils (Meriones unguiculatus). Journal of toxicology and environmental health. 1981;8(5-6):787-93.

Kjellstrand P, Kanje M, Bjerkemo M. Regeneration of the sciatic nerve in mice and rats exposed to trichloroethylene. Toxicology letters. 1987;38(1-2):187-91.

Kjellstrand P, Lanke J, Bjerkemo M, Zetterqvist L, Mansson L. Irreversible effects of trichloroethylene exposure on the central nervous system. Scandinavian journal of work, environment & health. 1980;6(1):40-7.

Kjellstrand P, Mansson L, Bjerkemo M, Lanke J, Holmquist B, Zetterqvist L. Sensitivity of Mongolian gerbils to trichloroethylene exposure during neonatal growth. Toxicology letters. 1982;14(1-2):97-101.

Kleinfeld M, Tabershaw IR. Trichloroethylene toxicity; report of five fatal cases. AMA archives of industrial hygiene and occupational medicine. 1954;10(2):134-41.

Kligerman AD, Bryant MF, Doerr CL, Erexson GL, Evansky PA, Kwanyuen P, et al. Inhalation studies of the genotoxicity of trichloroethylene to rodents. Mutation research. 1994;322(2):87-96.

Konietzko H, Elster I. Toxic effects on heart of trichloroethylene (author's transl). Archiv fur Toxikologie. 1973;31(1):93-8.

Konietzko H, Elster I, Bencsath A, Drysch K, Weichardt H. EEG changes under standardized trichloroethylene load (author's transl). International archives of occupational and environmental health. 1975;35(3-4):257-64.

Kopec AK, Sullivan BP, Kassel KM, Joshi N, Luyendyk JP. Toxicogenomic analysis reveals profibrogenic effects of trichloroethylene in autoimmune-mediated cholangitis in mice. Toxicological sciences : an official journal of the Society of Toxicology. 2014;141(2):515-23.

Kukongviriyapan V, Simajareuk S, Kukongviriyapan U, Cha-on U, Airarat W. Alteration of drug kinetics in rats following exposure to trichloroethylene. Pharmacology. 2001;63(2):90-4.

Kulig BM. The effects of chronic trichloroethylene exposure on neurobehavioral functioning in the rat. Neurotoxicology and teratology. 1987;9(2):171-8.

Kumagai S, Ota H. A degreasing worker with pneumatosis cystoides intestinalis caused by trichloroethylene exposure. Sangyo eiseigaku zasshi = Journal of occupational health. 2015;57(2):33-6.

Kumar M, Tewari S, Sharma P, Verma VK, Chauhan LKS, Agarwal SK, et al. Study of genetic polymorphism in solvent exposed population and its correlation to in vitro effect of trichloroethylene on lymphocytes. Journal of environmental biology. 2009;30(5):685-91.

Kumar P, Prasad AK, Dutta KK. Steroidogenic alterations in testes and sera of rats exposed to trichloroethylene (TCE) by inhalation. Human & experimental toxicology. 2000;19(2):117-21.

Kumar P, Prasad AK, Mani U, Maji BK, Dutta KK. Trichloroethylene induced testicular toxicity in rats exposed by inhalation. Human & experimental toxicology. 2001;20(11):585-9.

Kurihara Y, Yokogi K, Suzuki S, Wada T, Igari H, Obara K, et al. A survey for the detection of trichloroacetic acid (TCA) from urine of workers exposed to perchloroethylene (PE) and clinical study on three cases with pneumatosis cystoides coli (PCC) caused by chronic exposure to trichloroethylene (TE). Nihon Shokakibyo Gakkai zasshi = The Japanese journal of gastro-enterology. 1986;83(8):1455-60.

Kurihara Y, Yokogi K, Terashima K, Suzuki S, Wada T, Igari H, et al. Pneumatosis cystoides intestinalis in the colon which seemed to be caused by chronic exposure to trichloroethylene--a case report. Nihon Shokakibyo Gakkai zasshi = The Japanese journal of gastro-enterology. 1985;82(6):1580-4.

Kylin B, Reichard H, Suemegi I, Yllner S. HEPATOTOXICITY OF INHALED TRICHLOROETHYLENE, TETRACHLOROETHYLENE AND CHLOROFORM. SINGLE EXPOSURE. Acta pharmacologica et toxicologica. 1963;20:16-26.

Kyrklund T, Alling C, Haglid K, Kjellstand P. Chronic exposure to trichloroethylene: lipid and acyl group composition in gerbil cerebral cortex and hippocampus. Neurotoxicology. 1983;4(4):35-42.

Kyrklund T, Alling C, Kjellstrand P, Haglid KG. Fatty acid composition of ethanolamine phosphoglycerides in different areas of the gerbil brain after chronic exposure to trichloroethylene. Neurochemical pathology. 1985;3(3):151-8.

Kyrklund T, Kjellstrand P, Haglid KG. Fatty acid changes in rat brain ethanolamine phosphoglycerides during and following chronic exposure to trichloroethylene. Toxicology and applied pharmacology. 1986;85(2):145-53.

Lamb JC, Hentz KL. Toxicological review of male reproductive effects and trichloroethylene exposure: assessing the relevance to human male reproductive health. Reproductive toxicology (Elmsford, NY). 2006;22(4):557-63.

Lamotte M, Caroit M, Nathan JK. Case of acute poisoning caused by trichloroethylene with liver steatosis. La semaine des hopitaux : organe fonde par l'Association d'enseignement medical des hopitaux de Paris. 1956;32(16):913-5.

Lan Q, Zhang L, Tang X, Shen M, Smith MT, Qiu C, et al. Occupational exposure to trichloroethylene is associated with a decline in lymphocyte subsets and soluble CD27 and CD30 markers. Carcinogenesis. 2010;31(9):1592-6.

Landriault H, Sirois G, Chakrabarti S, Cote MG. Effect of cimetidine on hepatic biochemical changes, liver toxicity and major urinary metabolite excretion of trichloroethylene in rats. Journal of applied toxicology : JAT. 1989;9(2):75-81.

Landrigan PJ, Kominsky JR, Stein GF, Ruhe RL, Watanabe AS. Common-source community and industrial exposure to trichloroethylene. Archives of environmental health. 1987;42(6):327-32.

Lapare S, Tardif R, Brodeur J. Effect of various exposure scenarios on the biological monitoring of organic solvents in alveolar air. II. 1,1,1-Trichloroethane and trichloroethylene. International archives of occupational and environmental health. 1995;67(6):375-94.

Lash LH, Putt DA, Brashear WT, Abbas R, Parker JC, Fisher JW. Identification of S-(1,2-dichlorovinyl)glutathione in the blood of human volunteers exposed to trichloroethylene. Journal of toxicology and environmental health Part A. 1999;56(1):1-21.

Lash LH, Qian W, Putt DA, Hueni SE, Elfarra AA, Krause RJ, et al. Renal and hepatic toxicity of trichloroethylene and its glutathione-derived metabolites in rats and mice: sex-, species-, and tissue-dependent differences. The Journal of pharmacology and experimental therapeutics. 2001;297(1):155-64.

Lash LH, Xu Y, Elfarra AA, Duescher RJ, Parker JC. Glutathione-dependent metabolism of trichloroethylene in isolated liver and kidney cells of rats and its role in mitochondrial and cellular toxicity. Drug metabolism and disposition: the biological fate of chemicals. 1995;23(8):846-53.

Lash LH, Chiu WA, Guyton KZ, Rusyn I. Trichloroethylene biotransformation and its role in mutagenicity, carcinogenicity and target organ toxicity. Mutation research Reviews in mutation research. 2014;762:22-36.

Lash LH, Putt DA, Huang P, Hueni SE, Parker JC. Modulation of hepatic and renal metabolism and toxicity of trichloroethylene and perchloroethylene by alterations in status of cytochrome P450 and glutathione. Toxicology. 2007;235(1-2):11-26.

Lash LH, Putt DA, Hueni SE, Horwitz BP. Molecular markers of trichloroethylene-induced toxicity in human kidney cells. Toxicology and applied pharmacology. 2005;206(2):157-68.

Lash LH, Putt DA, Hueni SE, Payton SG, Zwickl J. Interactive toxicity of inorganic mercury and trichloroethylene in rat and human proximal tubules: effects on apoptosis, necrosis, and glutathione status. Toxicology and applied pharmacology. 2007;221(3):349-62.

Lash TL, Green LC. Blink reflex measurement of effects of trichloroethylene exposure on the trigeminal nerve. Muscle & nerve. 1993;16(2):217-20.

Lawrence WH, Partyka EK. Chronic dysphagia and trigeminal anesthesia after trichloroethylene exposure. Annals of internal medicine. 1981;95(6):710.

Leandri M, Schizzi R, Scielzo C, Favale E. Electrophysiological evidence of trigeminal root damage after trichloroethylene exposure. Muscle & nerve. 1995;18(4):467-8.

Lee J-H, Kim I, Seok H, Park I, Hwang J, Park J-O, et al. Case report of renal cell carcinoma in automobile manufacturing factory worker due to trichloroethylene exposure in Korea. Annals of occupational and environmental medicine. 2015;27:19.

Lefevre MJ, Mormont R, Close F. Prevention of intoxications by continuous determination of trichloroethylene and perchloroethylene in the atmosphere. Archives belges de medecine sociale, hygiene, medecine du travail et medecine legale Belgisch archief van sociale geneeskunde, hygiene, arbeidsgeneeskunde en gerechtelijke geneeskunde. 1965;23(3):145-61.

Lefrou L, Barbieux J-P, Barbieux C, Metman E-H. Cystic pneumatosis of the colon and professional trichloroethylene exposure. Gastroenterologie clinique et biologique. 2007;31(12):1072-3.

Liao RY, Liu S. Toxic effect of trichloroethylene on liver cells with CYP3A4 gene defect. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2016;34(6):421-5.

Lilis R, Stanescu D, Muica N, Roventa A. Chronic effects of trichloroethylene exposure. La Medicina del lavoro. 1969;60(10):595-601.

Liu YT, Jin C, Chen Z, Cai SX, Yin SN, Li GL, et al. Increased subjective symptom prevalence among workers exposed to trichloroethylene at sub-OEL levels. The Tohoku journal of experimental medicine. 1988;155(2):183-95.

Liu Y, Bartlett MG, White CA, Muralidhara S, Bruckner JV. Presystemic elimination of trichloroethylene in rats following environmentally relevant oral exposures. Drug metabolism and disposition: the biological fate of chemicals. 2009;37(10):1994-8.

Lock EA, Barth JL, Argraves SW, Schnellmann RG. Changes in gene expression in human renal proximal tubule cells exposed to low concentrations of S-(1,2-dichlorovinyl)-l-cysteine, a metabolite of trichloroethylene. Toxicology and applied pharmacology. 2006;216(2):319-30.

Lock EA, Reed CJ. Trichloroethylene: mechanisms of renal toxicity and renal cancer and relevance to risk assessment. Toxicological sciences : an official journal of the Society of Toxicology. 2006;91(2):313-31.

Lockey JE, Kelly CR, Cannon GW, Colby TV, Aldrich V, Livingston GK. Progressive systemic sclerosis associated with exposure to trichloroethylene. Journal of occupational medicine : official publication of the Industrial Medical Association. 1987;29(6):493-6.

Lowry LK, Vandervort R, Polakoff PL. Biological indicators of occupational exposure to trichloroethylene. Journal of occupational medicine : official publication of the Industrial Medical Association. 1974;16(2):98-101.

Lu SQ. Excretion of trichloroacetic acid (TCA) in urine of workers exposed to trichloroethylene. Zhonghua yu fang yi xue za zhi [Chinese journal of preventive medicine]. 1991;25(5):262-4.

Lu W, Chen Z, Ren X, Liu W, Deng R, Yuan J, et al. SET promotes H2Ak9 acetylation by suppressing HDAC1 in trichloroethylene-induced hepatic cytotoxicity. Environmental toxicology and pharmacology. 2018;59:125-31.

Lukavsky J, Furnadzhieva S, Dittrt F. Toxicity of trichloroethylene (TCE) on some algae and cyanobacteria. Bulletin of environmental contamination and toxicology. 2011;86(2):226-31.

Luo Y-S, Furuya S, Soldatov VY, Kosyk O, Yoo HS, Fukushima H, et al. Metabolism and Toxicity of Trichloroethylene and Tetrachloroethylene in Cytochrome P450 2E1 Knockout and Humanized Transgenic Mice. Toxicological sciences : an official journal of the Society of Toxicology. 2018.

Luria E, Meneghini R. On a case of toxicomania due to trichloroethylene inhalation. Giornale di psichiatria e di neuropatologia. 1965;93(3):743-57.

Luvoni R, Penzani B. Toxic action of trichloroethylene on the eye. Rassegna di medicina industriale e di igiene del lavoro. 1955;24(1):27-40.

Hinton MRSIWAVDE. Cytochrome P450 1A- and stress protein-induction in early life stages of medaka (Oryzias latipes) exposed to trichloroethylene (TCE) soot and different fractions. Biomarkers : biochemical indicators of exposure, response, and susceptibility to chemicals. 2001;6(2):133-45.

Makris SL, Scott CS, Fox J, Knudsen TB, Hotchkiss AK, Arzuaga X, et al. A systematic evaluation of the potential effects of trichloroethylene exposure on cardiac development. Reproductive toxicology (Elmsford, NY). 2016;65:321-58.

Makwana O, King NMP, Ahles L, Selmin O, Granzier HL, Runyan RB. Exposure to low-dose trichloroethylene alters shear stress gene expression and function in the developing chick heart. Cardiovascular toxicology. 2010;10(2):100-7.

Manasiev E, Iliev N. Problems and symptoms of dependence in the exposure to trichloroethylene. Arhiv za higijenu rada i toksikologiju. 1976;27(4):313-20.

Mandel JH, Kelsh MA, Mink PJ, Alexander DD, Kalmes RM, Weingart M, et al. Occupational trichloroethylene exposure and non-Hodgkin's lymphoma: a meta-analysis and review. Occupational and environmental medicine. 2006;63(9):597-607.

Mandel JH, Kelsh M, Mink PJ, Alexander DD. Trichloroethylene exposure and non-Hodgkin's lymphoma: supportive evidence. Occupational and environmental medicine. 2008;65(2):147-8.

Mandel JS. Renal cell cancer correlated with occupational exposure to trichloroethylene. Journal of cancer research and clinical oncology. 2001;127(4):265-8.

Manson JM, Murphy M, Richdale N, Smith MK. Effects of oral exposure to trichloroethylene on female reproductive function. Toxicology. 1984;32(3):229-42.

Marti T. Atypical chronic trichloroethylene poisoning. Acta medicinae legalis et socialis. 1953;6(1-2):123-40.

Martin SA, Simmons MB, Ortiz-Serrano M, Kendrick C, Gallo A, Campbell J, et al. Environmental exposure of a community to airborne trichloroethylene. Archives of environmental & occupational health. 2005;60(6):314-6.

Martinelli P, Gulli MR, Gabellini AS. Acute intoxication of trichloroethylene with complete recovery: a case report. Italian journal of neurological sciences. 1984;5(4):469.

Maslia ML, Aral MM, Williams RC, Williams-Fleetwood S, Hayes LC, Wilder LC. Use of computational models to reconstruct and predict trichloroethylene exposure. Toxicology and industrial health. 1996;12(2):139-52.

Mazza V, Brancaccio A, Elmino O. Kidney function in experimental intoxication with trichloroethylene. Folia medica Folia medica (Naples, Italy). 1968;51(4):282-8.

Mellerio F. Electroencephalographic modifications during acute trichloroethylene intoxications. Revue neurologique. 1969;121(3):363-4.

Melnick RL, Jameson CW, Goehl TJ, Kuhn GO. Application of microencapsulation for toxicology studies. I. Principles and stabilization of trichloroethylene in gelatin-sorbitol microcapsules. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1987;8(4):425-31.

Melnick RL, Jameson CW, Goehl TJ, Maronpot RR, Collins BJ, Greenwell A, et al. Application of microencapsulation for toxicology studies. II. Toxicity of microencapsulated trichloroethylene in Fischer 344 rats. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1987;8(4):432-42.

Mensing T, Welge P, Voss B, Fels LM, Fricke HH, Bruning T, et al. Renal toxicity after chronic inhalation exposure of rats to trichloroethylene. Toxicology letters. 2002;128(1-3):243-7.

Merrick BA, Robinson M, Condie LW. Differing hepatotoxicity and lethality after subacute trichloroethylene exposure in aqueous or corn oil gavage vehicles in B6C3F1 mice. Journal of applied toxicology : JAT. 1989;9(1):15-21.

Mhiri C, Choyakh F, Ben Hmida M, Feki I, Ben Messaud M, Zouari N. Trigeminal somatosensory evoked potentials in trichloroethylene-exposed workers. Neurosciences (Riyadh, Saudi Arabia). 2004;9(2):102-7.

Michaux P, Delevay-Le Gueut M. 3 cases of death in trichloroethylene addicts. Acta medicinae legalis et socialis. 1980;30(3):89-94.

Milby TH. Chronic trichloroethylene intoxication. Journal of occupational medicine : official publication of the Industrial Medical Association. 1968;10(5):252-4.

Mishima N, Hoffman S, Hill EG, Krug EL. Chick embryos exposed to trichloroethylene in an ex ovo culture model show selective defects in early endocardial cushion tissue formation. Birth defects research Part A, Clinical and molecular teratology. 2006;76(7):517-27.

Mochida K, Saito K. Toxicity assessment of tetrachloroethylene, trichloroethylene and 1,1,1-trichloroethane using human and monkey cells. Bulletin of environmental contamination and toxicology. 1985;35(5):593-5.

Mollaret P, Rapin M, Plainfosse B. A case of trichloroethylene poisoning treated with hyperventilation induced by inhalation of air rich in carbon dioxide. Bulletins et memoires de la Societe medicale des hopitaux de Paris. 1958;74(22-23):502-5.

Monster AC. Difference in uptake, elimination, and metabolism in exposure to trichloroethylene, 1,1,1-trichloroethane and tetrachloroethylene. International archives of occupational and environmental health. 1979;42(3-4):311-7.

Monster AC, Boersma G, Duba WC. Pharmacokinetics of trichloroethylene in volunteers, influence of workload and exposure concentration. International archives of occupational and environmental health. 1976;38(2):87-102.

Monster AC, Boersma G, Duba WC. Kinetics of trichloroethylene in repeated exposure of volunteers. International archives of occupational and environmental health. 1979;42(3-4):283-92.

Moore LE, Boffetta P, Karami S, Brennan P, Stewart PS, Hung R, et al. Occupational trichloroethylene exposure and renal carcinoma risk: evidence of genetic susceptibility by reductive metabolism gene variants. Cancer research. 2010;70(16):6527-36.

Morgan JW, Cassady RE. Community cancer assessment in response to long-time exposure to perchlorate and trichloroethylene in drinking water. Journal of occupational and environmental medicine. 2002;44(7):616-21.

Morgan RW, Kelsh MA, Zhao K, Heringer S. Mortality of aerospace workers exposed to trichloroethylene. Epidemiology (Cambridge, Mass). 1998;9(4):424-31.

Morimatsu Y, Ishitake T, Irie K, Hara K, Sakamoto T, Aizawa H. Acute pulmonary injury due to exposure to a high concentration of trichloroethylene vapor. Journal of occupational health. 2006;48(4):271-2.

Mosinger M, Fiorentini H. Hepatic, renal, ganglionic, and splenic reactions to experimental trichloroethylene poisoning in cat. Comptes rendus des seances de la Societe de biologie et de ses filiales. 1955;149(1-2):150-2.

Moslen MT, Reynolds ES, Szabo S. Enhancement of the metabolism and hepatotoxicity of trichloroethylene and perchloroethylene. Biochemical pharmacology. 1977;26(5):369-75.

Motohashi Y, Kawakami T, Miyazaki Y, Takano T, Ekataksin W. Circadian variations in trichloroethylene toxicity under a 12:12 hr light-dark cycle and their alterations under constant darkness in rats. Toxicology and applied pharmacology. 1990;104(1):139-48.

Muller G, Spassovski M, Henschler D. Trichloroethylene exposure and trichloroethylene metabolites in urine and blood. Archiv fur Toxikologie. 1972;29(4):335-40.

Murata K, Inoue O, Akutsu M, Iwata T. Neuromotor effects of short-term and long-term exposures to trichloroethylene in workers. American journal of industrial medicine. 2010;53(9):915-21.

Mutez E, Le Rhun E, Perriol MP, Soto Ares G, Pecheux N, Destee A, et al. Trichloroethylene intoxication presenting with temporal seizures. Revue neurologique. 2006;162(12):1248-51.

Nagaya T, Ishikawa N, Hata H. Sister-chromatid exchanges in lymphocytes of workers exposed to trichloroethylene. Mutation research. 1989;222(3):279-82.

Nagaya T, Ishikawa N, Hata H. Urinary total protein and beta-2-microglobulin in workers exposed to trichloroethylene. Environmental research. 1989;50(1):86-92.

Nagaya T, Ishikawa N, Hata H. No change in serum dopamine-beta-hydroxylase activity in workers exposed to trichloroethylene. Toxicology letters. 1990;54(2-3):221-7.

Nagaya T, Ishikawa N, Hata H, Otobe T. Subclinical and reversible hepatic effects of occupational exposure to trichloroethylene. International archives of occupational and environmental health. 1993;64(8):561-3.

Nakajima T, Okino T, Kurasawa K, Murayama N, Sato A. Chemical burns, bradycardia, extrasystolic arrhythmia and unconsciousness caused by accidental trichloroethylene exposure. Sangyo igaku Japanese journal of industrial health. 1987;29(1):72-3.

Nakajima T, Okino T, Okuyama S, Kaneko T, Yonekura I, Sato A. Ethanol-induced enhancement of trichloroethylene metabolism and hepatotoxicity: difference from the effect of phenobarbital. Toxicology and applied pharmacology. 1988;94(2):227-37.

Nakajima T, Wang H, Ito Y, Naito H, Wang D, Zhao N, et al. Exposure reconstruction of trichloroethylene among patients with occupational trichloroethylene hypersensitivity syndrome. Industrial health. 2018.

Nakajima T, Yamanoshita O, Kamijima M, Kishi R, Ichihara G. Generalized skin reactions in relation to trichloroethylene exposure: a review from the viewpoint of drug-metabolizing enzymes. Journal of occupational health. 2003;45(1):8-14.

Nakayama H, Kobayashi M, Takahashi M, Ageishi Y, Takano T. Generalized eruption with severe liver dysfunction associated with occupational exposure to trichloroethylene. Contact dermatitis. 1988;19(1):48-51.

Nakayama Y, Kishida F, Nakatsuka I, Matsuo M. Simulation of the toxicokinetics of trichloroethylene, methylene chloride, styrene and n-hexane by a toxicokinetics/toxicodynamics model using experimental data. Environmental sciences : an international journal of environmental physiology and toxicology. 2005;12(1):21-32.

Narotsky MG, Weller EA, Chinchilli VM, Kavlock RJ. Nonadditive developmental toxicity in mixtures of trichloroethylene, Di(2-ethylhexyl) phthalate, and heptachlor in a 5 x 5 x 5 design. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1995;27(2):203-16.

Neghab M, Qu S, Bai CL, Caples J, Stacey NH. Raised concentration of serum bile acids following occupational exposure to halogenated solvents, 1,1,2-trichloro-1,2,2-trifluoroethane and trichloroethylene. International archives of occupational and environmental health. 1997;70(3):187-94.

Noland-Gerbec EA, Pfohl RJ, Taylor DH, Bull RJ. 2-Deoxyglucose uptake in the developing rat brain upon pre- and postnatal exposure to trichloroethylene. Neurotoxicology. 1986;7(3):157-64.

Nomiyama K. Estimation of trichloroethylene exposure by biological materials. Internationales Archiv fur Arbeitsmedizin. 1971;27(4):281-92.

Nowill WK, Stephen CR, Margolis G. The chronic toxicity of trichloroethylene: a study. Anesthesiology. 1954;15(5):462-5.

Nunes J, Ehrich M, Robertson J. Toxicosis associated with dual oral exposure of rats to lead and trichloroethylene. Toxicologic pathology. 2001;29(4):451-7.

O'Donnell GE, Juska A, Geyer R, Faiz M, Stalder S. Analysis of trichloroacetic acid in the urine of workers occupationally exposed to trichloroethylene by capillary gas chromatography. Journal of chromatography A. 1995;709(2):313-7.

Odum J, Foster JR, Green T. A mechanism for the development of Clara cell lesions in the mouse lung after exposure to trichloroethylene. Chemico-biological interactions. 1992;83(2):135-53.

Ogata M, Kihara T, Kamoi T, Taguchi T, Oka J, Kenmotsu K. A report of a worker suffering from pneumatosis cystoides intestinalis following trichloroethylene exposure. Industrial health. 1988;26(3):179-82.

Ogata M, Shimada Y, Taguchi T. A new microdetermination method used in an analysis of the excretion of trichloro-compounds in the urine of workers exposed to trichloroethylene vapour. Industrial health. 1987;25(3):103-12.

Ogata M, Takatsuka Y, Tomokuni K. A simple method for the quantitative analysis of urinary trichloroethanol and trichloroacetic acid as an index of trichloroethylene exposure. British journal of industrial medicine. 1970;27(4):378-81.

Ogata M, Takatsuka Y, Tomokuni K. Excretion of organic chlorine compounds in the urine of persons exposed to vapours of trichloroethylene and tetrachloroethylene. British journal of industrial medicine. 1971;28(4):386-91.

Ogata M, Yamazaki Y. Quantitative determination of urinary trichloroacetic acid as an index of trichloroethylene exposure by high performance liquid chromatography. Acta medica Okayama. 1979;33(6):479-81.

Okino T, Nakajima T, Nakano M. Morphological and biochemical analyses of trichloroethylene hepatotoxicity: differences in ethanol- and phenobarbital-pretreated rats. Toxicology and applied pharmacology. 1991;108(3):379-89.

Oldenhuis R, Oedzes JY, van der Waarde JJ, Janssen DB. Kinetics of chlorinated hydrocarbon degradation by Methylosinus trichosporium OB3b and toxicity of trichloroethylene. Applied and environmental microbiology. 1991;57(1):7-14.

Ordaz JD, Damayanti NP, Irudayaraj JMK. Toxicological effects of trichloroethylene exposure on immune disorders. Immunopharmacology and immunotoxicology. 2017;39(6):305-17.

Ornigotti L, Verna N, Veneri L, Zecchi G. Investigation on a group of workers exposed to trichloroethylene: evaluation of environmental exposure and urine metabolites (author's transl). La Medicina del lavoro. 1980;71(5):388-96.

Oshiro WM, Krantz QT, Bushnell PJ. A search for residual behavioral effects of trichloroethylene (TCE) in rats exposed as young adults. Neurotoxicology and teratology. 2004;26(2):239-51.

Otsuki N, Homma T, Fujiwara H, Kaneko K, Hozumi Y, Shichiri M, et al. Trichloroethylene exposure aggravates behavioral abnormalities in mice that are deficient in superoxide dismutase. Regulatory toxicology and pharmacology : RTP. 2016;79:83-90.

Pantucharoensri S, Boontee P, Likhitsan P, Padungtod C, Prasartsansoui S. Generalized eruption accompanied by hepatitis in two Thai metal cleaners exposed to trichloroethylene. Industrial health. 2004;42(3):385-8.

Parker DR. Application of trichloroacetic acid level in urine as a measure of trichloroethylene vapor exposure. TID-4500. SC-M-67-431. SC [reports] US Atomic Energy Commission. 1967:1-10.

Peden-Adams MM, Eudaly JG, Heesemann LM, Smythe J, Miller J, Gilkeson GS, et al. Developmental immunotoxicity of trichloroethylene (TCE): studies in B6C3F1 mice. Journal of environmental science and health Part A, Toxic/hazardous substances & environmental engineering. 2006;41(3):249-71.

Peden-Adams MM, Eudaly JG, Lee AM, Miller J, Keil DE, Gilkeson GS. Lifetime exposure to trichloroethylene (TCE) does not accelerate autoimmune disease in MRL +/+ mice. Journal of environmental science and health Part A, Toxic/hazardous substances & environmental engineering. 2008;43(12):1402-9.

Perticoni GF, Bondi L. Acute neurotoxicity after trichloroethylene ingestion. Case report. Italian journal of neurological sciences. 1988;9(2):165-6.

Pessayre D, Cobert B, Descatoire V, Degott C, Babany G, Funck-Brentano C, et al. Hepatotoxicity of trichloroethylene-carbon tetrachloride mixtures in rats. A possible consequence of the potentiation by trichloroethylene of carbon tetrachloride-induced lipid peroxidation and liver lesions. Gastroenterology. 1982;83(4):761-72.

Phoon WH, Chan MO, Rajan VS, Tan KJ, Thirumoorthy T, Goh CL. Stevens-Johnson syndrome associated with occupational exposure to trichloroethylene. Contact dermatitis. 1984;10(5):270-6.

Pistelli A, Masini E, Caramelli L, Botti P, Peruzzi S, Zorn AM, et al. Acute toxicity of trichloroethylene. Description of a case series at the Autonomous Service of Toxicology of Florence during the 1977-1988 period. La Clinica terapeutica. 1990;135(3):173-80.

Pralong P, Cavailhes A, Balme B, Cottin V, Skowron F. Diffuse systemic sclerosis after occupational exposure to trichloroethylene and perchloroethylene. Annales de dermatologie et de venereologie. 2009;136(10):713-7.

Priest RJ, Horn RC, Jr. TRICHLOROETHYLENE INTOXICATION. A CASE OF ACUTE HEPATIC NECROSIS POSSIBLY DUE TO THIS AGENT. Archives of environmental health. 1965;11:361-5.

Pritchard WR, Hammer R, Sautter JH, Schultze MO. Studies on trichloroethylene-extracted feeds. IV. Susceptibility of the horse to the toxic factor in trichloroethylene-extracted soybean oil meal. American journal of veterinary research. 1956;17(64):441-3.

Pritchard WR, Mattson WE, Sautter JH, Schultze MO. Studies on trichloroethylene-extracted feeds. III. The use of young calves for study of various aspects of toxicity of trichloroethylene-extracted soybean oil meal. American journal of veterinary research. 1956;17(64):437-41.

Pritchard WR, Mattson WE, Sautter JH, Schultze MO. Studies on trichloroethylene-extracted feeds. V. Failure to demonstrate the presence of a toxic factor in the milk of cows fed toxic specimens of trichloroethylene-extracted soybean oil meal. American journal of veterinary research. 1956;17(64):444-5.

Purdue MP, Bakke B, Stewart P, De Roos AJ, Schenk M, Lynch CF, et al. A case-control study of occupational exposure to trichloroethylene and non-Hodgkin lymphoma. Environmental health perspectives. 2011;119(2):232-8.

Raaschou-Nielsen O, Hansen J, Christensen JM, Blot WJ, McLaughlin JK, Olsen JH. Urinary concentrations of trichloroacetic acid in Danish workers exposed to trichloroethylene, 1947-1985. American journal of industrial medicine. 2001;39(3):320-7.

Raaschou-Nielsen O, Hansen J, Thomsen BL, Johansen I, Lipworth L, McLaughlin JK, et al. Exposure of Danish workers to trichloroethylene, 1947-1989. Applied occupational and environmental hygiene. 2002;17(10):693-703.

Radican L, Blair A, Stewart P, Wartenberg D. Mortality of aircraft maintenance workers exposed to trichloroethylene and other hydrocarbons and chemicals: extended follow-up. Journal of occupational and environmental medicine. 2008;50(11):1306-19.

Radican L, Wartenberg D, Rhoads GG, Schneider D, Wedeen R, Stewart P, et al. A retrospective occupational cohort study of end-stage renal disease in aircraft workers exposed to trichloroethylene and other hydrocarbons. Journal of occupational and environmental medicine. 2006;48(1):1-12.

Ramdhan DH, Kamijima M, Yamada N, Ito Y, Yanagiba Y, Nakamura D, et al. Molecular mechanism of trichloroethylene-induced hepatotoxicity mediated by CYP2E1. Toxicology and applied pharmacology. 2008;231(3):300-7.

Rasmussen K, Sabroe S, Wohlert M, Ingerslev HJ, Kappel B, Nielsen J. A genotoxic study of metal workers exposed to trichloroethylene. Sperm parameters and chromosome aberrations in lymphocytes. International archives of occupational and environmental health. 1988;60(6):419-23.

Rastkari N, Yunesian M, Ahmadkhaniha R. Exposure assessment to trichloroethylene and perchloroethylene for workers in the dry cleaning industry. Bulletin of environmental contamination and toxicology. 2011;86(4):363-7.

Ray JL, Kopec AK, Joshi N, Cline-Fedewa H, Lash LH, Williams KJ, et al. Trichloroethylene Exposure Reduces Liver Injury in a Mouse Model of Primary Biliary Cholangitis. Toxicological sciences : an official journal of the Society of Toxicology. 2017;156(2):428-37.

Rebert CS, Day VL, Matteucci MJ, Pryor GT. Sensory-evoked potentials in rats chronically exposed to trichloroethylene: predominant auditory dysfunction. Neurotoxicology and teratology. 1991;13(1):83-90.

Reif JS, Burch JB, Nuckols JR, Metzger L, Ellington D, Anger WK. Neurobehavioral effects of exposure to trichloroethylene through a municipal water supply. Environmental research. 2003;93(3):248-58.

Ren X, Li J, Xia B, Liu W, Yang X, Hong W-X, et al. Phosphoproteomic analyses of L-02 liver cells exposed to trichloroethylene. Toxicology mechanisms and methods. 2015;25(6):459-66.

Ren X, Yang X, Hong W-X, Huang P, Wang Y, Liu W, et al. Identification of the proteins related to SET-mediated hepatic cytotoxicity of trichloroethylene by proteomic analysis. Toxicology letters. 2014;227(1):12-9.

Rendoing J, Seys GA, Manceaux JC, Choisy H. Accidental group intoxication by trichloroethylene vapors. European journal of toxicology and hygiene of environment. 1973;6(6):284-5.

Reynolds ES, Moslen MT. Metabolic activation and hepatotoxicity of trichloroethylene. Advances in experimental medicine and biology. 1981;136 Pt A:693-701.

Rhomberg L. The a posteriori probability of a kidney cancer cluster attributed to trichloroethylene exposure. Environmental health perspectives. 2002;110(5):A232.

Rivoire J, Genevois M, Tolot F. Elimination of trichloroacetic acid in subjects exposed to trichloroethylene. Results of the routine use of this method in an industrial plant. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1962;23:395-9.

Roche L. Respiratory intoxication with phosgene in workers exposed to trichloroethylene. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1953;14(1):66-7.

Roche L, Lejeune E, Riffat G. Acute trichloroethylene poisoning. Lyon medical. 1958;90(46):769-78 passim.

Roche L, Lejeune E, Riffat G. Acute trichloroethylene poisoning; clinical & toxicological study; 12 case reports. Annales de medecine legale, criminologie, police scientifique et toxicologie. 1958;38(6):356-63.

Roche L, Saury A, Girard R. Diagnostic difficulties of the benign trichloroethylene poisoning. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1966;27(9):700-2.

Rodenbeck SE, Sanderson LM, Rene A. Maternal exposure to trichloroethylene in drinking water and birth-weight outcomes. Archives of environmental health. 2000;55(3):188-94.

Roger H. Painless anesthesia of the trigeminal nerve of recurrent and alternating type; possible intoxication by trichloroethylene. Concours medical. 1953;75(47):3959-63.

Rosa C. Exposure to trichloroethylene in an insignia manufacturing facility. Applied occupational and environmental hygiene. 2003;18(9):646-8.

Rossi L, Grandjean E. Conditioned fugue reaction in rats after repeated exposure to trichloroethylene. Folia medica Folia medica (Naples, Italy). 1959;42(1):21-34.

Rouisse L, Chakrabarti SK. Dose-dependent metabolism of trichloroethylene and its relevance to hepatotoxicity in rats. Environmental research. 1986;40(2):450-8.

Rufer ES, Hacker TA, Flentke GR, Drake VJ, Brody MJ, Lough J, et al. Altered cardiac function and ventricular septal defect in avian embryos exposed to low-dose trichloroethylene. Toxicological sciences : an official journal of the Society of Toxicology. 2010;113(2):444-52.

Sagawa K, Nishitani H, Kawai H, Kuge Y, Ikeda M. Transverse lesion of spinal cord after accidental exposure to trichloroethylene. Internationales Archiv fur Arbeitsmedizin. 1973;31(4):257-64.

Saillenfait AM, Langonne I, Sabate JP. Developmental toxicity of trichloroethylene, tetrachloroethylene and four of their metabolites in rat whole embryo culture. Archives of toxicology. 1995;70(2):71-82.

Salvini M, Binaschi S, Riva M. Evaluation of the psychophysiological functions in humans exposed to trichloroethylene. British journal of industrial medicine. 1971;28(3):293-5.

Sanders VM, Tucker AN, White KL, Jr., Kauffmann BM, Hallett P, Carchman RA, et al. Humoral and cell-mediated immune status in mice exposed to trichloroethylene in the drinking water. Toxicology and applied pharmacology. 1982;62(3):358-68.

Sano Y, Nakashima H, Yoshioka N, Etho N, Nomiyama T, Nishiwaki Y, et al. Trichloroethylene liver toxicity in mouse and rat: microarray analysis reveals species differences in gene expression. Archives of toxicology. 2009;83(9):835-49.

Sanz P, Prat A, Reig R, Borras L, Corbella J. Trichloroethylene poisoning. Presentation of 3 cases and review of the literature. Revista de medicina de la Universidad de Navarra. 1988;32(4):204-7.

Sanz P, Nogue S, Vilchez D, Salvado E, Casal A, Logroscino G. Myoclonic encephalopathy after exposure to trichloroethylene. Industrial health. 2008;46(6):635-7.

Sato A. Accumulation kinetics of trichloroethylene and its metabolites during multiple exposures. A theoretical study (author's transl). Sangyo igaku Japanese journal of industrial health. 1979;21(4):361-5.

Sato A, Endoh K, Kaneko T, Johanson G. Effects of consumption of ethanol on the biological monitoring of exposure to organic solvent vapours: a simulation study with trichloroethylene. British journal of industrial medicine. 1991;48(8):548-56.

Sato A, Nakajima T. Differences following skin or inhalation exposure in the absorption and excretion kinetics of trichloroethylene and toluene. British journal of industrial medicine. 1978;35(1):43-9.

Sato A, Nakajima T, Fujiwara Y, Murayama N. A pharmacokinetic model to study the excretion of trichloroethylene and its metabolites after an inhalation exposure. British journal of industrial medicine. 1977;34(1):56-63.

Sato A, Yamaguchi K, Nakajima T. Occupational trichloroethylene exposure causes pneumatosis cystoides intestinalis? Sangyo igaku Japanese journal of industrial health. 1986;28(1):57-62.

Sauerbeck A, Hunter R, Bing G, Sullivan PG. Traumatic brain injury and trichloroethylene exposure interact and produce functional, histological, and mitochondrial deficits. Experimental neurology. 2012;234(1):85-94.

Schattner A, Malnick SD. Anicteric hepatitis and uveitis in a worker exposed to trichloroethylene. Postgraduate medical journal. 1990;66(779):730-1.

Schilling E, Siegemund A, Gorisch V. Serum enzymes in toxicity of trichloroethylene after subchronic ethanol pretreatment. Archives of toxicology Supplement = Archiv fur Toxikologie Supplement. 1985;8:409-11.

Schraml P, Zhaou M, Richter J, Bruning T, Pommer M, Sauter G, et al. Analysis of kidney tumors in trichloroethylene exposed workers by comparative genomic hybridization and DNA sequence analysis. Verhandlungen der Deutschen Gesellschaft fur Pathologie. 1999;83:218-24.

Schuttmann W. Liver damage in occupational exposure to trichloroethylene. Deutsche Zeitschrift fur Verdauungs- und Stoffwechselkrankheiten. 1970;30(1):43-5.

Scialli AR, Gibb H. Trichloroethylene exposure and congenital heart defects. Birth defects research Part A, Clinical and molecular teratology. 2005;73(4):255; author reply 6-7.

Scott JE, Forkert PG, Oulton M, Rasmusson MG, Temple S, Fraser MO, et al. Pulmonary toxicity of trichloroethylene: induction of changes in surfactant phospholipids and phospholipase A2 activity in the mouse lung. Experimental and molecular pathology. 1988;49(1):141-50.

Seiji K, Inoue O, Jin C, Liu YT, Cai SX, Ohashi M, et al. Dose-excretion relationship in tetrachloroethylene-exposed workers and the effect of tetrachloroethylene co-exposure on trichloroethylene metabolism. American journal of industrial medicine. 1989;16(6):675-84.

Seiji K, Jin C, Watanabe T, Nakatsuka H, Ikeda M. Sister chromatid exchanges in peripheral lymphocytes of workers exposed to benzene, trichloroethylene, or tetrachloroethylene, with reference to smoking habits. International archives of occupational and environmental health. 1990;62(2):171-6.

Selden A, Hultberg B, Ulander A, Ahlborg G, Jr. Trichloroethylene exposure in vapour degreasing and the urinary excretion of N-acetyl-beta-D-glucosaminidase. Archives of toxicology. 1993;67(3):224-6.

Selgrade MK, Gilmour MI. Suppression of pulmonary host defenses and enhanced susceptibility to respiratory bacterial infection in mice following inhalation exposure to trichloroethylene and chloroform. Journal of immunotoxicology. 2010;7(4):350-6.

Senft V. Simple determination of trichloroacetic acid in urine using head space gas chromatography: a suitable method for monitoring exposure to trichloroethylene. Journal of chromatography. 1985;337(1):126-30.

Shih CL, Chen HH, Chiu TH. Acute exposure to trichloroethylene differentially alters the susceptibility to chemoconvulsants in mice. Toxicology. 2001;162(1):35-42.

Shipman AJ, Whim BP. Occupational exposure to trichloroethylene in metal cleaning processes and to tetrachloroethylene in the drycleaning industry in the U.K. The Annals of occupational hygiene. 1980;23(2):197-204.

Shusterman D. Trichloroethylene exposure. American family physician. 1993;47(8):1713-4.

Siddiqi A, Nafees S, Rashid S, Sultana S, Saidullah B. Hesperidin ameliorates trichloroethylene-induced nephrotoxicity by abrogation of oxidative stress and apoptosis in wistar rats. Molecular and cellular biochemistry. 2015;406(1-2):9-20.

Siggins A, Enright A-M, Abram F, Botting C, O'Flaherty V. Impact of trichloroethylene exposure on the microbial diversity and protein expression in anaerobic granular biomass at 37°C and 15°C. Archaea (Vancouver, BC). 2012;2012:940159.

Silverman AP, Williams H. Behaviour of rats exposed to trichloroethylene vapour. British journal of industrial medicine. 1975;32(4):308-15.

Simmons JH, Moss IM. Measurement of personal exposure to 1,1,1-trichloroethane and trichloroethylene using an inexpensive sampling device and battery-operated pump. The Annals of occupational hygiene. 1973;16(1):47-9.

Singh R, Olson MS. Kinetics of trichloroethylene and toluene toxicity to Pseudomonas putida F1. Environmental toxicology and chemistry. 2010;29(1):56-63.

Singthong S, Pakkong P, Choosang K, Wongsanit S. Occupational health risks among trichloroethylene-exposed workers in a clock manufacturing factory. Global journal of health science. 2014;7(1):161-72.

Skender LJ, Karacic V, Prpic-Majic D. A comparative study of human levels of trichloroethylene and tetrachloroethylene after occupational exposure. Archives of environmental health. 1991;46(3):174-8.

Skender L, Karacic V, Bosner B, Prpic-Majic D. Assessment of exposure to trichloroethylene and tetrachloroethylene in the population of Zagreb, Croatia. International archives of occupational and environmental health. 1993;65(1 Suppl):S163-5.

Skender L, Karacic V, Bosner B, Prpic-Majic D. Assessment of urban population exposure to trichloroethylene and tetrachloroethylene by means of biological monitoring. Archives of environmental health. 1994;49(6):445-51.

Skender L, Karacic V, Prpic-Majic D. Metabolic activity of antipyrine in workers occupationally exposed to trichloroethylene. International archives of occupational and environmental health. 1988;61(3):189-95.

Sohn MD, McKone TE, Blancato JN. Reconstructing population exposures from dose biomarkers: inhalation of trichloroethylene (TCE) as a case study. Journal of exposure analysis and environmental epidemiology. 2004;14(3):204-13.

Soni MG, Mangipudy RS, Mumtaz MM, Mehendale HM. Tissue repair response as a function of dose during trichloroethylene hepatotoxicity. Toxicological sciences : an official journal of the Society of Toxicology. 1998;42(2):158-65.

Stacey NH. Toxicity of mixtures of trichloroethylene, tetrachloroethylene and 1,1,1-trichloroethane: similarity of in vitro to in vivo responses. Toxicology and industrial health. 1989;5(3):441-50.

Starek A. Effect of trichloroethylene on metabolism and toxicology of benzene in rats. Folia medica Cracoviensia. 1991;32(3-4):169-84.

Stettiner HM, Gomes JR, Colacioppo S. Risk of occupational poisoning by trichloroethylene during grease removal operation in the county of Sao Paulo, Brazil. Revista de saude publica. 1977;11(3):395-,404.

Steup DR, Wiersma D, McMillan DA, Sipes IG. Pretreatment with drinking water solutions containing trichloroethylene or chloroform enhances the hepatotoxicity of carbon tetrachloride in Fischer 344 rats. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1991;16(4):798-809.

Stewart RD, Dodd HC, Gay HH, Erley DS. Experimental human exposure to trichloroethylene. Archives of environmental health. 1970;20(1):64-71.

Stewart RD, Gay HH, Erley DS, Hake CL, Peterson JE. Observations on the concentrations of trichloroethylene in blood and expired air following exposure of humans. American Industrial Hygiene Association journal. 1962;23:167-70.

Stewart RD, Hake CL, Peterson JE. Use of breath analysis to monitor trichloroethylene exposures. Archives of environmental health. 1974;29(1):6-13.

Stewart RD, Sadek SE, Swank JD, Dodd HC. DIAGNOSIS OF TRICHLOROETHYLENE EXPOSURE AFTER DEATH. Archives of pathology. 1964;77:101-4.

Stracciari A, Gallassi R, Ciardulli C, Coccagna G. Neuropsychological and EEG evaluation in exposure to trichloroethylene. Journal of neurology. 1985;232(2):120-2.

Styblova V. Neurological studies of workers exposed to trichloroethylene. Pracovni lekarstvi. 1955;7(5):260-3.

Suciu I, Olinici L. Hepato-renal involvement in acute occupational trichloroethylene intoxication. La Medicina del lavoro. 1983;74(2):123-8.

Suzuki S, Suzuki K, Hirata K. Pictures in clinical medicine. Brain magnetic resonance imaging in chronic trichloroethylene and toluene exposure. Internal medicine (Tokyo, Japan). 2009;48(10):861-2.

Swaen GM. Increased incidence of renal cell tumours in a cohort of cardboard workers exposed to trichloroethylene. Archives of toxicology. 1995;70(2):127-8, 31-3.

Szafranek K, Szafranek J. Delirium in the course of trichloroethylene intoxication. Psychiatria polska. 1974;8(2):216.

Tabrez S, Ahmad M. Toxicity, biomarkers, genotoxicity, and carcinogenicity of trichloroethylene and its metabolites: a review. Journal of environmental science and health Part C, Environmental carcinogenesis & ecotoxicology reviews. 2009;27(3):178-96.

Tabrez S, Ahmad M. Genotoxicity of trichloroethylene in the natural milieu. International journal of hygiene and environmental health. 2012;215(3):333-8.

Takeuchi Y, Iwata M, Hisanaga N, Ono Y, Shibata E, Huang J, et al. Polyneuropathy caused by chronic exposure to trichloroethylene. Industrial health. 1986;24(4):243-7.

Taylor DH, Lagory KE, Zaccaro DJ, Pfohl RJ, Laurie RD. Effect of trichloroethylene on the exploratory and locomotor activity of rats exposed during development. The Science of the total environment. 1985;47:415-20.

Teisinger J, Styblova V, Vlachova D. Importance of determination of urinary trichloroethanol in workers exposed to trichloroethylene. Pracovni lekarstvi. 1955;7(5):258-60.

Tesone PA. Pathology of trichloroethylene poisoning: relation to internal medicine. Prensa medica argentina. 1958;45(1):174-9.

Thiele DL, Eigenbrodt EH, Ware AJ. Cirrhosis after repeated trichloroethylene and 1,1,1-trichloroethane exposure. Gastroenterology. 1982;83(4):926-9.

Tola S, Vilhunen R, Jarvinen E, Korkala ML. A cohort study on workers exposed to trichloroethylene. Journal of occupational medicine : official publication of the Industrial Medical Association. 1980;22(11):737-40.

Tolot F, Viallier J, Roullet A, Rivoire J, Figueres JC. HEPATIC TOXICITY OF TRICHLOROETHYLENE. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1964;25:9-15.

Toraason M, Clark J, Dankovic D, Mathias P, Skaggs S, Walker C, et al. Oxidative stress and DNA damage in Fischer rats following acute exposure to trichloroethylene or perchloroethylene. Toxicology. 1999;138(1):43-53.

Toyooka T, Yanagiba Y, Ibuki Y, Wang R-S. Trichloroethylene exposure results in the phosphorylation of histone H2AX in a human hepatic cell line through cytochrome P450 2E1-mediated oxidative stress. Journal of applied toxicology : JAT. 2018.

Triebig G, Lehrl S, Kinzel W, Erzigkeit H, Galster JV, Schaller KH. Psychopathometrical results of follow-up studies of trichloroethylene-exposed persons (author's transl). Zentralblatt fur Bakteriologie, Parasitenkunde, Infektionskrankheiten und Hygiene Erste Abteilung Originale Reihe B: Hygiene, praventive Medizin. 1977;164(4):314-77.

Triebig G, Reichenbach T, Flugel KA. Biochemical examinations and measurements of conduction velocity of trichloroethylene exposed persons (author's transl). International archives of occupational and environmental health. 1978;42(1):31-40.

Triebig G, Schaller KH, Erzigkeit H, Valentin H. Biochemical investigations and psychological studies of persons chronically exposed to trichloroethylene with regard to non-exposure intervals (author's transl). International archives of occupational and environmental health. 1977;38(3):149-62.

Triebig G, Trautner P, Weltle D, Saure E, Valentin H. Investigations on neurotoxicity of chemical substances at the workplace. III. Determination of the motor and sensory nerve conduction velocity in persons occupationally exposed to trichloroethylene. International archives of occupational and environmental health. 1982;51(1):25-34.

Troster AI, Ruff RM. Neuropsychological sequelae of exposure to the chlorinated hydrocarbon solvents trichloroethylene and trichloroethane. Archives of clinical neuropsychology : the official journal of the National Academy of Neuropsychologists. 1990;5(1):31-47.

Truhaut R. Contribution to the study of toxicology of trichloroethylene; establishment of a method of determination applicable to atmosphere and biological media. Annales pharmaceutiques francaises. 1951;9(3):175-87.

Truhaut R, Boudene C, Bister Miel F. USE OF A PORTABLE APPARATUS IN THE CONTINUOUS DETERMINATION OF THE EXPOSURE OF AN INDIVIDUAL TO TRICHLOROETHYLENE IN INDUSTRY. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1964;25:577-82.

Tucker AN, Sanders VM, Barnes DW, Bradshaw TJ, White KL, Jr., Sain LE, et al. Toxicology of trichloroethylene in the mouse. Toxicology and applied pharmacology. 1982;62(3):351-7.

Ulander A, Selden A, Ahlborg G, Jr. Assessment of intermittent trichloroethylene exposure in vapor degreasing. American Industrial Hygiene Association journal. 1992;53(11):742-3.

Utidjian HM. Criteria for a recommended standard. Occupational exposure to trichloroethylene. I. Recommendations for a trichloroethylene standard. Journal of occupational medicine : official publication of the Industrial Medical Association. 1974;16(3):192-4.

Vainio H, Savolainen H, Pfaffli P. Biochemical and toxicological effects of combined exposure to 1,1,1-trichloroethane and trichloroethylene on rat liver and brain. Xenobiotica; the fate of foreign compounds in biological systems. 1978;8(3):191-6.

Van Nostrand JD, Khijniak TJ, Neely B, Sattar MA, Sowder AG, Mills G, et al. Reduction of nickel and uranium toxicity and enhanced trichloroethylene degradation to Burkholderia vietnamiensis PR1301 with hydroxyapatite amendment. Environmental science & technology. 2007;41(6):1877-82.

Van Vliet AG. A case of toxic psychosis caused by trichloroethylene addiction. Nederlands tijdschrift voor geneeskunde. 1959;103(2):75-8.

Varshney M, Chandra A, Chauhan LKS, Goel SK. Micronucleus induction by oxidative metabolites of trichloroethylene in cultured human peripheral blood lymphocytes: a comparative genotoxicity study. Environmental science and pollution research international. 2013;20(12):8709-16.

Vattemi G, Tonin P, Filosto M, Rizzuto N, Tomelleri G, Perbellini L, et al. Human skeletal muscle as a target organ of trichloroethylene toxicity. Jama. 2005;294(5):554-6.

Vedrinne J, Cottraux J, Evreux JC. Trichloroethylene toxicomania. Apropos of a case. Medecine legale et dommage corporel. 1968;1(4):374-6.

Venkatratnam A, Furuya S, Kosyk O, Gold A, Bodnar W, Konganti K, et al. Editor's Highlight: Collaborative Cross Mouse Population Enables Refinements to Characterization of the Variability in Toxicokinetics of Trichloroethylene and Provides Genetic Evidence for the Role of PPAR Pathway in Its Oxidative Metabolism. Toxicological sciences : an official journal of the Society of Toxicology. 2017;158(1):48-62.

Vermeulen R, Zhang L, Spierenburg A, Tang X, Bonventre JV, Reiss B, et al. Elevated urinary levels of kidney injury molecule-1 among Chinese factory workers exposed to trichloroethylene. Carcinogenesis. 2012;33(8):1538-41.

Vesterberg O, Astrand I. Exposure to trichloroethylene monitored by analysis of metabolites in blood and urine. Journal of occupational medicine : official publication of the Industrial Medical Association. 1976;18(4):224-6.

Vesterberg O, Gorczak J, Krasts M. Methods for measuring trichloroethanol and trichloroacetic acid in blood and urine after exposure to trichloroethylene. Scandinavian journal of work, environment & health. 1975;1(4):243-8.

Vesterberg O, Gorczak J, Krasts M. Exposure to trichloroethylene II. Metabolites in blood and urine. Scandinavian journal of work, environment & health. 1976;2(4):212-9.

Viallier J, Brune A. Effect of combination with various solvents on experimental toxicity of trichloroethylene. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1958;19(6):624-5.

Vlaanderen J, Straif K, Pukkala E, Kauppinen T, Kyyronen P, Martinsen JI, et al. Occupational exposure to trichloroethylene and perchloroethylene and the risk of lymphoma, liver, and kidney cancer in four Nordic countries. Occupational and environmental medicine. 2013;70(6):393-401.

Vodela JK, Lenz SD, Renden JA, McElhenney WH, Kemppainen BW. Drinking water contaminants (arsenic, cadmium, lead, benzene, and trichloroethylene). 2. Effects on reproductive performance, egg quality, and embryo toxicity in broiler breeders. Poultry science. 1997;76(11):1493-500.

von Grote J, Hurlimann C, Scheringer M, Hungerbuhler K. Reduction of occupational exposure to perchloroethylene and trichloroethylene in metal degreasing over the last 30 years: influences of technology innovation and legislation. Journal of exposure analysis and environmental epidemiology. 2003;13(5):325-40.

von Lupke H, Gerchow J, Schmidt K. On two cases of lethal trichloroethylene intoxication (author's transl). Zeitschrift fur Rechtsmedizin Journal of legal medicine. 1978;81(3):237-41.

Vyskocil A, Leroux T, Truchon G, Lemay F, Gagnon F, Gendron M, et al. Ototoxicity of trichloroethylene in concentrations relevant for the working environment. Human & experimental toxicology. 2008;27(3):195-200.

Wackett LP, Householder SR. Toxicity of Trichloroethylene to Pseudomonas putida F1 Is Mediated by Toluene Dioxygenase. Applied and environmental microbiology. 1989;55(10):2723-5.

Walker DI, Uppal K, Zhang L, Vermeulen R, Smith M, Hu W, et al. High-resolution metabolomics of occupational exposure to trichloroethylene. International journal of epidemiology. 2016;45(5):1517-27.

Wallace L. Trichloroethylene correction of Trichloroethene levels in human blood and exhaled breath from controlled inhalation exposure. Environmental health perspectives. 1998;106(9):531-3.

Waller PA, Clauw D, Cupps T, Metcalf JS, Silver RM, Leroy EC. Fasciitis (not scleroderma) following prolonged exposure to an organic solvent (trichloroethylene). The Journal of rheumatology. 1994;21(8):1567-70.

Wallin M, Andersson A. Value of clarifying social factors in disability determination of non-specific complaints in a group of workers exposed to trichloroethylene. Svenska lakartidningen. 1955;52(2):90-7.

Wang GF, Stacey NH. Elevation of individual serum bile acids on exposure to trichloroethylene or alpha-naphthylisothiocyanate. Toxicology and applied pharmacology. 1990;105(2):209-15.

Wang JL, Chen WL, Tsai SY, Sung PY, Huang RN. An in vitro model for evaluation of vaporous toxicity of trichloroethylene and tetrachloroethylene to CHO-K1 cells. Chemico-biological interactions. 2001;137(2):139-54.

Ward GS, Tolmsoff AJ, Petrocelli SR. Acute toxicity of trichloroethylene to saltwater organisms. Bulletin of environmental contamination and toxicology. 1986;37(6):830-6.

Wartenberg D. Causal relationship between trichloroethylene exposure and non-Hodgkin's lymphoma. Occupational and environmental medicine. 2007;64(5):352.

Waseem M, Ali M, Dogra S, Dutta KK, Kaw JL. Toxicity of trichloroethylene following inhalation and drinking contaminated water. Journal of applied toxicology : JAT. 2001;21(6):441-4.

Watanabe H. Hypersensitivity syndrome due to trichloroethylene exposure: a severe generalized skin reaction resembling drug-induced hypersensitivity syndrome. The Journal of dermatology. 2011;38(3):229-35.

Weiss NS. Cancer in relation to occupational exposure to trichloroethylene. Occupational and environmental medicine. 1996;53(1):1-5.

Wells GM, Schroth W, Brauch H, Ross EA. Bilateral renal-cell carcinoma associated with an acquired VHL mutation and long-term trichloroethylene exposure. Clinical nephrology. 2009;71(6):708-13.

Westergren I, Kjellstrand P, Linder LE, Johansson BB. Reduction of brain specific gravity in mice prenatally exposed to trichloroethylene. Toxicology letters. 1984;23(2):223-6.

White JF, Carlson GP. Influence of alterations in drug metabolism on spontaneous and epinephrine-induced cardiac arrhythmias in animals exposed to trichloroethylene. Toxicology and applied pharmacology. 1979;47(3):515-27.

White JF, Carlson GP. Epinephrine-induced cardiac arrhythmias in rabbits exposed to trichloroethylene: potentiation by ethanol. Toxicology and applied pharmacology. 1981;60(3):466-71.

White JF, Carlson GP. Epinephrine-induced cardiac arrhythmias in rabbits exposed to trichloroethylene: role of trichloroethylene metabolites. Toxicology and applied pharmacology. 1981;60(3):458-65.

White JF, Carlson GP. Epinephrine-induced cardiac arrhythmias in rabbits exposed to trichloroethylene: potentiation by caffeine. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1982;2(3):125-9.

Wiesenhutter B, Selinski S, Golka K, Bruning T, Bolt HM. Re-assessment of the influence of polymorphisms of phase-II metabolic enzymes on renal cell cancer risk of trichloroethylene-exposed workers. International archives of occupational and environmental health. 2007;81(2):247-51.

Wikoff D, Urban JD, Harvey S, Haws LC. Role of Risk of Bias in Systematic Review for Chemical Risk Assessment: A Case Study in Understanding the Relationship Between Congenital Heart Defects and Exposures to Trichloroethylene. International journal of toxicology. 2018;37(2):125-43.

Williams JW. The toxicity of trichloroethylene. Journal of occupational medicine : official publication of the Industrial Medical Association. 1959;1:549-54.

Wilmer JW, Spencer PJ, Ball N, Bus JS. Assessment of the genotoxicity of trichloroethylene in the in vivo micronucleus assay by inhalation exposure. Mutagenesis. 2014;29(3):209-14.

Windemuller FJ, Ettema JH. Effects of combined exposure to trichloroethylene and alcohol on mental capacity. International archives of occupational and environmental health. 1978;41(2):77-85.

Wirbisky SE, Damayanti NP, Mahapatra CT, Sepulveda MS, Irudayaraj J, Freeman JL. Mitochondrial Dysfunction, Disruption of F-Actin Polymerization, and Transcriptomic Alterations in Zebrafish Larvae Exposed to Trichloroethylene. Chemical research in toxicology. 2016;29(2):169-79.

Wirtschafter ZT, Cronyn MW. RELATIVE HEPATOTOXICITY: PENTANE, TRICHLOROETHYLENE, BENZENE, CARBON TETRACHLORIDE. Archives of environmental health. 1964;9:180-5.

Wright PF, Thomas WD, Stacey NH. Effects of trichloroethylene on hepatic and splenic lymphocytotoxic activities in rodents. Toxicology. 1991;70(2):231-42.

Wu C, Schaum J. Exposure assessment of trichloroethylene. Environmental health perspectives. 2000;108 Suppl 2:359-63.

Wu KL, Berger T. Ovarian gene expression is stable after exposure to trichloroethylene. Toxicology letters. 2008;177(1):59-65.

Xu H, Tanphaichitr N, Forkert P-G, Anupriwan A, Weerachatyanukul W, Vincent R, et al. Exposure to trichloroethylene and its metabolites causes impairment of sperm fertilizing ability in mice. Toxicological sciences : an official journal of the Society of Toxicology. 2004;82(2):590-7.

Xu X-y, Mao J-y, Mao K-l, Liu G-h, Ci J-y, Yang X-f, et al. Effects of trichloroethylene on hepatotoxicity in cytochrome 2E1-silenced hepatocytes. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2013;31(3):172-7.

Xu X, Mao K, Yuan J, Wu D, Huang H, Qin X, et al. Effects of trichloroethylene toxicity on normal human liver cells and hepatocytes with CYP2E1 gene overexpression. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2014;32(10):723-7.

Xu X, Yang R, Wu N, Zhong P, Ke Y, Zhou L, et al. Severe hypersensitivity dermatitis and liver dysfunction induced by occupational exposure to trichloroethylene. Industrial health. 2009;47(2):107-12.

Yacoub M, Faure J, Rollux R, Mallion JM, Marka C. Acute poisoning by trichloroethylene. Clinical and paraclinical manifestations, surveillance of product elimination. European journal of toxicology and hygiene of environment. 1973;6(6):275-83.

Yamaga S, Saruta K, Omori K, Mochizuki T, Hashiguchi A, Ishida K. A consideration for safety limit of concentration of the so-called Fujiwara-reaction-positive metabolities in urine against trichloroethylene exposure. Nihon eiseigaku zasshi Japanese journal of hygiene. 1961;36:458-61.

Yamaguchi K, Shimakura K, Kamijo N, Shigeno T, Sakato M, Matsuo K, et al. The clinical aspect of pneumatosis cystoides coli with special reference to association of trichloroethylene exposure. Nihon Shokakibyo Gakkai zasshi = The Japanese journal of gastro-enterology. 1988;85(10):2161-7.

Yamaguchi K, Shirai T, Shimakura K, Akamatsu T, Nakama H, Kono K, et al. Pneumatosis cystoides intestinalis and trichloroethylene exposure. The American journal of gastroenterology. 1985;80(10):753-7.

Yamamura K, Ikeda T, Sadamoto T, Maehara N, Harabuchi I, Takashima H, et al. Effects of trichloroethylene exposure on hearing. An investigation of cochlear microphonics and action potential of the guinea pig. European journal of applied physiology and occupational physiology. 1983;52(1):47-50.

Yang X, Jiang Y, Li J, Hong W-X, Wu D, Huang X, et al. Lentivirus-mediated silencing of I2PP2A through RNA interference attenuates trichloroethylene-induced cytotoxicity in human hepatic L-02 cells. Toxicology letters. 2012;209(3):232-8.

Yaqoob N, Evans A, Foster JR, Lock EA. Trichloroethylene and trichloroethanol-induced formic aciduria and renal injury in male F-344 rats following 12 weeks exposure. Toxicology. 2014;323:70-7.

Yeager CM, Bottomley PJ, Arp DJ. Cytotoxicity associated with trichloroethylene oxidation in Burkholderia cepacia G4. Applied and environmental microbiology. 2001;67(5):2107-15.

Yi J, Teng Y-x, Zang D, Zhou W, Dong H-y, Niu Y, et al. Analysis of subgroups of lymphocyte in peripheral blood among dermatitis medicamentosa-like of trichloroethylene patients and healthy exposed workers. Zhonghua yu fang yi xue za zhi [Chinese journal of preventive medicine]. 2011;45(11):1017-21.

Yoo HS, Bradford BU, Kosyk O, Shymonyak S, Uehara T, Collins LB, et al. Comparative analysis of the relationship between trichloroethylene metabolism and tissue-specific toxicity among inbred mouse strains: liver effects. Journal of toxicology and environmental health Part A. 2015;78(1):15-31.

Yoo HS, Bradford BU, Kosyk O, Uehara T, Shymonyak S, Collins LB, et al. Comparative analysis of the relationship between trichloroethylene metabolism and tissue-specific toxicity among inbred mouse strains: kidney effects. Journal of toxicology and environmental health Part A. 2015;78(1):32-49.

Yoo HS, Cichocki JA, Kim S, Venkatratnam A, Iwata Y, Kosyk O, et al. The Contribution of Peroxisome Proliferator-Activated Receptor Alpha to the Relationship Between Toxicokinetics and Toxicodynamics of Trichloroethylene. Toxicological sciences : an official journal of the Society of Toxicology. 2015;147(2):339-49.

Yu J-F, Feng Y-Y, Shen X-F. Potential immunotoxic effects of trichloroethylene-induced IV allergic reaction in renal impairment. Central-European journal of immunology. 2017;42(2):140-9.

Zabetakis KM, Nino de Guzman GT, Torrents A, Yarwood S. Toxicity of zero-valent iron nanoparticles to a trichloroethylene-degrading groundwater microbial community. Journal of environmental science and health Part A, Toxic/hazardous substances & environmental engineering. 2015;50(8):794-805.

Zadorozhnyi BV. Changes in the body of animals during prolonged inhalation exposure to trichloroethylene in low concentrations. Gigiena truda i professional'nye zabolevaniia. 1973;17(5):55-7.

Zenick H, Blackburn K, Hope E, Richdale N, Smith MK. Effects of trichloroethylene exposure on male reproductive function in rats. Toxicology. 1984;31(3-4):237-50.

Zhang L, Bassig BA, Mora JL, Vermeulen R, Ge Y, Curry JD, et al. Alterations in serum immunoglobulin levels in workers occupationally exposed to trichloroethylene. Carcinogenesis. 2013;34(4):799-802.

Zhang Y, Tay J. Toxic and inhibitory effects of trichloroethylene aerobic co-metabolism on phenol-grown aerobic granules. Journal of hazardous materials. 2015;286:204-10.

Zhao N, Wang H-l, Yue F, Zeng Z-m, Li H-l, Huang Y-s, et al. Studying the changes of the related serum complement immune indexes in patients with occupational medicamentosa-like dermatitis induced by trichloroethylene and workers occupationally exposed to trichloroethylene. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2012;30(4):284-8.

Zhu QX, Shen T, Tu DY, Ding R, Liang ZZ, Zhang XJ. Protective effects of Ginkgo biloba leaf extracts on trichloroethylene-induced human keratinocyte cytotoxicity and apoptosis. Skin pharmacology and physiology. 2005;18(4):160-9.

Zhu Q-x, Ma T, Shen T, Yu Y, Ye L-p, Ding R, et al. Cytotoxicity of trichloroethylene in keratinocytes involving alterations of mitochondrial function and ultrastructure. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2007;25(5):263-6.

Zhu Q-X, Shen T, Ding R, Liang Z-Z, Zhang X-J. Cytotoxicity of trichloroethylene and perchloroethylene on normal human epidermal keratinocytes and protective role of vitamin E. Toxicology. 2005;209(1):55-67.

Zhu Q-x, Xu H, Leng J, Shen T. Changes in humoral immunity in sensitized guinea pigs exposed to trichloroethylene. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2012;30(9):641-4.

Zielinski A. Occupational exposure to lead, trichloroethylene and tobacco smoking at work. Przeglad lekarski. 1969;25(9):656-8.

Ziglio G. Human exposure to environmental trichloroethylene and tetrachloroethylene: preliminary data on population groups of Milan, Italy. Bulletin of environmental contamination and toxicology. 1981;26(1):131-6.

Trichloroethylene toxicity poses a danger in Oklahoma. The Journal of the Oklahoma State Medical Association. 1993;86(5):243.

Reproductive toxicology. Trichloroethylene. Environmental health perspectives. 1997;105 Suppl 1:357-8.

Reproductive toxicology. Trichloroethylene. Environmental health perspectives. 1997;105 Suppl 1:359-60.

BIB-3. Naphthalene

Abdo KM, Grumbein S, Chou BJ, Herbert R. Toxicity and carcinogenicity study in F344 rats following 2 years of whole-body exposure to naphthalene vapors. Inhalation toxicology. 2001;13(10):931-50.

Ahn IS, Ghiorse WC, Lion LW, Shuler ML. Growth kinetics of Pseudomonas putida G7 on naphthalene and occurrence of naphthalene toxicity during nutrient deprivation. Biotechnology and bioengineering. 1998;59(5):587-94.

Aina R, Palin L, Citterio S. Molecular evidence for benzo a pyrene and naphthalene genotoxicity in Trifolium repens L. Chemosphere. 2006;65(4):666-73.

Al-Mutairi MS, Al-Abdullah ES, Haiba ME, Khedr MA, Zaghary WA. Synthesis, molecular docking and preliminary in-vitro cytotoxic evaluation of some substituted tetrahydro-naphthalene (2',3',4',6'-tetra-O-acetyl-beta-D-gluco/-galactopyranosyl) derivatives. Molecules (Basel, Switzerland). 2012;17(4):4717-32.

Alexandersson R, Gustafsson P, Hedenstierna G, Rosen G. Exposure to naphthalene-diisocyanate in a rubber plant: symptoms and lung function. Archives of environmental health. 1986;41(2):85-9.

Alonso MC, Tirapu L, Ginebreda A, Barcelo D. Monitoring and toxicity of sulfonated derivatives of benzene and naphthalene in municipal sewage treatment plants. Environmental pollution (Barking, Essex : 1987). 2005;137(2):253-62.

Aoshiba K, Tsuji T, Itoh M, Semba S, Yamaguchi K, Nakamura H, et al. A murine model of airway fibrosis induced by repeated naphthalene exposure. Experimental and toxicologic pathology : official journal of the Gesellschaft fur Toxikologische Pathologie. 2014;66(4):169-77.

Bagchi D, Balmoori J, Bagchi M, Ye X, Williams CB, Stohs SJ. Role of p53 tumor suppressor gene in the toxicity of TCDD, endrin, naphthalene, and chromium (VI) in liver and brain tissues of mice. Free radical biology & medicine. 2000;28(6):895-903.

Baldwin RM, Shultz MA, Buckpitt AR. Bioactivation of the pulmonary toxicants naphthalene and 1-nitronaphthalene by rat CYP2F4. The Journal of pharmacology and experimental therapeutics. 2005;312(2):857-65.

Baur X, Chen Z, Marczynski B. Respiratory diseases caused by occupational exposure to 1,5-naphthalene-diisocyanate (NDI): Results of workplace-related challenge tests and antibody analyses. American journal of industrial medicine. 2001;39(4):369-72.

Bieniek G. The presence of 1-naphthol in the urine of industrial workers exposed to naphthalene. Occupational and environmental medicine. 1994;51(5):357-9.

Bieniek G. Urinary naphthols as an indicator of exposure to naphthalene. Scandinavian journal of work, environment & health. 1997;23(6):414-20.

Bieniek G, Cisowska G, Lusiak T, Siwek A. Evaluation of exposure to benzene and naphthalene in coke plant workers. Medycyna pracy. 1993;44(6):579-86.

Bieniek G, Wilczok T. Separation and determination of phenol, alpha-naphthol m- and p-, o-cresols and 2,5-xylenol, and catechol in the urine after mixed exposure to phenol, naphthalene, cresols, and xylenols. British journal of industrial medicine. 1986;43(8):570-1.

Billings RE, Miller NE, Dabbs JE, LeValley SE, Hill JR, Green CE. Comparison of the toxicity of naphthalene and naphthalene-1,2-dihydrodiol (DIOL). Advances in experimental medicine and biology. 1991;283:681-4.

Bogen KT, Benson JM, Yost GS, Morris JB, Dahl AR, Clewell HJ, 3rd, et al. Naphthalene metabolism in relation to target tissue anatomy, physiology, cytotoxicity and tumorigenic mechanism of action. Regulatory toxicology and pharmacology : RTP. 2008;51(2 Suppl):S27-36.

Boose RB, Terriere LC. Quantitative aspects of the detoxication of naphthalene by resistant and susceptible house flies. Journal of economic entomology. 1967;60(2):580-6.

Brock WE, Jones EW, Macvicar R, Pope LS. Chlorinated naphthalene intoxication in sheep. American journal of veterinary research. 1957;18(68):625-30.

Brusick D. Critical assessment of the genetic toxicity of naphthalene. Regulatory toxicology and pharmacology : RTP. 2008;51(2 Suppl):S37-42.

Brusick D, Small MS, Cavalieri EL, Chakravarti D, Ding X, Longfellow DG, et al. Possible genotoxic modes of action for naphthalene. Regulatory toxicology and pharmacology : RTP. 2008;51(2 Suppl):S43-50.

Buckpitt A, Boland B, Isbell M, Morin D, Shultz M, Baldwin R, et al. Naphthalene-induced respiratory tract toxicity: metabolic mechanisms of toxicity. Drug metabolism reviews. 2002;34(4):791-820.

Buckpitt A, Buonarati M, Avey LB, Chang AM, Morin D, Plopper CG. Relationship of cytochrome P450 activity to Clara cell cytotoxicity. II. Comparison of stereoselectivity of naphthalene epoxidation in lung and nasal mucosa of mouse, hamster, rat and rhesus monkey. The Journal of pharmacology and experimental therapeutics. 1992;261(1):364-72.

Buckpitt A, Chang AM, Weir A, Van Winkle L, Duan X, Philpot R, et al. Relationship of cytochrome P450 activity to Clara cell cytotoxicity. IV. Metabolism of naphthalene and naphthalene oxide in microdissected airways from mice, rats, and hamsters. Molecular pharmacology. 1995;47(1):74-81.

Buonarati M, Morin D, Plopper C, Buckpitt A. Glutathione depletion and cytotoxicity by naphthalene 1,2-oxide in isolated hepatocytes. Chemico-biological interactions. 1989;71(2-3):147-65.

Carratt SA, Morin D, Buckpitt AR, Edwards PC, Van Winkle LS. Naphthalene cytotoxicity in microsomal epoxide hydrolase deficient mice. Toxicology letters. 2016;246:35-41.

Centers for Disease C. Illness associated with exposure to naphthalene in mothballs--Indiana. MMWR Morbidity and mortality weekly report. 1983;32(2):34-5.

Chen H, Sheng L, Gong Z, Ru S, Bian H. Investigation of the molecular mechanisms of hepatic injury upon naphthalene exposure in zebrafish (Danio rerio). Ecotoxicology (London, England). 2018.

Chen W, Tang W, Zhang R, Lou L, Zhao W. Cytotoxic germacrane-type sesquiterpenes, pimarane-type diterpenes, and a naphthalene derivative from Wollastonia biflora. Journal of natural products. 2007;70(4):567-70.

Chetiyanukornkul T, Toriba A, Kameda T, Tang N, Hayakawa K. Simultaneous determination of urinary hydroxylated metabolites of naphthalene, fluorene, phenanthrene, fluoranthene and pyrene as multiple biomarkers of exposure to polycyclic aromatic hydrocarbons. Analytical and bioanalytical chemistry. 2006;386(3):712-8.

Chichester CH, Buckpitt AR, Chang A, Plopper CG. Metabolism and cytotoxicity of naphthalene and its metabolites in isolated murine Clara cells. Molecular pharmacology. 1994;45(4):664-72.

Chung PP, Ballard JWO, Hyne RV. Differential survival and reproductive performance across three mitochondrial lineages in Melita plumulosa following naphthalene exposure. Chemosphere. 2013;93(6):1064-9.

Corner ED, Billett FS, Young L. Biochemical studies of toxic agents. 6. The conversion of naphthalene into 1:2-dihydro-2-hydroxy-1-naphthyl glucosiduronic acid in the rabbit. The Biochemical journal. 1954;56(2):270-4.

Corner ED, Young L. Biochemical studies of toxic agents. VII. The metabolism of naphthalene in animals of different species. The Biochemical journal. 1954;58(4):647-55.

Corner ED, Young L. Biochemical studies of toxic agents. 8. 1:2-Dihydronaphthalene-1:2-diol and its role in the metabolism of naphthalene. The Biochemical journal. 1955;61(1):132-41.

Croera C, Ferrario D, Gribaldo L. In vitro toxicity of naphthalene, 1-naphthol, 2-naphthol and 1,4-naphthoquinone on human CFU-GM from female and male cord blood donors. Toxicology in vitro : an international journal published in association with BIBRA. 2008;22(6):1555-61.

Czerski B, Kostrzewski P. Alkyl derivatives of benzene, indene, naphthalene, diphenyl and fluorene as a potential source of occupational and environmental exposure. Medycyna pracy. 1995;46(4):359-68.

Dai Y-f, Leng S-g, Pan Z-f, Rappaport SM, Zheng Y-x. Preliminary study on naphthalene-metabolites-albumin adduct as an exposure biomarker for coke oven workers. Zhonghua yu fang yi xue za zhi [Chinese journal of preventive medicine]. 2004;38(6):392-5.

DeStefano-Shields C, Morin D, Buckpitt A. Formation of covalently bound protein adducts from the cytotoxicant naphthalene in nasal epithelium: species comparisons. Environmental health perspectives. 2010;118(5):647-52.

Dinsdale D, Verschoyle RD. Pulmonary toxicity of naphthalene derivatives in the rat. Archives of toxicology Supplement = Archiv fur Toxikologie Supplement. 1987;11:288-91.

Diodovich C, Malerba I, Bowe G, Acquati F, Bianchi MG, Taramelli R, et al. Naphthalene exposure: effects on gene expression and proliferation in human cord blood cells. Journal of biochemical and molecular toxicology. 2003;17(5):286-94.

Dodd DE, Gross EA, Miller RA, Wong BA. Nasal olfactory epithelial lesions in F344 and SD rats following 1- and 5-day inhalation exposure to naphthalene vapor. International journal of toxicology. 2010;29(2):175-84.

Dodd DE, Wong BA, Gross EA, Miller RA. Nasal epithelial lesions in F344 rats following a 90-day inhalation exposure to naphthalene. Inhalation toxicology. 2012;24(1):70-9.

Domingo JL. Polychlorinated naphthalenes in animal aquatic species and human exposure through the diet: a review. Journal of chromatography A. 2004;1054(1-2):327-34.

Edmisten GE, Bantle JA. Use of Xenopus laevis larvae in 96-hour, flow-through toxicity tests with naphthalene. Bulletin of environmental contamination and toxicology. 1982;29(4):392-9.

Efthymiou T, Cheinisse C, Proteau J, Gervais P. Naphthalene and paradichlorobenzene in clinical toxicology. La Presse medicale. 1966;74(3):121-2.

Egeghy PP, Hauf-Cabalo L, Gibson R, Rappaport SM. Benzene and naphthalene in air and breath as indicators of exposure to jet fuel. Occupational and environmental medicine. 2003;60(12):969-76.

Elovaara E, Mikkola J, Stockmann-Juvala H, Luukkanen L, Keski-Hynnila H, Kostiainen R, et al. Polycyclic aromatic hydrocarbon (PAH) metabolizing enzyme activities in human lung, and their inducibility by exposure to naphthalene, phenanthrene, pyrene, chrysene, and benzo(a)pyrene as shown in the rat lung and liver. Archives of toxicology. 2007;81(3):169-82.

Enerstvedt KS, Sydnes MO, Larssen E, Pampanin DM. Screening for protein adducts of naphthalene and chrysene in plasma of exposed Atlantic cod (Gadus morhua). Chemosphere. 2018;200:67-79.

Fabian P. Toxic hemolytic anemia in newborn following naphthalene vapor poisoning. Ceskoslovenska pediatrie. 1957;12(9):833-4.

Falandysz J, Fernandes A, Gregoraszczuk E, Rose M. The toxicological effects of halogenated naphthalenes: a review of aryl hydrocarbon receptor-mediated (dioxin-like) relative potency factors. Journal of environmental science and health Part C, Environmental carcinogenesis & ecotoxicology reviews. 2014;32(3):239-72.

Fanucchi MV, Buckpitt AR, Murphy ME, Plopper CG. Naphthalene cytotoxicity of differentiating Clara cells in neonatal mice. Toxicology and applied pharmacology. 1997;144(1):96-104.

Fernandes AR, Tlustos C, Rose M, Smith F, Carr M, Panton S. Polychlorinated naphthalenes (PCNs) in Irish foods: Occurrence and human dietary exposure. Chemosphere. 2011;85(3):322-8.

Fernandes A, Mortimer D, Gem M, Smith F, Rose M, Panton S, et al. Polychlorinated naphthalenes (PCNs): congener specific analysis, occurrence in food, and dietary exposure in the UK. Environmental science & technology. 2010;44(9):3533-8.

Fingerman SW, Short EC, Jr. Changes in neurotransmitter levels in channel catfish after exposure to benzo(a)pyrene, naphthalene, and Aroclor 1254. Bulletin of environmental contamination and toxicology. 1983;30(2):147-51.

Fustinoni S, Rossella F, Campo L, Mercadante R, Bertazzi PA. Urinary BTEX, MTBE and naphthalene as biomarkers to gain environmental exposure profiles of the general population. The Science of the total environment. 2010;408(14):2840-9.

Gaber M, El-Ghamry HA, Fathalla SK. Ni(II), Pd(II) and Pt(II) complexes of (1H-1,2,4-triazole-3-ylimino)methyl naphthalene-2-ol. Structural, spectroscopic, biological, cytotoxicity, antioxidant and DNA binding. Spectrochimica acta Part A, Molecular and biomolecular spectroscopy. 2015;139:396-404.

Galoch A, Sapota A, Skrzypinska-Gawrysiak M, Kilanowicz A. Acute toxicity of polychlorinated naphthalenes and their effect on cytochrome P450. Human & experimental toxicology. 2006;25(2):85-92.

Ganapaty S, Steve Thomas P, Karagianis G, Waterman PG, Brun R. Antiprotozoal and cytotoxic naphthalene derivatives from Diospyros assimilis. Phytochemistry. 2006;67(17):1950-6.

Ganassin RC, Sanders SM, Kennedy CJ, Joyce EM, Bols NC. Development and characterization of a cell line from Pacific herring, Clupea harengus pallasi, sensitive to both naphthalene cytotoxicity and infection by viral hemorrhagic septicemia virus. Cell biology and toxicology. 1999;15(5):299-309.

Garcia EM, Siegert IG, Suarez P. Toxicity assays and naphthalene utilization by natural bacteria selected in marine environments. Bulletin of environmental contamination and toxicology. 1998;61(3):370-7.

Geiger JG, Buikema AL, Jr. Oxygen consumption and filtering rate of Daphnia pulex after exposure to water-soluble fractions of naphthalene, phenanthrene, No. 2 fuel oil, and coal-tar creosote. Bulletin of environmental contamination and toxicology. 1981;27(6):783-9.

Genter MB, Marlowe J, Kevin Kerzee J, Dragin N, Puga A, Dalton TP, et al. Naphthalene toxicity in mice and aryl hydrocarbon receptor-mediated CYPs. Biochemical and biophysical research communications. 2006;348(1):120-3.

Gesto M, Tintos A, Alvarez R, Soengas JL, Miguez JM. Alterations in the brain monoaminergic neurotransmitters of rainbow trout related to naphthalene exposure at the beginning of vitellogenesis. Fish physiology and biochemistry. 2009;35(3):453-65.

Gesto M, Tintos A, Soengas JL, Miguez JM. Effects of acute and prolonged naphthalene exposure on brain monoaminergic neurotransmitters in rainbow trout (Oncorhynchus mykiss). Comparative biochemistry and physiology Toxicology & pharmacology : CBP. 2006;144(2):173-83.

Ghanem A, Shuler ML. Combining cell culture analogue reactor designs and PBPK models to probe mechanisms of naphthalene toxicity. Biotechnology progress. 2000;16(3):334-45.

Gregory RP, Jr., Wise JC, Sikes D. Experimental production of bovine hyperkeratosis with a feed concentrate exposed to vapors of a highly chlorinated naphthalene. Journal of the American Veterinary Medical Association. 1954;125(930):244-6.

Griego FY, Bogen KT, Price PS, Weed DL. Exposure, epidemiology and human cancer incidence of naphthalene. Regulatory toxicology and pharmacology : RTP. 2008;51(2 Suppl):S22-6.

Guazzaroni M-E, Herbst F-A, Lores I, Tamames J, Pelaez AI, Lopez-Cortes N, et al. Metaproteogenomic insights beyond bacterial response to naphthalene exposure and bio-stimulation. The ISME journal. 2013;7(1):122-36.

Harden RA, Baetjer AM. Aplastic anemia following exposure to paradichlorobenzene and naphthalene. Journal of occupational medicine : official publication of the Industrial Medical Association. 1978;20(12):820-2.

Hayward D. Identification of bioaccumulating polychlorinated naphthalenes and their toxicological significance. Environmental research. 1998;76(1):1-18.

Hoffman DR, Anderson PP, Schubert CM, Gault MB, Blanford WJ, Sandrin TR. Carboxymethyl-beta-cyclodextrin mitigates toxicity of cadmium, cobalt, and copper during naphthalene biodegradation. Bioresource technology. 2010;101(8):2672-7.

Hoke H, Zellerhoff R. Metabolism and toxicity of diisopropylnaphthalene as compared to naphthalene and monoalkyl naphthalenes: a minireview. Toxicology. 1998;126(1):1-7.

Honda T, Kiyozumi M, Kojima S. Alkylnaphthalene. XI. Pulmonary toxicity of naphthalene, 2-methylnaphthalene, and isopropylnaphthalenes in mice. Chemical & pharmaceutical bulletin. 1990;38(11):3130-5.

Hu J, Zheng M, Liu W, Li C, Nie Z, Liu G, et al. Occupational exposure to polychlorinated dibenzo-p-dioxins and dibenzofurans, dioxin-like polychlorinated biphenyls, and polychlorinated naphthalenes in workplaces of secondary nonferrous metallurgical facilities in China. Environmental science & technology. 2013;47(14):7773-9.

Hu J, Sheng L, Li L, Zhou X, Xie F, D'Agostino J, et al. Essential role of the cytochrome P450 enzyme CYP2A5 in olfactory mucosal toxicity of naphthalene. Drug metabolism and disposition: the biological fate of chemicals. 2014;42(1):23-7.

Huang Y, Li J, Xu Y, Xu W, Zhong G, Liu X, et al. Polychlorinated naphthalenes in the air over the equatorial Indian Ocean: Occurrence, potential sources, and toxicity. Marine pollution bulletin. 2016;107(1):240-4.

Ibrahim SA, Henderson G, Younis AM, Laine RA. Toxicity and inhibition of feeding and tunneling response of naphthalene and 10 derivatives on the formosan subterranean termite (Isoptera: Rhinotermitidae). Journal of economic entomology. 2010;103(6):2132-9.

Ismert M, Oster T, Bagrel D. Effects of atmospheric exposure to naphthalene on xenobiotic-metabolising enzymes in the snail Helix aspersa. Chemosphere. 2002;46(2):273-80.

Iyer P, Martin JE, Irvin TR. Role of biotransformation in the in vitro preimplantation embryotoxicity of naphthalene. Toxicology. 1991;66(3):257-70.

Jaskowski J, Witkowski J, Mysliwski A, Zawadzki H. Effect of air ions on L 1210 cells: changes in fluorescence of membrane-bound 1,8-aniline-naphthalene-sulfonate (ANS) after in vitro exposure of cells to air ions. General physiology and biophysics. 1986;5(5):511-5.

Jensen-Taubman S, Wang X-Y, Linnoila RI. Achaete-scute homologue-1 tapers neuroendocrine cell differentiation in lungs after exposure to naphthalene. Toxicological sciences : an official journal of the Society of Toxicology. 2010;117(1):238-48.

Jia C, Batterman S. A critical review of naphthalene sources and exposures relevant to indoor and outdoor air. International journal of environmental research and public health. 2010;7(7):2903-39.

Jiang R, French JE, Stober VP, Kang-Sickel J-CC, Zou F, Nylander-French LA. Single-nucleotide polymorphisms associated with skin naphthyl-keratin adduct levels in workers exposed to naphthalene. Environmental health perspectives. 2012;120(6):857-64.

Kamal A, Qayyum M, Cheema IU, Rashid A. Biological monitoring of blood naphthalene levels as a marker of occupational exposure to PAHs among auto-mechanics and spray painters in Rawalpindi. BMC public health. 2011;11:467.

Kanekal S, Plopper C, Morin D, Buckpitt A. Metabolism and cytotoxicity of naphthalene oxide in the isolated perfused mouse lung. The Journal of pharmacology and experimental therapeutics. 1991;256(1):391-401.

Kang-Sickel J-CC, Stober VP, French JE, Nylander-French LA. Exposure to naphthalene induces naphthyl-keratin adducts in human epidermis in vitro and in vivo. Biomarkers : biochemical indicators of exposure, response, and susceptibility to chemicals. 2010;15(6):488-97.

Kapuci M, Ulker Z, Gurkan S, Alpsoy L. Determination of cytotoxic and genotoxic effects of naphthalene, 1-naphthol and 2-naphthol on human lymphocyte culture. Toxicology and industrial health. 2014;30(1):82-9.

Katsnelson BA, Minigaliyeva IA, Degtyareva TD, Privalova LI, Beresneva TA. Does a concomitant exposure to lead influence unfavorably the naphthalene subchronic toxicity and toxicokinetics? Environmental toxicology and chemistry. 2014;33(1):152-7.

Kedderis GL, Shepard KG, Recio L. Cytotoxicity of naphthalene toward cells from target and non-target organs in vitro. Chemico-biological interactions. 2014;209:85-95.

Kilanowicz A, Sitarek K, Skrzypinska-Gawrysiak M, Sapota A. Prenatal developmental toxicity of polychlorinated naphthalenes (PCNs) in the rat. Ecotoxicology and environmental safety. 2011;74(3):504-12.

Kilanowicz A, Skrzypinska-Gawrysiak M, Sapota A, Galoch A, Darago A. Subacute toxicity of polychlorinated naphthalenes and their effect on cytochrome P-450. Ecotoxicology and environmental safety. 2009;72(2):650-7.

Kim D, Andersen ME, Chao Y-CE, Egeghy PP, Rappaport SM, Nylander-French LA. PBTK modeling demonstrates contribution of dermal and inhalation exposure components to end-exhaled breath concentrations of naphthalene. Environmental health perspectives. 2007;115(6):894-901.

King JM, Digrazia PM, Applegate B, Burlage R, Sanseverino J, Dunbar P, et al. Rapid, sensitive bioluminescent reporter technology for naphthalene exposure and biodegradation. Science (New York, NY). 1990;249(4970):778-81.

Kleinfeld M, Messite J, Swencicki R. Clinical effects of chlorinated naphthalene exposure. Journal of occupational medicine : official publication of the Industrial Medical Association. 1972;14(5):377-9.

Klotz K, Angerer J. Quantification of naphthoquinone mercapturic acids in urine as biomarkers of naphthalene exposure. Journal of chromatography B, Analytical technologies in the biomedical and life sciences. 2016;1012-1013:89-96.

Klotz K, Schindler BK, Angerer J. 1,2-Dihydroxynaphthalene as biomarker for a naphthalene exposure in humans. International journal of hygiene and environmental health. 2011;214(2):110-4.

Kokel D, Li Y, Qin J, Xue D. The nongenotoxic carcinogens naphthalene and para-dichlorobenzene suppress apoptosis in Caenorhabditis elegans. Nature chemical biology. 2006;2(6):338-45.

Kong Q, Zhu L, Shen X. The toxicity of naphthalene to marine Chlorella vulgaris under different nutrient conditions. Journal of hazardous materials. 2010;178(1-3):282-6.

Kong Q, Zhu L, Shen X. Effect of nutrient conditions on the toxicity of naphthalene to Chlorella pyrenoidosa. Journal of environmental sciences (China). 2011;23(2):307-14.

Korn S, Moles DA, Rice SD. Effects of temperature on the median tolerance limit of pink salmon and shrimp exposed to toluene, naphthalene, and Cook Inlet crude oil. Bulletin of environmental contamination and toxicology. 1979;21(4-5):521-5.

Kovalchuk N, Kelty J, Li L, Hartog M, Zhang Q-Y, Edwards P, et al. Impact of hepatic P450-mediated biotransformation on the disposition and respiratory tract toxicity of inhaled naphthalene. Toxicology and applied pharmacology. 2017;329:1-8.

Kultz D, Li J, Sacchi R, Morin D, Buckpitt A, Van Winkle L. Alterations in the proteome of the respiratory tract in response to single and multiple exposures to naphthalene. Proteomics. 2015;15(15):2655-68.

Kuusimaki L, Peltonen Y, Mutanen P, Peltonen K, Savela K. Urinary hydroxy-metabolites of naphthalene, phenanthrene and pyrene as markers of exposure to diesel exhaust. International archives of occupational and environmental health. 2004;77(1):23-30.

Lakritz J, Chang A, Weir A, Nishio S, Hyde D, Philpot R, et al. Cellular and metabolic basis of Clara cell tolerance to multiple doses of cytochrome P450-activated cytotoxicants. I: Bronchiolar epithelial reorganization and expression of cytochrome P450 monooxygenases in mice exposed to multiple doses of naphthalene. The Journal of pharmacology and experimental therapeutics. 1996;278(3):1408-18.

Lee K-H, Huang B-R. Synthesis and cytotoxic evaluation of alpha-methylene-gamma-butyrolactone bearing naphthalene and naphtho 2,1-b furan derivatives. European journal of medicinal chemistry. 2002;37(4):333-8.

Lee MG, Phimister A, Morin D, Buckpitt A, Plopper C. In situ naphthalene bioactivation and nasal airflow cause region-specific injury patterns in the nasal mucosa of rats exposed to naphthalene by inhalation. The Journal of pharmacology and experimental therapeutics. 2005;314(1):103-10.

Li J, Zhang Y, Chen Y, Shang X, Ti T, Chen H, et al. Synthesis, binding ability, and cell cytotoxicity of fluorescent probes for l-arginine detection based on naphthalene derivatives: Experiment and theory. Journal of molecular recognition : JMR. 2017.

Li L, Carratt S, Hartog M, Kovalchik N, Jia K, Wang Y, et al. Human CYP2A13 and CYP2F1 Mediate Naphthalene Toxicity in the Lung and Nasal Mucosa of CYP2A13/2F1-Humanized Mice. Environmental health perspectives. 2017;125(6):067004.

Li L, Wei Y, Van Winkle L, Zhang Q-Y, Zhou X, Hu J, et al. Generation and characterization of a Cyp2f2-null mouse and studies on the role of CYP2F2 in naphthalene-induced toxicity in the lung and nasal olfactory mucosa. The Journal of pharmacology and experimental therapeutics. 2011;339(1):62-71.

Lin CY, Wheelock AM, Morin D, Baldwin RM, Lee MG, Taff A, et al. Toxicity and metabolism of methylnaphthalenes: comparison with naphthalene and 1-nitronaphthalene. Toxicology. 2009;260(1-3):16-27.

Lin P-H, Pan W-C, Kang Y-W, Chen Y-L, Lin C-H, Lee M-C, et al. Effects of naphthalene quinonoids on the induction of oxidative DNA damage and cytotoxicity in calf thymus DNA and in human cultured cells. Chemical research in toxicology. 2005;18(8):1262-70.

Link RP, Smith JC, Newton DI. Toxic effect of chlorinated naphthalenes in pigs. Journal of the American Veterinary Medical Association. 1958;133(1):83-5.

Llobet JM, Falco G, Bocio A, Domingo JL. Human exposure to polychlorinated naphthalenes through the consumption of edible marine species. Chemosphere. 2007;66(6):1107-13.

Long PH, Herbert RA, Peckham JC, Grumbein SL, Shackelford CC, Abdo K. Morphology of nasal lesions in F344/N rats following chronic inhalation exposure to naphthalene vapors. Toxicologic pathology. 2003;31(6):655-64.

Luis LG, Guilhermino L. Short-term toxic effects of naphthalene and pyrene on the common prawn (Palaemon serratus) assessed by a multi-parameter laboratorial approach: mechanisms of toxicity and impairment of individual fitness. Biomarkers : biochemical indicators of exposure, response, and susceptibility to chemicals. 2012;17(3):275-85.

Magee B, Samuelian J, Haines K, Chappel M, Penn I, Chin D, et al. Screening-level population risk assessment of nasal tumors in the US due to naphthalene exposure. Regulatory toxicology and pharmacology : RTP. 2010;57(2-3):168-80.

Marti-Cid R, Llobet JM, Castell V, Domingo JL. Human exposure to polychlorinated naphthalenes and polychlorinated diphenyl ethers from foods in Catalonia, Spain: temporal trend. Environmental science & technology. 2008;42(11):4195-201.

Mattorano DA, Kupper LL, Nylander-French LA. Estimating dermal exposure to jet fuel (naphthalene) using adhesive tape strip samples. The Annals of occupational hygiene. 2004;48(2):139-46.

Medarde M, Maya ABS, Perez-Melero C. Naphthalene combretastatin analogues: synthesis, cytotoxicity and antitubulin activity. Journal of enzyme inhibition and medicinal chemistry. 2004;19(6):521-40.

Meeker JD, Barr DB, Serdar B, Rappaport SM, Hauser R. Utility of urinary 1-naphthol and 2-naphthol levels to assess environmental carbaryl and naphthalene exposure in an epidemiology study. Journal of exposure science & environmental epidemiology. 2007;17(4):314-20.

Melancon MJ, Jr., Lech JJ. Distribution and elimination of naphthalene and 2-methylnaphthalene in rainbow trout during short- and long-term exposures. Archives of environmental contamination and toxicology. 1978;7(2):207-20.

Meng F, Wang Y, Myers MB, Wong BA, Gross EA, Clewell HJ, 3rd, et al. p53 codon 271 CGT to CAT mutant fraction does not increase in nasal respiratory and olfactory epithelia of rats exposed to inhaled naphthalene. Mutation research. 2011;721(2):199-205.

Molee W, Phanumartwiwath A, Kesornpun C, Sureram S, Ngamrojanavanich N, Ingkaninan K, et al. Naphthalene Derivatives and Quinones from Ventilago denticulata and Their Nitric Oxide Radical Scavenging, Antioxidant, Cytotoxic, Antibacterial, and Phosphodiesterase Inhibitory Activities. Chemistry & biodiversity. 2018;15(3):e1700537.

Molloy EJ, Doctor BA, Reed MD, Walsh MC. Perinatal toxicity of domestic naphthalene exposure. Journal of perinatology : official journal of the California Perinatal Association. 2004;24(12):792-3.

Morasch B, Annweiler E, Warthmann RJ, Meckenstock RU. The use of a solid adsorber resin for enrichment of bacteria with toxic substrates and to identify metabolites: degradation of naphthalene, O-, and m-xylene by sulfate-reducing bacteria. Journal of microbiological methods. 2001;44(2):183-91.

O'Brien KA, Smith LL, Cohen GM. Differences in naphthalene-induced toxicity in the mouse and rat. Chemico-biological interactions. 1985;55(1-2):109-22.

O'Brien KA, Suverkropp C, Kanekal S, Plopper CG, Buckpitt AR. Tolerance to multiple doses of the pulmonary toxicant, naphthalene. Toxicology and applied pharmacology. 1989;99(3):487-500.

Ozhan K, Bargu S. Can crude oil toxicity on phytoplankton be predicted based on toxicity data on benzo(a)pyrene and naphthalene? Bulletin of environmental contamination and toxicology. 2014;92(2):225-30.

Pajaro-Castro N, Caballero-Gallardo K, Olivero-Verbel J. Toxicity of Naphthalene and Benzene on Tribollium castaneum Herbst. International journal of environmental research and public health. 2017;14(6).

Pakenham G, Lango J, Buonarati M, Morin D, Buckpitt A. Urinary naphthalene mercapturates as biomarkers of exposure and stereoselectivity of naphthalene epoxidation. Drug metabolism and disposition: the biological fate of chemicals. 2002;30(3):247-53.

Palanikumar L, Kumaraguru AK, Ramakritinan CM. Biochemical and genotoxic response of naphthalene to fingerlings of milkfish Chanos chanos. Ecotoxicology (London, England). 2013;22(7):1111-22.

Pandya U, Saini MK, Jin GF, Awasthi S, Godley BF, Awasthi YC. Dietary curcumin prevents ocular toxicity of naphthalene in rats. Toxicology letters. 2000;115(3):195-204.

Pardyak L, Kaminska A, Galas J, Ptak A, Bilinska B, Kotula-Balak M. Primary and tumor mouse Leydig cells exposed to polychlorinated naphthalenes mixture: Effect on estrogen related-receptors expression, intracellular calcium level and sex hormones secretion. Tissue & cell. 2016;48(5):432-41.

Park W, Jeon CO, Cadillo H, DeRito C, Madsen EL. Survival of naphthalene-degrading Pseudomonas putida NCIB 9816-4 in naphthalene-amended soils: toxicity of naphthalene and its metabolites. Applied microbiology and biotechnology. 2004;64(3):429-35.

Pathiratne A, Hemachandra CK, Pathiratne KAS. Assessment of bile fluorescence patterns in a tropical fish, Nile tilapia (Oreochromis niloticus) exposed to naphthalene, phenanthrene, pyrene and chrysene using fixed wavelength fluorescence and synchronous fluorescence spectrometry. Bulletin of environmental contamination and toxicology. 2010;84(5):554-8.

Peng R-H, Xu R-R, Fu X-Y, Xiong A-S, Zhao W, Tian Y-S, et al. Microarray analysis of the phytoremediation and phytosensing of occupational toxicant naphthalene. Journal of hazardous materials. 2011;189(1-2):19-26.

Pesonen M, Teivainen P, Lundstrom J, Jakobsson E, Norrgren L. Biochemical responses of fish sac fry and a primary cell culture of fish hepatocytes exposed to polychlorinated naphthalenes. Archives of environmental contamination and toxicology. 2000;38(1):52-8.

Phimister AJ, Lee MG, Morin D, Buckpitt AR, Plopper CG. Glutathione depletion is a major determinant of inhaled naphthalene respiratory toxicity and naphthalene metabolism in mice. Toxicological sciences : an official journal of the Society of Toxicology. 2004;82(1):268-78.

Phimister AJ, Nagasawa HT, Buckpitt AR, Plopper CG. Prevention of naphthalene-induced pulmonary toxicity by glutathione prodrugs: roles for glutathione depletion in adduct formation and cell injury. Journal of biochemical and molecular toxicology. 2005;19(1):42-51.

Phimister AJ, Williams KJ, Van Winkle LS, Plopper CG. Consequences of abrupt glutathione depletion in murine Clara cells: ultrastructural and biochemical investigations into the role of glutathione loss in naphthalene cytotoxicity. The Journal of pharmacology and experimental therapeutics. 2005;314(2):506-13.

Piccirillo VJ, Bird MG, Lewis RJ, Bover WJ. Preliminary evaluation of the human relevance of respiratory tumors observed in rodents exposed to naphthalene. Regulatory toxicology and pharmacology : RTP. 2012;62(3):433-40.

Plasterer MR, Bradshaw WS, Booth GM, Carter MW, Schuler RL, Hardin BD. Developmental toxicity of nine selected compounds following prenatal exposure in the mouse: naphthalene, p-nitrophenol, sodium selenite, dimethyl phthalate, ethylenethiourea, and four glycol ether derivatives. Journal of toxicology and environmental health. 1985;15(1):25-38.

Plopper CG, Macklin J, Nishio SJ, Hyde DM, Buckpitt AR. Relationship of cytochrome P-450 activity to Clara cell cytotoxicity. III. Morphometric comparison of changes in the epithelial populations of terminal bronchioles and lobar bronchi in mice, hamsters, and rats after parenteral administration of naphthalene. Laboratory investigation; a journal of technical methods and pathology. 1992;67(5):553-65.

Plopper CG, Suverkropp C, Morin D, Nishio S, Buckpitt A. Relationship of cytochrome P-450 activity to Clara cell cytotoxicity. I. Histopathologic comparison of the respiratory tract of mice, rats and hamsters

after parenteral administration of naphthalene. The Journal of pharmacology and experimental therapeutics. 1992;261(1):353-63.

Plopper CG, Van Winkle LS, Fanucchi MV, Malburg SR, Nishio SJ, Chang A, et al. Early events in naphthalene-induced acute Clara cell toxicity. II. Comparison of glutathione depletion and histopathology by airway location. American journal of respiratory cell and molecular biology. 2001;24(3):272-81.

Pollino CA, Georgiades E, Holdway DA. Physiological changes in reproductively active rainbowfish (Melanotaenia fluviatilis) following exposure to naphthalene. Ecotoxicology and environmental safety. 2009;72(4):1265-70.

Popp W, Norpoth K, Vahrenholz C, Hamm S, Balfanz E, Theisen J. Polychlorinated naphthalene exposures and liver function changes. American journal of industrial medicine. 1997;32(4):413-6.

Preuss R, Angerer J, Drexler H. Naphthalene--an environmental and occupational toxicant. International archives of occupational and environmental health. 2003;76(8):556-76.

Preuss R, Drexler H, Bottcher M, Wilhelm M, Bruning T, Angerer J. Current external and internal exposure to naphthalene of workers occupationally exposed to polycyclic aromatic hydrocarbons in different industries. International archives of occupational and environmental health. 2005;78(5):355-62.

Preuss R, Koch HM, Wilhelm M, Pischetsrieder M, Angerer J. Pilot study on the naphthalene exposure of German adults and children by means of urinary 1- and 2-naphthol levels. International journal of hygiene and environmental health. 2004;207(5):441-5.

Price PS, Jayjock MA. Available data on naphthalene exposures: strengths and limitations. Regulatory toxicology and pharmacology : RTP. 2008;51(2 Suppl):S15-21.

Pulster EL, Main K, Wetzel D, Murawski S. Species-specific metabolism of naphthalene and phenanthrene in 3 species of marine teleosts exposed to Deepwater Horizon crude oil. Environmental toxicology and chemistry. 2017;36(11):3168-76.

Rappaport SM, Waidyanatha S, Serdar B. Naphthalene and its biomarkers as measures of occupational exposure to polycyclic aromatic hydrocarbons. Journal of environmental monitoring : JEM. 2004;6(5):413-6.

Rasmussen RE, Do DH, Kim TS, Dearden LC. Comparative cytotoxicity of naphthalene and its monomethyl- and mononitro-derivatives in the mouse lung. Journal of applied toxicology : JAT. 1986;6(1):13-20.

Rasolofonjatovo E, Provot O, Hamze A, Rodrigo J, Bignon J, Wdzieczak-Bakala J, et al. Conformationnally restricted naphthalene derivatives type isocombretastatin A-4 and isoerianin analogues: synthesis, cytotoxicity and antitubulin activity. European journal of medicinal chemistry. 2012;52:22-32.

Recio L, Shepard KG, Hernandez LG, Kedderis GL. Dose-response assessment of naphthalene-induced genotoxicity and glutathione detoxication in human TK6 lymphoblasts. Toxicological sciences : an official journal of the Society of Toxicology. 2012;126(2):405-12.

Ren L, Huang XD, McConkey BJ, Dixon DG, Greenberg BM. Photoinduced toxicity of three polycyclic aromatic hydrocarbons (fluoranthene, pyrene, and naphthalene) to the duckweed Lemna gibba L. G-3. Ecotoxicology and environmental safety. 1994;28(2):160-71.

Roumieu S, Jouve A, Vieillard M, Jego L, Maurice F, Bagneres D, et al. Hemolytic anemia due to naphthalene poisoning. La Revue de medecine interne. 2015;36(6):423-5.

Russell LC, Fingerman M. Exposure to the water soluble fraction of crude oil or to naphthalenes alters breathing rates in Gulf killifish, Fundulus grandis. Bulletin of environmental contamination and toxicology. 1984;32(3):363-7.

Sakai S-I, Yamamoto T, Noma Y, Giraud R. Formation and control of toxic polychlorinated compounds during incineration of wastes containing polychlorinated naphthalenes. Environmental science & technology. 2006;40(7):2247-53.

Sakharova LN, Manzhosova GV, Tolgskaia MS, Pavlovskaia GS, Shvedova EN. Toxicity and the nature of the action of nitro derivatives of naphthalene. Gigiena truda i professional'nye zabolevaniia. 1980(12):36-9.

Salvati E, Doria F, Manoli F, D'Angelo C, Biroccio A, Freccero M, et al. A bimodal fluorescent and photocytotoxic naphthalene diimide for theranostic applications. Organic & biomolecular chemistry. 2016;14(30):7238-49.

Sams C. Urinary Naphthol as a Biomarker of Exposure: Results from an Oral Exposure to Carbaryl and Workers Occupationally Exposed to Naphthalene. Toxics. 2017;5(1).

Sanborn HR, Malins DC. Toxicity and metabolism of naphthalene: a study with marine larval invertebrates. Proceedings of the Society for Experimental Biology and Medicine Society for Experimental Biology and Medicine (New York, NY). 1977;154(2):151-5.

Sandrin TR, Chech AM, Maier RM. A rhamnolipid biosurfactant reduces cadmium toxicity during naphthalene biodegradation. Applied and environmental microbiology. 2000;66(10):4585-8.

Sandrint TR, Maier RM. Effect of pH on cadmium toxicity, speciation, and accumulation during naphthalene biodegradation. Environmental toxicology and chemistry. 2002;21(10):2075-9.

Sarojini R, Reddy PS, Nagabhushanam R, Fingerman M. Naphthalene-induced cytotoxicity on the hepatopancreatic cells of the red swamp crayfish, Procambarus clarkii. Bulletin of environmental contamination and toxicology. 1993;51(5):689-95.

Sasaki JC, Arey J, Eastmond DA, Parks KK, Grosovsky AJ. Genotoxicity induced in human lymphoblasts by atmospheric reaction products of naphthalene and phenanthrene. Mutation research. 1997;393(1-2):23-35.

Schreiner CA. Genetic toxicity of naphthalene: a review. Journal of toxicology and environmental health Part B, Critical reviews. 2003;6(2):161-83.

Schultz TW, Moulton MP. Structure-toxicity relationships of selected naphthalene derivatives II. Principal components analysis. Bulletin of environmental contamination and toxicology. 1985;34(1):1-9.

Sennbro CJ, Lindh CH, Mattsson C, Jonsson BAG, Tinnerberg H. Biological monitoring of exposure to 1,5-naphthalene diisocyanate and 4,4'-methylenediphenyl diisocyanate. International archives of occupational and environmental health. 2006;79(8):647-53.

Sepai O, Sabbioni G. Albumin adducts and urinary metabolites resulting from occupational exposure to 1,5-naphthalene diisocyanate. International journal of occupational medicine and environmental health. 2017;30(4):579-91.

Shopp GM, White KL, Jr., Holsapple MP, Barnes DW, Duke SS, Anderson AC, et al. Naphthalene toxicity in CD-1 mice: general toxicology and immunotoxicology. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1984;4(3 Pt 1):406-19.

Smith RL, Hargreaves BR. A simple toxicity apparatus for continuous flow with small volumes: demonstration with mysids and naphthalene. Bulletin of environmental contamination and toxicology. 1983;30(4):406-12.

Sobus JR, Waidyanatha S, McClean MD, Herrick RF, Smith TJ, Garshick E, et al. Urinary naphthalene and phenanthrene as biomarkers of occupational exposure to polycyclic aromatic hydrocarbons. Occupational and environmental medicine. 2009;66(2):99-104.

Stohs SJ, Ohia S, Bagchi D. Naphthalene toxicity and antioxidant nutrients. Toxicology. 2002;180(1):97-105.

Suruda AJ, Ward EM, Fingerhut MA. Identification of soft tissue sarcoma deaths in cohorts exposed to dioxin and to chlorinated naphthalenes. Epidemiology (Cambridge, Mass). 1993;4(1):14-9.

Sweeney LM, Shuler ML, Babish JG, Ghanem A. A cell culture analogue of rodent physiology: Application to naphthalene toxicology. Toxicology in vitro : an international journal published in association with BIBRA. 1995;9(3):307-16.

Syrowatka T, Jurek A. Incidence and toxicity of polychlorinated derivatives of dibenzo-P-dioxine, dibenzofuran and naphthalene. Roczniki Panstwowego Zakladu Higieny. 1975;26(5):623-34.

Tingle MD, Pirmohamed M, Templeton E, Wilson AS, Madden S, Kitteringham NR, et al. An investigation of the formation of cytotoxic, genotoxic, protein-reactive and stable metabolites from naphthalene by human liver microsomes. Biochemical pharmacology. 1993;46(9):1529-38.

Todisco V, Lamour J, Finberg L. Hemolysis from exposure to naphthalene mothballs. The New England journal of medicine. 1991;325(23):1660-1.

Tsyrkunov LP, Iakovleva LM. Occupational toxicoderma caused by naphthalene. Vestnik dermatologii i venerologii. 1985(5):50-2.

Turkall RM, Skowronski GA, Kadry AM, Abdel-Rahman MS. A comparative study of the kinetics and bioavailability of pure and soil-adsorbed naphthalene in dermally exposed male rats. Archives of environmental contamination and toxicology. 1994;26(4):504-9.

Unger MA, Newman MC, Vadas GG. Predicting survival of grass shrimp (Palaemonetes pugio) exposed to naphthalene, fluorene, and dibenzothiophene. Environmental toxicology and chemistry. 2008;27(8):1802-8.

Van Heyningen R, Pirie A. The metabolism of naphthalene and its toxic effect on the eye. The Biochemical journal. 1967;102(3):842-52.

Van Winkle LS, Johnson ZA, Nishio SJ, Brown CD, Plopper CG. Early events in naphthalene-induced acute Clara cell toxicity: comparison of membrane permeability and ultrastructure. American journal of respiratory cell and molecular biology. 1999;21(1):44-53.

Van Winkle LS, Brown CD, Shimizu JA, Gunderson AD, Evans MJ, Plopper CG. Impaired recovery from naphthalene-induced bronchiolar epithelial injury in mice exposed to aged and diluted sidestream cigarette smoke. Toxicology letters. 2004;154(1-2):1-9.

Vancea P. Action of total eyeball extract on vitreous body opacities in experimental naphthalene poisoning. Bulletins et memoires de la Societe francaise d'ophtalmologie. 1973;86(0):215-21.

Vandermeulen JH. Altered grazing patterns in an experimental copepod-alga ecosystem exposed to naphthalene and Kuwait crude oil. Bulletin of environmental contamination and toxicology. 1986;36(2):260-6.

Varanasi U, Gmur DJ, Treseler PA. Influence of time and mode of exposure on biotransformation of naphthalene by juvenile starry flounder (Platichthys stellatus) and rock sole (Lepidopsetta bilineata). Archives of environmental contamination and toxicology. 1979;8(6):673-92.

Verdi GP. Histopathological study of retinal lesions induced by experimental naphthalene intoxication. Bollettino d'oculistica. 1958;37(1):50-65.

Vijayavel K, Anbuselvam C, Ashokkumar B. Protective effect of Coleus aromaticus Benth (Lamiaceae) against naphthalene-induced hepatotoxicity. Biomedical and environmental sciences : BES. 2013;26(4):295-302.

Vijayavel K, Balasubramanian MP. Changes in oxygen consumption and respiratory enzymes as stress indicators in an estuarine edible crab Scylla serrata exposed to naphthalene. Chemosphere. 2006;63(9):1523-31.

Vijayavel K, Balasubramanian MP. Fluctuations of biochemical constituents and marker enzymes as a consequence of naphthalene toxicity in the edible estuarine crab Scylla serrata. Ecotoxicology and environmental safety. 2006;63(1):141-7.

Vinitskaya H, Lachowicz A, Kilanowicz A, Bartkowiak J, Zylinska L. Exposure to polychlorinated naphthalenes affects GABA-metabolizing enzymes in rat brain. Environmental toxicology and pharmacology. 2005;20(3):450-5.

Viravaidya K, Sin A, Shuler ML. Development of a microscale cell culture analog to probe naphthalene toxicity. Biotechnology progress. 2004;20(1):316-23.

Volodina EA. Naphthalene intoxication. Sudebno-meditsinskaia ekspertiza. 2005;48(1):38-9.

Vondracek J, Svihalkova-Sindlerova L, Pencikova K, Marvanova S, Krcmar P, Ciganek M, et al. Concentrations of methylated naphthalenes, anthracenes, and phenanthrenes occurring in Czech river sediments and their effects on toxic events associated with carcinogenesis in rat liver cell lines. Environmental toxicology and chemistry. 2007;26(11):2308-16.

Vos JG, Koeman JH, van der Maas HL, ten Noever de Brauw MC, de Vos RH. Identification and toxicological evaluation of chlorinated dibenzofuran and chlorinated naphthalene in two commercial polychlorinated biphenyls. Food and cosmetics toxicology. 1970;8(6):625-33.

Waidyanatha S, Zheng Y, Serdar B, Rappaport SM. Albumin adducts of naphthalene metabolites as biomarkers of exposure to polycyclic aromatic hydrocarbons. Cancer epidemiology, biomarkers & prevention : a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology. 2004;13(1):117-24.

Wang Y, Zhang X, Zhao J, Xie S, Wang C. Nonhematotoxic naphthalene diimide modified by polyamine: synthesis and biological evaluation. Journal of medicinal chemistry. 2012;55(7):3502-12.

Ward EM, Ruder AM, Suruda A, Smith AB, Fessler-Flesch CA, Zahm SH. Acute and chronic liver toxicity resulting from exposure to chlorinated naphthalenes at a cable manufacturing plant during World War II. American journal of industrial medicine. 1996;30(2):225-33.

Watanabe O, Tsuji T, Kikuchi R, Itoh M, Nakamura H, Aoshiba K. Little evidence for epithelial-mesenchymal transition in a murine model of airway fibrosis induced by repeated naphthalene exposure. Experimental and toxicologic pathology : official journal of the Gesellschaft fur Toxikologische Pathologie. 2016;68(9):517-20.

West JA, Buckpitt AR, Plopper CG. Elevated airway GSH resynthesis confers protection to Clara cells from naphthalene injury in mice made tolerant by repeated exposures. The Journal of pharmacology and experimental therapeutics. 2000;294(2):516-23.

West JA, Pakehham G, Morin D, Fleschner CA, Buckpitt AR, Plopper CG. Inhaled naphthalene causes dose dependent Clara cell cytotoxicity in mice but not in rats. Toxicology and applied pharmacology. 2001;173(2):114-9.

West JAA, Van Winkle LS, Morin D, Fleschner CA, Forman HJ, Plopper CG. Repeated inhalation exposures to the bioactivated cytotoxicant naphthalene (NA) produce airway-specific Clara cell tolerance in mice. Toxicological sciences : an official journal of the Society of Toxicology. 2003;75(1):161-8.

Wheeler AJ, Dobbin NA, Heroux M-E, Fisher M, Sun L, Khoury CF, et al. Urinary and breast milk biomarkers to assess exposure to naphthalene in pregnant women: an investigation of personal and indoor air sources. Environmental health : a global access science source. 2014;13(1):30.

Wilson AS, Davis CD, Williams DP, Buckpitt AR, Pirmohamed M, Park BK. Characterisation of the toxic metabolite(s) of naphthalene. Toxicology. 1996;114(3):233-42.

Wilson AS, Tingle MD, Kelly MD, Park BK. Evaluation of the generation of genotoxic and cytotoxic metabolites of benzo a pyrene, aflatoxin B1, naphthalene and tamoxifen using human liver microsomes and human lymphocytes. Human & experimental toxicology. 1995;14(6):507-15.

Zhang H, Liu C-S, Bu X-H, Yang M. Synthesis, crystal structure, cytotoxic activity and DNA-binding properties of the copper (II) and zinc (II) complexes with 1- 3-(2-pyridyl)pyrazol-1-ylmethyl naphthalene. Journal of inorganic biochemistry. 2005;99(5):1119-25.

Zheng J, Cho M, Jones AD, Hammock BD. Evidence of quinone metabolites of naphthalene covalently bound to sulfur nucleophiles of proteins of murine Clara cells after exposure to naphthalene. Chemical research in toxicology. 1997;10(9):1008-14.

Digitoxin and naphthalene intoxications. New York state journal of medicine. 1960;60:3676-8.

Toxicology and carcinogenesis studies of naphthalene (cas no. 91-20-3) in F344/N rats (inhalation studies). National Toxicology Program technical report series. 2000(500):1-173.

BIB-4. Dimethylbenzene

Adams JC, Dills RL, Morgan MS, Kalman DA, Pierce CH. A physiologically based toxicokinetic model of inhalation exposure to xylenes in Caucasian men. Regulatory toxicology and pharmacology : RTP. 2005;43(2):203-14.

Agwuocha S, Kulkarni BG, Pandey AK. Histopathological alterations in hepatopancreas of Gafrarium divaricatum exposed to xylene, benzene and gear oil-WSF. Journal of environmental biology. 2011;32(1):35-8.

Alegretti AP, Thiesen FV, Maciel GP. Analytical method for evaluation of exposure to benzene, toluene, xylene in blood by gas chromatography preceded by solid phase microextraction. Journal of chromatography B, Analytical technologies in the biomedical and life sciences. 2004;809(1):183-7.

Alexopoulos EC, Chatzis C, Linos A. An analysis of factors that influence personal exposure to toluene and xylene in residents of Athens, Greece. BMC public health. 2006;6:50.

An YJ. Toxicity of benzene, toluene, ethylbenzene, and xylene (BTEX) mixtures to Sorghum bicolor and Cucumis sativus. Bulletin of environmental contamination and toxicology. 2004;72(5):1006-11.

Andersson K, Fuxe K, Nilsen OG, Toftgard R, Eneroth P, Gustafsson JA. Production of discrete changes in dopamine and noradrenaline levels and turnover in various parts of the rat brain following exposure to xylene, ortho-, meta-, and para-xylene, and ethylbenzene. Toxicology and applied pharmacology. 1981;60(3):535-48.

Angerer J, Lehnert G. Occupational chronic exposure to organic solvents. VIII. Phenolic compounds--metabolites of alkylbenzenes in man. Simultaneous exposure to ethylbenzene and xylenes. International archives of occupational and environmental health. 1979;43(2):145-50.

Api AM, Ford RA, San RH. An evaluation of musk xylene in a battery of genotoxicity tests. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 1995;33(12):1039-45.

Arrigoni S, Lonati D, Bernareggi G, Locatelli C, Petrolini V, Butera R, et al. Collective secondary exposure to malathion and xylene among first aid staff. Giornale italiano di medicina del lavoro ed ergonomia. 2003;25 Suppl(3):87.

Astrand I, Engstrom J, Ovrum P. Exposure to xylene and ethylbenzene. I. Uptake, distribution and elimination in man. Scandinavian journal of work, environment & health. 1978;4(3):185-94.

Bahrami A, Jonidi-Jafari A, Mahjub H. Environmental exposure to xylenes in drivers and petrol station workers by urinary methylhippuric Acid. Journal of research in health sciences. 2008;8(2):61-8.

Barbieri A, Sabatini L, Indiveri P, Violante FS. Biological monitoring of exposure to benzene, toluene and xylenes in urban traffic wardens by LC-MS analysis. Giornale italiano di medicina del lavoro ed ergonomia. 2007;29(3 Suppl):536-8.

Bergert KD, Nestler K, Friedrich K, Zehner C, Selbmann K. Determination of control values of metabolite excretion in the use of biologic exposure tests for styrene, toluene and xylene in occupational medicine monitoring of exposed workers. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1987;33(7):353-6.

Bieniek G, Wilczok T. Thin-layer chromatography of hippuric and m-methylhippuric acid in urine after mixed exposure to toluene and xylene. British journal of industrial medicine. 1981;38(3):304-6.

Bogdanik T. Acute poisoning with trichloroethylene, toluene and xylene--toxicokinetic mathematical models and clinical experiments. Postepy higieny i medycyny doswiadczalnej. 1992;46(4):431-48.

Boleas S, Fernandez C, Tarazona JV. Toxicological and kinetic study of musk xylene in rainbow trout, Oncorhynchus mykiss. Bulletin of environmental contamination and toxicology. 1996;57(2):217-22.

Bono R, Scursatone E, Schiliro T, Gilli G. Ambient air levels and occupational exposure to benzene, toluene, and xylenes in northwestern Italy. Journal of toxicology and environmental health Part A. 2003;66(6):519-31.

Brown-Woodman PD, Webster WS, Picker K, Ritchie HE. Embryotoxicity of xylene and toluene: an in vitro study. Industrial health. 1991;29(4):139-52.

Buratti M, Pellegrino O, Valla C, Fustinoni S, Brambilla G, Colombi A. Gas chromatography-electron-capture detection of urinary methylhippuric acid isomers as biomarkers of environmental exposure to xylene. Journal of chromatography B, Biomedical sciences and applications. 1999;723(1-2):95-104.

Caetano MO, Kieling AG, Raimondi RL, Gomes LP, Schneider IAH. Ecotoxicity tests with Allium cepa to determine the efficiency of rice husk ash in the treatment of groundwater contaminated with benzene, toluene, ethylbenzene, and xylene. Environmental science and pollution research international. 2018;25(13):12849-58.

Carpenter CP, Kinkead ER, Geary DL, Jr., Sullivan LJ, King JM. Petroleum hydrocarbon toxicity studies. V. Animal and human response to vapors of mixed xylenes. Toxicology and applied pharmacology. 1975;33(3):543-58.

Carrer P, Maroni M, Cavallo D, Visentin S, Cecchetti G, Mangani F, et al. Evaluation to the exposure to polycyclic aromatic hydrocarbons, benzene, toluene and xylenes in workers in a power plant fueled with heavy oil. La Medicina del lavoro. 2001;92(5):314-26.

Chambers DM, Reese CM, Thornburg LG, Sanchez E, Rafson JP, Blount BC, et al. Distinguishing Petroleum (Crude Oil and Fuel) From Smoke Exposure within Populations Based on the Relative Blood Levels of Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX), Styrene and 2,5-Dimethylfuran by Pattern Recognition Using Artificial Neural Networks. Environmental science & technology. 2018;52(1):308-16.

Chatterjee A, Babu RJ, Ahaghotu E, Singh M. The effect of occlusive and unocclusive exposure to xylene and benzene on skin irritation and molecular responses in hairless rats. Archives of toxicology. 2005;79(5):294-301.

Chen CS, Hseu YC, Liang SH, Kuo J-Y, Chen SC. Assessment of genotoxicity of methyl-tert-butyl ether, benzene, toluene, ethylbenzene, and xylene to human lymphocytes using comet assay. Journal of hazardous materials. 2008;153(1-2):351-6.

Chen H-x, Mei Y. Progress in research on biological monitoring indicators of occupational xylene exposure. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2010;28(5):397-9.

Chen M-L, Chen S-H, Guo B-R, Mao IF. Relationship between environmental exposure to toluene, xylene and ethylbenzene and the expired breath concentrations for gasoline service workers. Journal of environmental monitoring : JEM. 2002;4(4):562-6.

Chen Z, Liu SJ, Cai SX, Yao YM, Yin H, Ukai H, et al. Exposure of workers to a mixture of toluene and xylenes. II. Effects. Occupational and environmental medicine. 1994;51(1):47-9.

Ciarrocca M, Tomei G, Fiaschetti M, Caciari T, Cetica C, Andreozzi G, et al. Assessment of occupational exposure to benzene, toluene and xylenes in urban and rural female workers. Chemosphere. 2012;87(7):813-9.

Coleman CA, Hull BE, McDougal JN, Rogers JV. The effect of m-xylene on cytotoxicity and cellular antioxidant status in rat dermal equivalents. Toxicology letters. 2003;142(1-2):133-42.

Condie LW, Hill JR, Borzelleca JF. Oral toxicology studies with xylene isomers and mixed xylenes. Drug and chemical toxicology. 1988;11(4):329-54.

de Gandarias JM, Echevarria E, Casis E, Martinez-Millan L, Casis L. Effects of acute xylene exposure on the enkephalinergic neuromodulatory system in rats. Industrial health. 1995;33(1):1-6.

De Gandarias JM, Echevarria E, Irazusta J, Gil J, Casis L. Brain aminopeptidase activity after subacute xylene exposure. Neurotoxicology and teratology. 1993;15(1):51-3.

Dean BJ. Genetic toxicology of benzene, toluene, xylenes and phenols. Mutation research. 1978;47(2):75-97.

Dean BJ. Recent findings on the genetic toxicology of benzene, toluene, xylenes and phenols. Mutation research. 1985;154(3):153-81.

Dennison JE, Bigelow PL, Mumtaz MM, Andersen ME, Dobrev ID, Yang RSH. Evaluation of potential toxicity from co-exposure to three CNS depressants (toluene, ethylbenzene, and xylene) under resting and working conditions using PBPK modeling. Journal of occupational and environmental hygiene. 2005;2(3):127-35.

Desi I, Kovacs F, Zahumenszky Z, Balogh A. Maze learning in rats exposed to xylene intoxication. Psychopharmacologia. 1967;11(3):224-30.

Devillers J, Chezeau A, Thybaud E, Rahmani R. QSAR modeling of the adult and developmental toxicity of glycols, glycol ethers and xylenes to Hydra attenuata. SAR and QSAR in environmental research. 2002;13(5):555-66.

Ding G, Ren J, Yu S. 9 cases with toxic encephalopathy induced by xylene. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2014;32(9):705.

Draper THJ, Bamiou DE. Auditory neuropathy in a patient exposed to xylene: case report. The Journal of laryngology and otology. 2009;123(4):462-5.

Duan W, Meng F, Wang F, Liu Q. Environmental behavior and eco-toxicity of xylene in aquatic environments: A review. Ecotoxicology and environmental safety. 2017;145:324-32.

Dudek B, Gralewicz K, Jakubowski M, Kostrzewski P, Sokal J. Neurobehavioral effects of experimental exposure to toluene, xylene and their mixture. Polish journal of occupational medicine. 1990;3(1):109-16.

Dyer RS, Bercegeay MS, Mayo LM. Acute exposures to p-xylene and toluene alter visual information processing. Neurotoxicology and teratology. 1988;10(2):147-53.

Edelfors S, Hass U, Ravn-Jonsen A, Lund SP. The effect of ageing and in vitro exposure to xylene and KCl on Ca2+ i in synaptosomes from rats exposed prenatally to xylene. Pharmacology & toxicology. 1996;78(6):409-12.

Elovaara E, Collan Y, Pfaffli P, Vainio H. The combined toxicity of technical grade xylene and ethanol in the rat. Xenobiotica; the fate of foreign compounds in biological systems. 1980;10(6):435-45.

Elovaara E, Zitting A, Nickels J, Aitio A. m-Xylene inhalation destroys cytochrome P-450 in rat lung at low exposure. Archives of toxicology. 1987;61(1):21-6.

Engelmeier RL. Effective measures to reduce xylene exposure. The Journal of prosthetic dentistry. 1985;53(4):564-5.

Engstrom J, Bjurstrom R. Exposure to xylene and ethylbenzene. II. Concentration in subcutaneous adipose tissue. Scandinavian journal of work, environment & health. 1978;4(3):195-203.

Engstrom J, Riihimaki V. Distribution of m-xylene to subcutaneous adipose tissue in short-term experimental human exposure. Scandinavian journal of work, environment & health. 1979;5(2):126-34.

Engstrom K, Husman K, Pfaffli P, Riihimaki V. Evaluation of occupational exposure to xylene by blood, exhaled air and urine analysis. Scandinavian journal of work, environment & health. 1978;4(2):114-21.

Engstrom K, Riihimaki V, Laine A. Urinary disposition of ethylbenzene and m-xylene in man following separate and combined exposure. International archives of occupational and environmental health. 1984;54(4):355-63.

Erickson T, Amed V, Leibach SJ, Bushnik P, Saxon A, Hryhorczuk DO, et al. Acute bone marrow toxicity and pancytopenia following exposure to lead chromate, xylene, and ethylbenzene in a degloving injury. American journal of hematology. 1994;47(4):257-61.

Eriksson K, Tjarner D, Marqvardsen I, Jarvholm B. Exposure to benzene, toluene, xylenes and total hydrocarbons among snowmobile drivers in Sweden. Chemosphere. 2003;50(10):1343-7.

Ernstgard L, Sjogren B, Warholm M, Johanson G. Sex differences in the toxicokinetics of inhaled solvent vaporsin humans 1. m-Xylene. Toxicology and applied pharmacology. 2003;193(2):147-57.

Fabre R, Truhaut R, Laham S. Toxicological research on substitute solvents for benzene. IV. Study of xylenes. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1960;21:301-13.

Fay M, Eisenmann C, Diwan S, de Rosa C. ATSDR evaluation of health effects of chemicals. V. Xylenes: health effects, toxicokinetics, human exposure, and environmental fate. Toxicology and industrial health. 1998;14(5):571-781.

Ferrando MD, Andreu-Moliner E. Acute toxicity of toluene, hexane, xylene, and benzene to the rotifers Brachionus calyciflorus and Brachionus plicatilis. Bulletin of environmental contamination and toxicology. 1992;49(2):266-71.

Fishbein L. An overview of environmental and toxicological aspects of aromatic hydrocarbons. III. Xylene. The Science of the total environment. 1985;43(1-2):165-83.

Fishbein L. Xylenes: uses, occurrence and exposure. IARC scientific publications. 1988(85):109-20.

Fishbein L, O'Neill IK, Tossavainen A. Past and present exposure determination techniques for benzene, toluene and xylene. IARC scientific publications. 1988(85):123-48.

Foy JWD, Schatz RA. Inhibition of rat respiratory-tract cytochrome P-450 activity after acute low-level m-xylene inhalation: role in 1-nitronaphthalene toxicity. Inhalation toxicology. 2004;16(3):125-32.

Franco G, Santagostino G, Lorena M, Imbriani M. Conjugated serum bile acid concentrations in workers exposed to low doses of toluene and xylene. British journal of industrial medicine. 1989;46(2):141-2.

Freundt KJ, Romer KG, Federsel RJ. Decrease of inhaled toluene, ethyl benzene, m-xylene, or mesitylene in rat blood after combined exposure to ethyl acetate. Bulletin of environmental contamination and toxicology. 1989;42(4):495-8.

Fuente A, McPherson B, Hood LJ. Hearing loss associated with xylene exposure in a laboratory worker. Journal of the American Academy of Audiology. 2012;23(10):824-30.

Fustinoni S, Campo L, Pasini R, De Comite A, Missineo P, Riboldi L, et al. The assessment of risk for xylene exposure in a laboratory of anatomy: comparison between computational models and environmental and biological monitoring. Giornale italiano di medicina del lavoro ed ergonomia. 2012;34(3 Suppl):794-5.

Gagnaire F, Marignac B, Blachere V, Grossmann S, Langlais C. The role of toxicokinetics in xylene-induced ototoxicity in the rat and guinea pig. Toxicology. 2007;231(2-3):147-58.

Gagnaire F, Marignac B, Langlais C, Bonnet P. Ototoxicity in rats exposed to ortho-, meta- and para-xylene vapours for 13 weeks. Pharmacology & toxicology. 2001;89(1):6-14.

Gagnaire F, Langlais C, Grossmann S, Wild P. Ototoxicity in rats exposed to ethylbenzene and to two technical xylene vapours for 13 weeks. Archives of toxicology. 2007;81(2):127-43.

Gamberale F, Annwall G, Hultengren M. Exposure to xylene and ethylbenzene. III. Effects on central nervous functions. Scandinavian journal of work, environment & health. 1978;4(3):204-11.

Gao J, Ruan H, Qi X, Guo X, Zheng J, Liu C, et al. Increased apoptosis and abnormal visual behavior by histone modifications with exposure to para-xylene in developing Xenopus. Neuroscience. 2016;331:177-85.

Gardner R. A statistical analysis of data on exposure to xylene at selected workplaces in the U.K. The Annals of occupational hygiene. 1996;40(4):411-22.

Gerin M, Siemiatycki J, Desy M, Krewski D. Associations between several sites of cancer and occupational exposure to benzene, toluene, xylene, and styrene: results of a case-control study in Montreal. American journal of industrial medicine. 1998;34(2):144-56.

Gilli G, Scursatone E, Bono R. Benzene, toluene and xylenes in air, geographical distribution in the Piedmont region (Italy) and personal exposure. The Science of the total environment. 1994;148(1):49-56.

Glaser RA, Arnold JE, Shulman SA. Comparison of three sampling and analytical methods for measuring m-xylene in expired air of exposed humans. American Industrial Hygiene Association journal. 1990;51(3):139-50.

Gralewicz S, Wiaderna D. Behavioral effects following subacute inhalation exposure to m-xylene or trimethylbenzene in the rat: a comparative study. Neurotoxicology. 2001;22(1):79-89.

Gralewicz S, Wiaderna D, Tomas T. Development of spontaneous, age-related nonconvulsive seizure electrocortical activity and radial-maze learning after exposure to m-xylene in rats. International journal of occupational medicine and environmental health. 1995;8(4):347-60.

Gunasekar PG, Rogers JV, Kabbur MB, Garrett CM, Brinkley WW, McDougal JN. Molecular and histological responses in rat skin exposed to m-xylene. Journal of biochemical and molecular toxicology. 2003;17(2):92-4.

Haro-Garcia LC, Gonzalez-Bonilla CR, Chacon-Salinas R, Perez-Lucio C, Juarez-Perez CA, Borja-Aburto VH. Occupational exposure-associated hematological and immunologic manifestations to the benzene-toluene-xylene (Btx) mixture. Revista medica del Instituto Mexicano del Seguro Social. 2008;46(6):643-50.

Haro-Garcia LC, Juarez-Perez CA, Aguilar-Madrid G, Velez-Zamora NM, Munoz-Navarro S, Chacon-Salinas R, et al. Production of IL-10, TNF and IL-12 by peripheral blood mononuclear cells in Mexican workers exposed to a mixture of benzene-toluene-xylene. Archives of medical research. 2012;43(1):51-7.

Haro-Garcia L, Velez-Zamora N, Aguilar-Madrid G, Guerrero-Rivera S, Sanchez-Escalante V, Munoz SR, et al. Blood disorders among workers exposed to a mixture of benzene-toluene-xylene (BTX) in a paint factory. Revista peruana de medicina experimental y salud publica. 2012;29(2):181-7.

Hass U, Jakobsen BM. Prenatal toxicity of xylene inhalation in the rat: a teratogenicity and postnatal study. Pharmacology & toxicology. 1993;73(1):20-3.

Hass U, Lund SP, Simonsen L. Long-lasting neurobehavioral effects of prenatal exposure to xylene in rats. Neurotoxicology. 1997;18(2):547-51.

Hass U, Lund SP, Simonsen L, Fries AS. Effects of prenatal exposure to xylene on postnatal development and behavior in rats. Neurotoxicology and teratology. 1995;17(3):341-9.

Heibati B, Godri Pollitt KJ, Charati JY, Ducatman A, Shokrzadeh M, Karimi A, et al. Biomonitoring-based exposure assessment of benzene, toluene, ethylbenzene and xylene among workers at petroleum distribution facilities. Ecotoxicology and environmental safety. 2018;149:19-25.

Hein MJ, Waters MA, van Wijngaarden E, Deddens JA, Stewart PA. Issues when modeling benzene, toluene, and xylene exposures using a literature database. Journal of occupational and environmental hygiene. 2008;5(1):36-47.

Honma T, Sudo A, Miyagawa M, Sato M, Hasegawa H. Significant changes in the amounts of neurotransmitter and related substances in rat brain induced by subacute exposure to low levels of toluene and xylene. Industrial health. 1983;21(3):143-51.

Hood RD, Ottley MS. Developmental effects associated with exposure to xylene: a review. Drug and chemical toxicology. 1985;8(4):281-97.

Huang MY, Jin C, Liu YT, Li BH, Qu QS, Uchida Y, et al. Exposure of workers to a mixture of toluene and xylenes. I. Metabolism. Occupational and environmental medicine. 1994;51(1):42-6.

Hudak A, Ungvary G. Embryotoxic effects of benzene and its methyl derivatives: toluene, xylene. Toxicology. 1978;11(1):55-63.

Imbriani M, Ghittori S, Pezzagno G, Capodaglio E. Urinary elimination of xylene in experimental and occupational exposure. La Medicina del lavoro. 1987;78(3):239-49.

Inoue O, Seiji K, Kawai T, Watanabe T, Jin C, Cai SX, et al. Excretion of methylhippuric acids in urine of workers exposed to a xylene mixture: comparison among three xylene isomers and toluene. International archives of occupational and environmental health. 1993;64(7):533-9.

Iqbal MA, Haque RA, Ahamed SA, Jafari SF, Khadeer Ahamed MB, Abdul Majid AMS. Crystal Structures and Cytotoxicity of Ortho-Xylene Linked Bis-benzimidazolium Salts. Medicinal chemistry (Shariqah (United Arab Emirates)). 2015;11(5):473-81.

Jacobson GA, McLean S. Biological monitoring of low level occupational xylene exposure and the role of recent exposure. The Annals of occupational hygiene. 2003;47(4):331-6.

Jajte J, Stetkiewicz J, Wronska-Nofer T. Combined exposure to m-xylene and ethanol: oxidative stress in the rat liver. International journal of occupational medicine and environmental health. 2003;16(4):345-50.

Jakubowski M, Kostrzewski P. Excretion of methylbenzoic acid in urine as a result of single and combined exposure to m-xylene. Polish journal of occupational medicine. 1989;2(3):238-47.

Jan R-L, Chen S-H, Chang H-Y, Yeh H-J, Shieh C-C, Wang J-Y. Asthma-like syndrome in school children after accidental exposure to xylene and methylene diphenyl diisocyanate. Journal of microbiology, immunology, and infection = Wei mian yu gan ran za zhi. 2008;41(4):337-41.

Janasik B, Jakubowski M, Jalowiecki P. Excretion of unchanged volatile organic compounds (toluene, ethylbenzene, xylene and mesitylene) in urine as result of experimental human volunteer exposure. International archives of occupational and environmental health. 2008;81(4):443-9.

Jang JY, Droz PO, Kim S. Biological monitoring of workers exposed to ethylbenzene and co-exposed to xylene. International archives of occupational and environmental health. 2001;74(1):31-7.

Johnson EM, Gabel BE, Christian MS, Sica E. The developmental toxicity of xylene and xylene isomers in the Hydra assay. Toxicology and applied pharmacology. 1986;82(2):323-8.

Jonai H, Sato M. Exposure indices for painters exposed to toluene and xylene at low concentrations. Industrial health. 1988;26(3):197-202.

Jori A, Calamari D, Di Domenico A, Galli CL, Galli E, Marinovich M, et al. Ecotoxicological profile of xylenes. Working Party on Ecotoxicological Profiles of Chemicals. Ecotoxicology and environmental safety. 1986;11(1):44-80.

Kafferlein HU, Goen T, Angerer J. Musk xylene: analysis, occurrence, kinetics, and toxicology. Critical reviews in toxicology. 1998;28(5):431-76.

Kaneko T, Wang PY, Sato A. Enzyme induction by ethanol consumption affects the pharmacokinetics of inhaled m-xylene only at high levels of exposure. Archives of toxicology. 1993;67(7):473-7.

Kaneko T, Wang PY, Tsukada H, Sato A. m-xylene toxicokinetics in phenobarbital-treated rats: comparison among inhalation exposure, oral administration, and intraperitoneal administration. Toxicology and applied pharmacology. 1995;131(1):13-20.

Kawai T, Mizunuma K, Yasugi T, Horiguchi S, Uchida Y, Iwami O, et al. Urinary methylhippuric acid isomer levels after occupational exposure to a xylene mixture. International archives of occupational and environmental health. 1991;63(1):69-75.

Kilburn KH, Seidman BC, Warshaw R. Neurobehavioral and respiratory symptoms of formaldehyde and xylene exposure in histology technicians. Archives of environmental health. 1985;40(4):229-33.

Kim CS, Koh SB, Kim H, Park SK, Chang SH. A Study on Polymorphism Affecting Excretion of Urinary Methylhippuric Acid due to Xylene Exposure. Journal of preventive medicine and public health = Yebang Uihakhoe chi. 2004;37(4):321-8.

Kira S. Measurement by gas chromatography of urinary hippuric acid and methylhippuric acid as indices of toluene and xylene exposure. British journal of industrial medicine. 1977;34(4):305-9.

Klaucke DN, Johansen M, Vogt RL. An outbreak of xylene intoxication in a hospital. American journal of industrial medicine. 1982;3(2):173-8.

Kojima R. Effect of inosine, NAD and glycine or glucuronic acid lactone on acute toluene or xylene intoxications. Igaku to seibutsugaku Medicine and biology. 1971;83(5):269-74.

Kondo H, Sakurai H, Onodera M. (GLUCURONIC ACID EXCRETION IN URINE OF RABBITS BY EXPOSURE TO TOLUENE, XYLENE AND CARBON DISULFIDE.). Nihon eiseigaku zasshi Japanese journal of hygiene. 1964;19:219-24.

Korsak Z, Sokal JA, Gorny R. Toxic effects of combined exposure to toluene and m-xylene in animals. III. Subchronic inhalation study. Polish journal of occupational medicine and environmental health. 1992;5(1):27-33.

Korsak Z, Sokal JA, Swiercz R. The toxic effects of combined exposure to toluene and m-xylene in animals. II. Blood toluene and m-xylene during single and combined exposure in rats. Polish journal of occupational medicine and environmental health. 1991;4(4):377-81.

Korsak Z, Sokal JA, Wasiela T, Swiercz R. Toxic effects of acute exposure to particular xylene isomers in animals. Polish journal of occupational medicine. 1990;3(2):221-6.

Korsak Z, Sokal J, Dedyk A, Tomas T, Jedrychowski R. Toxic effects of combined exposure to toluene and xylene in animals. I. Acute inhalation study. Polish journal of occupational medicine. 1988;1(1):45-50.

Korsak Z, Swiercz R, Jedrychowski R. Effects of acute combined exposure to N-butyl alcohol and M-xylene. Polish journal of occupational medicine and environmental health. 1993;6(1):35-41.

Korsak Z, Wisniewska-Knypl J, Swiercz R. Toxic effects of subchronic combined exposure to n-butyl alcohol and m-xylene in rats. International journal of occupational medicine and environmental health. 1994;7(2):155-66.

Koutinas M, Lam M-C, Kiparissides A, Silva-Rocha R, Godinho M, Livingston AG, et al. The regulatory logic of m-xylene biodegradation by Pseudomonas putida mt-2 exposed by dynamic modelling of the principal node Ps/Pr of the TOL plasmid. Environmental microbiology. 2010;12(6):1705-18.

Kramer A, Linnert M, Jr., Wrbitzky R, Angerer J. Occupational chronic exposure to organic solvents XVII. Ambient and biological monitoring of workers exposed to xylenes. International archives of occupational and environmental health. 1999;72(1):52-5.

Kunhua W, Chuming F, Tao L, Yanmei Y, Xin Y, Xiaoming Z, et al. A novel non-toxic xylene substitute (SBO) for histology. African journal of traditional, complementary, and alternative medicines : AJTCAM. 2012;9(1):43-9.

Kyrklund T, Kjellstrand P, Haglid K. Brain lipid changes in rats exposed to xylene and toluene. Toxicology. 1987;45(2):123-33.

Lange A, Smolik R, Zatonski W, Glazman H. Leukocyte agglutinins in workers exposed to benzene, toluene and xylene. Internationales Archiv fur Arbeitsmedizin. 1973;31(1):45-50.

Lange A, Smolik R, Zatonski W, Szymanska J. Serum immunoglobulin levels in workers exposed to benzene, toluene and xylene. Internationales Archiv fur Arbeitsmedizin. 1973;31(1):37-44.

Langman JM. Xylene: its toxicity, measurement of exposure levels, absorption, metabolism and clearance. Pathology. 1994;26(3):301-9.

Lapare S, Tardif R, Brodeur J. Effect of various exposure scenarios on the biological monitoring of organic solvents in alveolar air. I. Toluene and m-xylene. International archives of occupational and environmental health. 1993;64(8):569-80.

Lauwerys R, Buchet JP. Biological monitoring of exposure to benzene, toluene and xylene. IARC scientific publications. 1988(85):205-22.

Lee E-H, Paek D, Kho YL, Choi K, Chae HJ. Color vision impairments among shipyard workers exposed to mixed organic solvents, especially xylene. Neurotoxicology and teratology. 2013;37:39-43.

Liira J, Elovaara E, Raunio H, Riihimaki V, Engstrom K. Metabolic interaction and disposition of methyl ethyl ketone and m-xylene in rats at single and repeated inhalation exposures. Xenobiotica; the fate of foreign compounds in biological systems. 1991;21(1):53-63.

Lin RC. Investigation on renal function of workers exposed to toluene and xylene. Zhonghua yu fang yi xue za zhi [Chinese journal of preventive medicine]. 1991;25(6):356-8.

Liscic RM, Skender L, Jakic-Razumovic J, Simic D, Milkovic-Kraus S. Event-related potentials in medical workers with long-term exposure to xylene. Collegium antropologicum. 2001;25(1):357-62.

Liu FF, Escher BI, Were S, Duffy L, Ng JC. Mixture effects of benzene, toluene, ethylbenzene, and xylenes (BTEX) on lung carcinoma cells via a hanging drop air exposure system. Chemical research in toxicology. 2014;27(6):952-9.

Loizou GD, McNally K, Jones K, Cocker J. The application of global sensitivity analysis in the development of a physiologically based pharmacokinetic model for m-xylene and ethanol co-exposure in humans. Frontiers in pharmacology. 2015;6:135.

Lundberg I, Sollenberg J. Correlation of xylene exposure and methyl hippuric acid excretion in urine among paint industry workers. Scandinavian journal of work, environment & health. 1986;12(2):149-53.

Maguin K, Lataye R, Campo P, Cossec B, Burgart M, Waniusiow D. Ototoxicity of the three xylene isomers in the rat. Neurotoxicology and teratology. 2006;28(6):648-56.

Mandiracioglu A, Akgur S, Kocabiyik N, Sener U. Evaluation of neuropsychological symptoms and exposure to benzene, toluene and xylene among two different furniture worker groups in Izmir. Toxicology and industrial health. 2011;27(9):802-9.

Marchand A, Aranda-Rodriguez R, Tardif R, Nong A, Haddad S. Human inhalation exposures to toluene, ethylbenzene, and m-xylene and physiologically based pharmacokinetic modeling of exposure biomarkers in exhaled air, blood, and urine. Toxicological sciences : an official journal of the Society of Toxicology. 2015;144(2):414-24.

McNally K, Cotton R, Cocker J, Jones K, Bartels M, Rick D, et al. Reconstruction of Exposure to m-Xylene from Human Biomonitoring Data Using PBPK Modelling, Bayesian Inference, and Markov Chain Monte Carlo Simulation. Journal of toxicology. 2012;2012:760281.

Mergler D, Beauvais B. Olfactory threshold shift following controlled 7-hour exposure to toluene and/or xylene. Neurotoxicology. 1992;13(1):211-5.

Mikhailova A, Khalkova Z. Biochemical pulmonary research in experimental exposure to xylene and noise. Problemi na khigienata. 1985;10:88-93.

Mikiskova H. Determination of the electrical irritability of the motor cerebral cortex and its use in pharmacology and toxicology. II. Effect of benzene, toluene and xylene in guinea pigs. Archiv fur Gewerbepathologie und Gewerbehygiene. 1960;18:300-9.

Miller MJ, Edwards JW. Possible preferential metabolism of xylene isomers following occupational exposure to mixed xylenes. International archives of occupational and environmental health. 1999;72(2):89-97.

Mirkova E, Antov G, Zaikov K, Ganchovska V. Evaluation of inhalation toxicity of organic solvent xylene in pregnant rats. Problemi na khigienata. 1982;7:60-7.

Mirkova E, Zaikov C, Antov G, Mikhailova A, Khinkova L, Benchev I. Prenatal toxicity of xylene. Journal of hygiene, epidemiology, microbiology, and immunology. 1983;27(3):337-43.

Mlynarczyk W, Kozielski J, Szafarek D, Przyslawski J, Nowak B. Occupational exposure to xylene of workers employed in paint shops. Medycyna pracy. 1977;28(3):243-7.

Mlynarczyk W, Slusarek D. Use of methylhippuric test in industry for assessing exposure to xylene. Medycyna pracy. 1981;32(6):445-9.

Mohammadyan M, Baharfar Y. Control of workers' exposure to xylene in a pesticide production factory. International journal of occupational and environmental health. 2015;21(2):121-6.

Morasch B, Annweiler E, Warthmann RJ, Meckenstock RU. The use of a solid adsorber resin for enrichment of bacteria with toxic substrates and to identify metabolites: degradation of naphthalene, O-, and m-xylene by sulfate-reducing bacteria. Journal of microbiological methods. 2001;44(2):183-91.

Morel G, Bonnet P, Cossec B, Morel S, Cour C, Lambert AM, et al. The role of glutathione and cysteine conjugates in the nephrotoxicity of o-xylene in rats. Archives of toxicology. 1998;72(9):553-8.

Morin M, Chambon P, Chambon R, Bichet N. Measurement of exposure to xylenes by separate determination of m- and p-methylhippuric acids in urine. Journal of chromatography. 1981;210(2):346-9.

Moszczynski P, Lisiewicz J. Hematological indices of peripheral blood in workers occupationally exposed to benzene, toluene and xylene. Zentralblatt fur Bakteriologie, Mikrobiologie und Hygiene 1 Abt Originale B, Hygiene. 1983;178(4):329-39.

Moszczynski P, Lisiewicz J. Enzymes of neutrophils in workers occupationally exposed to benzene, toluene and xylene. Revista espanola de oncologia. 1984;31(3):435-41.

Moszczynski P, Lisiewicz J. Hematological indicators of peripheral blood in workers occupationally exposed to benzene, toluene and xylene. Folia medica Cracoviensia. 1984;25(3-4):405-19.

Moszczynski P, Lisiewicz J. Occupational exposure to benzene, toluene and xylene and the lymphocyte lysosomal N-acetyl-beta-D-glucosaminidase. Industrial health. 1985;23(1):47-51.

Moszczynsky P, Lisiewicz J. Occupational exposure to benzene, toluene and xylene and the T lymphocyte functions. Haematologia. 1984;17(4):449-53.

Mottaleb MA, Brumley WC, Pyle SM, Sovocool GW. Determination of a bound musk xylene metabolite in carp hemoglobin as a biomarker of exposure by gas chromatography-mass spectrometry using selected ion monitoring. Journal of analytical toxicology. 2004;28(7):581-6.

Mottaleb MA, Karim MR. Determination of hemoglobin adduct of a musk xylene metabolite in trout as biomarker of exposure by gas chromatography mass spectrometry. Journal of environmental sciences (China). 2005;17(6):989-92.

Mudiam MKR, Singh MP, Chowdhuri DK, Murthy RC. Quantitative evaluation of benzene, toluene, and xylene in the larvae of Drosophila melanogaster by solid-phase microextraction/gas chromatography/mass spectrometry for potential use in toxicological studies. Journal of AOAC International. 2010;93(5):1595-9.

Muralidhara, Krishnakumari MK. Mammalia toxicity of aromex & xylene used in pesticidal formulations. Indian journal of experimental biology. 1980;18(10):1148-51.

Murata K, Araki S, Yokoyama K, Yamashita K, Okajima F, Nakaaki K. Changes in autonomic function as determined by ECG R-R interval variability in sandal, shoe and leather workers exposed to n-hexane, xylene and toluene. Neurotoxicology. 1994;15(4):867-75.

Murayama R, Goto S, Nakajima D, Fujimaki H, Watanabe I, Arashidani K, et al. Measurements of exposure concentrations of benzene, toluene and xylene, and amounts of respiratory uptake. Journal of UOEH. 2006;28(2):173-83.

Musilek K, Holas O, Misik J, Pohanka M, Novotny L, Dohnal V, et al. Monooxime-monocarbamoyl Bispyridinium Xylene-Linked Reactivators of Acetylcholinesterase-Synthesis, In vitro and Toxicity Evaluation, and Docking Studies. ChemMedChem. 2010;5(2):247-54.

Neghab M, Hosseinzadeh K, Hassanzadeh J. Early Liver and Kidney Dysfunction Associated with Occupational Exposure to Sub-Threshold Limit Value Levels of Benzene, Toluene, and Xylenes in Unleaded Petrol. Safety and health at work. 2015;6(4):312-6.

Neuparth T, Capela R, Pereira SPP, Moreira SM, Santos MM, Reis-Henriques MA. Toxicity effects of hazardous and noxious substances (HNS) to marine organisms: acute and chronic toxicity of p-xylene to the amphipod Gammarus locusta. Journal of toxicology and environmental health Part A. 2014;77(20):1210-21.

Niaz K, Bahadar H, Maqbool F, Abdollahi M. A review of environmental and occupational exposure to xylene and its health concerns. EXCLI journal. 2015;14:1167-86.

Norstrom A, Andersson B, Aringer L, Levin JO, Lof A, Naslund P, et al. Determination of specific mercapturic acids in human urine after experimental exposure to toluene or o-xylene. IARC scientific publications. 1988(89):232-4.

Nylen P, Ebendal T, Eriksdotter-Nilsson M, Hansson T, Henschen A, Johnson AC, et al. Testicular atrophy and loss of nerve growth factor-immunoreactive germ cell line in rats exposed to n-hexane and a protective effect of simultaneous exposure to toluene or xylene. Archives of toxicology. 1989;63(4):296-307.

Nylen P, Hagman M. Function of the auditory and visual systems, and of peripheral nerve, in rats after long-term combined exposure to n-hexane and methylated benzene derivatives. II. Xylene. Pharmacology & toxicology. 1994;74(2):124-9.

Ogata M, Sugihara R, Kira S. Quantitative determination of urinary hippuric acid and m- or p-methylhippuric acid as indices of toluene and m- or p-xylene exposure by high performance liquid chromatography. International archives of occupational and environmental health. 1977;39(4):199-206.

Ogata M, Taguchi T. Quantitative analysis of urinary glycine conjugates by high performance liquid chromatography: excretion of hippuric acid and methylhippuric acids in the urine of subjects exposed to vapours of toluene and xylenes. International archives of occupational and environmental health. 1986;58(2):121-9.

Ogata M, Takatsuka Y, Tomokuni K. Excretion of hippuric acid and m- or p-methylhippuric acid in the urine of persons exposed to vapours of toluene and m- or p-xylene in an exposure chamber and in workshops, with specific reference to repeated exposures. British journal of industrial medicine. 1971;28(4):382-5.

Ogata M, Tomokuni K, Takatsuka Y. Urinary excretion of hippuric acid and m- or p-methylhippuric acid in the urine of persons exposed to vapours of toluene and m- or p-xylene as a test of exposure. British journal of industrial medicine. 1970;27(1):43-50.

Ortiz E, Alemon E, Romero D, Arriaga JL, Olaya P, Guzman F, et al. Personal exposure to benzene, toluene and xylene in different microenvironments at the Mexico City metropolitan zone. The Science of the total environment. 2002;287(3):241-8.

Panova N, Bonev N. The personal exposure of workers in the manufacture of xylenes--in Burgas (the Neftokhim firm). Problemi na khigienata. 1995;20:185-91.

Pap M, Varga C. Sister-chromatid exchanges in peripheral lymphocytes of workers occupationally exposed to xylenes. Mutation research. 1987;187(4):223-5.

Parreira FV, de CCR, de CZL. Evaluation of indoor exposition to benzene, toluene, ethylbenzene, xylene, and styrene by passive sampling with a solid-phase microextraction device. Journal of chromatographic science. 2002;40(3):122-6.

Patel JM, Harper C, Drew RT. The biotransformation of p-xylene to a toxic aldehyde. Drug metabolism and disposition: the biological fate of chemicals. 1978;6(4):368-74.

Patel JM, Harper C, Gupta BN, Drew RT. Changes in serum enzymes after inhalation exposure of p-xylene. Bulletin of environmental contamination and toxicology. 1979;21(1-2):17-24.

Pinkart HC, Wolfram JW, Rogers R, White DC. Cell Envelope Changes in Solvent-Tolerant and Solvent-Sensitive Pseudomonas putida Strains following Exposure to o-Xylene. Applied and environmental microbiology. 1996;62(3):1129-32.

Piotrowska D, Dlugosz A, Pajak J. Antioxidative properties of coenzyme Q10 and vitamin E in exposure to xylene and gasoline and their mixture with methanol. Acta poloniae pharmaceutica. 2002;59(6):427-32.

Raaschou-Nielsen O, Lohse C, Thomsen BL, Skov H, Olsen JH. Ambient air levels and the exposure of children to benzene, toluene, and xylenes in Denmark. Environmental research. 1997;75(2):149-59.

Ramakrishnan A, Lupo PJ, Agopian AJ, Linder SH, Stock TH, Langlois PH, et al. Evaluating the effects of maternal exposure to benzene, toluene, ethyl benzene, and xylene on oral clefts among offspring in Texas: 1999-2008. Birth defects research Part A, Clinical and molecular teratology. 2013;97(8):532-7.

Rana SV, Kumar S. Lipid peroxidation in liver, kidney and brain of rats after combined exposure to xylene, toluene and methyl alcohol. Indian journal of experimental biology. 1994;32(12):919-21.

Rana SV, Kumar S. Antioxidative enzyme in the liver of rats after exposure to xylene, toluene and methyl alcohol separately and in combination. Physiological chemistry and physics and medical NMR. 1995;27(1):25-9.

Revilla AS, Pestana CR, Pardo-Andreu GL, Santos AC, Uyemura SA, Gonzales ME, et al. Potential toxicity of toluene and xylene evoked by mitochondrial uncoupling. Toxicology in vitro : an international journal published in association with BIBRA. 2007;21(5):782-8.

Richer CL, Chakrabarti S, Senecal-Quevillon M, Duhr MA, Zhang XX, Tardif R. Cytogenetic effects of low-level exposure to toluene, xylene, and their mixture on human blood lymphocytes. International archives of occupational and environmental health. 1993;64(8):581-5.

Riedel J, Dekant W. Biotransformation and toxicokinetics of musk xylene in humans. Toxicology and applied pharmacology. 1999;157(2):145-55.

Riihimaki V, Pfaffli P, Savolainen K, Pekari K. Kinetics of m-xylene in man: General features of absorption, distribution, biotransformation and excretion in repetitive inhalation exposure. Scandinavian journal of work, environment & health. 1979;5(3):217-31.

Riihimaki V, Savolainen K. Human exposure to m-xylene. Kinetics and acute effects on the central nervous system. The Annals of occupational hygiene. 1980;23(4):411-22.

Rocco L, Mottola F, Santonastaso M, Saputo V, Cusano E, Costagliola D, et al. Anti-genotoxic ability of alpha-tocopherol and Anthocyanin to counteract fish DNA damage induced by musk xylene. Ecotoxicology (London, England). 2015;24(9):2026-35.

Rogers JV, Gunasekar PG, Garrett CM, McDougal JN. Dermal exposure to m-xylene leads to increasing oxidative species and low molecular weight DNA levels in rat skin. Journal of biochemical and molecular toxicology. 2001;15(4):228-30.

Rosen MB, Crofton KM, Chernoff N. Postnatal evaluation of prenatal exposure to p-xylene in the rat. Toxicology letters. 1986;34(2-3):223-9.

Rosengren LE, Kjellstrand P, Aurell A, Haglid KG. Irreversible effects of xylene on the brain after long term exposure: a quantitative study of DNA and the glial cell marker proteins S-100 and GFA. Neurotoxicology. 1986;7(3):121-35.

Ruijten MW, Hooisma J, Brons JT, Habets CE, Emmen HH, Muijser H. Neurobehavioral effects of long-term exposure to xylene and mixed organic solvents in shipyard spray painters. Neurotoxicology. 1994;15(3):613-20.

Rydzynski K, Korsak Z, Jedlinska U, Sokal JA. The toxic effects of combined exposure to toluene and m-xylene in animals. IV. Liver ultrastructure after subchronic inhalatory exposure. Polish journal of occupational medicine and environmental health. 1992;5(1):35-42.

Sabatini L, Barbieri A, Indiveri P, Mattioli S, Violante FS. Validation of an HPLC-MS/MS method for the simultaneous determination of phenylmercapturic acid, benzylmercapturic acid and o-methylbenzyl mercapturic acid in urine as biomarkers of exposure to benzene, toluene and xylenes. Journal of chromatography B, Analytical technologies in the biomedical and life sciences. 2008;863(1):115-22.

Saillenfait AM, Gallissot F, Morel G, Bonnet P. Developmental toxicities of ethylbenzene, ortho-, meta-, para-xylene and technical xylene in rats following inhalation exposure. Food and chemical toxicology : an

international journal published for the British Industrial Biological Research Association. 2003;41(3):415-29.

Saito A, Tanaka H, Usuda H, Shibata T, Higashi S, Yamashita H, et al. Characterization of skin inflammation induced by repeated exposure of toluene, xylene, and formaldehyde in mice. Environmental toxicology. 2011;26(3):224-32.

Saito T, Kusakabe T, Takeichi S. Hippuric acid and methyl hippuric acid in rat hair: possible monitoring of xylene and toluene exposure. Forensic science international. 2003;133(1-2):146-51.

Sakai T, Takeuchi Y, Ikeya Y, Araki T, Ushio K. Method for simultaneous determination of six metabolites of toluene, xylene and ethylbenzene, and its application to exposure monitoring of workers in a printing factory with gravure machines. Sangyo igaku Japanese journal of industrial health. 1989;31(1):9-16.

Santiago F, Alves G, Otero UB, Tabalipa MM, Scherrer LR, Kosyakova N, et al. Monitoring of gas station attendants exposure to benzene, toluene, xylene (BTX) using three-color chromosome painting. Molecular cytogenetics. 2014;7(1):15.

Sato A. Toxicokinetics of benzene, toluene and xylenes. IARC scientific publications. 1988(85):47-64.

Savolainen H, Pfaffli P. Dose-dependent neurochemical changes during short-term inhalation exposure to m-xylene. Archives of toxicology. 1980;45(2):117-22.

Savolainen H, Vainio H, Helojoki M, Elovaara E. Biochemical and toxicological effects of short-term, intermittent xylene inhalation exposure and combined ethanol intake. Archives of toxicology. 1978;41(3):195-205.

Savolainen K, Riihimaki V, Laine A, Kekoni J. Short-term exposure of human subjects to m-xylene and 1,1,1-trichloroethane. International archives of occupational and environmental health. 1981;49(1):89-98.

Savolainen K, Riihimaki V, Laine A, Kekoni J. Short-term exposure of human subjects to m-xylene and 1,1,1-trichloroethane. Archives of toxicology Supplement = Archiv fur Toxikologie Supplement. 1982;5:96-9.

Savolainen K, Riihimaki V, Linnoila M. Effects of short-term xylene exposure on psychophysiological functions in man. International archives of occupational and environmental health. 1979;44(4):201-11.

Savolainen K, Riihimaki V, Muona O, Kekoni J, Luukkonen R, Laine A. Conversely exposure-related effects between atmospheric m-xylene concentrations and human body sense of balance. Acta pharmacologica et toxicologica. 1985;57(2):67-71.

Savolainen K, Riihimaki V, Seppalainen AM, Linnoila M. Effects of short-term m-xylene exposure and physical exercise on the central nervous system. International archives of occupational and environmental health. 1980;45(2):105-21.

Scheepers PTJ, Konings J, Demirel G, Gaga EO, Anzion R, Peer PGM, et al. Determination of exposure to benzene, toluene and xylenes in Turkish primary school children by analysis of breath and by environmental passive sampling. The Science of the total environment. 2010;408(20):4863-70.

Schultz TW, Bryant SE, Kissel TS. Toxicological assessment in Tetrahymena of intermediates in aerobic microbial transformation of toluene and p-xylene. Bulletin of environmental contamination and toxicology. 1996;56(1):129-34.

Schupp T, Bolt HM, Hengstler JG. Maximum exposure levels for xylene, formaldehyde and acetaldehyde in cars. Toxicology. 2005;206(3):461-70.

Sedivec V, Flek J. Exposure test for xylenes. International archives of occupational and environmental health. 1976;37(3):219-32.

Selgrade MK, Daniels MJ, Jaskot RH, Robinson BL, Allis JW. Enhanced mortality and liver damage in virus-infected mice exposed to p-xylene. Journal of toxicology and environmental health. 1993;40(1):129-44.

Seppalainen AM, Laine A, Salmi T, Riihimaki V, Verkkala E. Changes induced by short-term xylene exposure in human evoked potentials. International archives of occupational and environmental health. 1989;61(7):443-9.

Seppalainen AM, Laine A, Salmi T, Verkkala E, Riihimaki V, Luukkonen R. Electroencephalographic findings during experimental human exposure to m-xylene. Archives of environmental health. 1991;46(1):16-24.

Shen S, Yuan L, Zeng S. An effort to test the embryotoxicity of benzene, toluene, xylene, and formaldehyde to murine embryonic stem cells using airborne exposure technique. Inhalation toxicology. 2009;21(12):973-8.

Silva-Rocha R, de Lorenzo V. Stochasticity of TOL plasmid catabolic promoters sets a bimodal expression regime in Pseudomonas putida mt-2 exposed to m-xylene. Molecular microbiology. 2012;86(1):199-211.

Simmons JE, Allis JW, Grose EC, Seely JC, Robinson BL, Berman E. Assessment of the hepatotoxicity of acute and short-term exposure to inhaled p-xylene in F-344 rats. Journal of toxicology and environmental health. 1991;32(3):295-306.

Singh MP, Mishra M, Sharma A, Shukla AK, Mudiam MKR, Patel DK, et al. Genotoxicity and apoptosis in Drosophila melanogaster exposed to benzene, toluene and xylene: attenuation by quercetin and curcumin. Toxicology and applied pharmacology. 2011;253(1):14-30.

Singh MP, Ram KR, Mishra M, Shrivastava M, Saxena DK, Chowdhuri DK. Effects of co-exposure of benzene, toluene and xylene to Drosophila melanogaster: alteration in hsp70, hsp60, hsp83, hsp26, ROS generation and oxidative stress markers. Chemosphere. 2010;79(5):577-87.

Singh MP, Reddy MMK, Mathur N, Saxena DK, Chowdhuri DK. Induction of hsp70, hsp60, hsp83 and hsp26 and oxidative stress markers in benzene, toluene and xylene exposed Drosophila melanogaster: role of ROS generation. Toxicology and applied pharmacology. 2009;235(2):226-43.

Siwek-Iwanicka J, Chwaluk A. Acute-onset thrombocytopenia following single inhalation xylene exposure--a case report. Przeglad lekarski. 2013;70(8):681-3.

Skender L, Karacic V, Bosner B. A selection of biological indicators in occupational exposure to toluene and xylene. Arhiv za higijenu rada i toksikologiju. 1993;44(1):27-33.

Smolik R, Grzybek-Hryncewicz K, Lange A, Zatonski W. Serum complement level in workers exposed to nebzene, toluene and xylene. Internationales Archiv fur Arbeitsmedizin. 1973;31(3):243-7.

Sollenberg J, Baldesten A. Isotachophoretic analysis of mandelic acid, phenylglyoxylic acid, hippuric acid and methylhippuric acid in urine after occupational exposure to styrene, toluene and/or xylene. Journal of chromatography. 1977;132(3):469-76.

Stetkiewicz J, Domanska A. Morphometric analysis of the rat lung after exposure to xylene vapors. Medycyna pracy. 1988;39(5):297-308.

Sugihara R, Ogata M. Quantitation of urinary m- and p-methylhippuric acids as indices of m- and p-xylene exposure. International archives of occupational and environmental health. 1978;41(4):281-6.

Swiercz R, Korsak Z, Rydzynski K. Kinetics of n-butyl alcohol and m-xylene in blood during single and combined inhalation exposure in rats. International journal of occupational medicine and environmental health. 1995;8(4):361-5.

Symanski E, Stock TH, Tee PG, Chan W. Demographic, residential, and behavioral determinants of elevated exposures to benzene, toluene, ethylbenzene, and xylenes among the U.S. population: results from 1999-2000 NHANES. Journal of toxicology and environmental health Part A. 2009;72(14):915-24.

Takeuchi A, Kawai T, Zhang ZW, Miyama Y, Sakamoto K, Higashikawa K, et al. Toluene, xylenes and xylene isomers in urine as biological indicators of low-level exposure to each solvent; a comparative study. International archives of occupational and environmental health. 2002;75(6):387-93.

Tardif R, Lapare S, Krishnan K, Brodeur J. Physiologically based modeling of the toxicokinetic interaction between toluene and m-xylene in the rat. Toxicology and applied pharmacology. 1993;120(2):266-73.

Tardif R, Lapare S, Plaa GL, Brodeur J. Effect of simultaneous exposure to toluene and xylene on their respective biological exposure indices in humans. International archives of occupational and environmental health. 1991;63(4):279-84.

Tardif R, Plaa GL, Brodeur J. Influence of various mixtures of inhaled toluene and xylene on the biological monitoring of exposure to these solvents in rats. Canadian journal of physiology and pharmacology. 1992;70(3):385-93.

Tardif R, Sato A, Lapare S, Brodeur J. Ethanol induced modification of m-xylene toxicokinetics in humans. Occupational and environmental medicine. 1994;51(3):187-91.

Thetkathuek A, Jaidee W, Saowakhontha S, Ekburanawat W. Neuropsychological Symptoms among Workers Exposed to Toluene and Xylene in Two Paint Manufacturing Factories in Eastern Thailand. Advances in preventive medicine. 2015;2015:183728.

Toftgard R. Effects of xylene exposure on the metabolism of antipyrine in vitro and in vivo in the rat. Toxicology. 1983;28(1-2):117-31.

Toftgard R, Nilsen OG, Glaumann H, Gustafsson JA. Induction of cytochrome P-450 in the rat liver after exposure to xylenes, dose-response relationship and dependence on endocrine factors. Toxicology. 1983;27(2):119-37.

Tomaszewski R, Gandurski P, Chmielewski J. Nodal rhythm in xylene intoxication. Wiadomosci lekarskie (Warsaw, Poland : 1960). 1978;31(3):193-4.

Turkall RM, Skowronski GA, Kadry AR, Abdel-Rahman MS. Sex differences in the bioavailability of soil-adsorbed m-xylene in orally exposed rats. Toxicology letters. 1992;63(1):57-67.

Uchida Y, Nakatsuka H, Ukai H, Watanabe T, Liu YT, Huang MY, et al. Symptoms and signs in workers exposed predominantly to xylenes. International archives of occupational and environmental health. 1993;64(8):597-605.

Ungvary G. The effect of xylene exposure on the liver. Acta morphologica Hungarica. 1990;38(3-4):245-58.

Ungvary G, Tatrai E, Hudak A, Barcza G, Lorincz M. Studies on the embryotoxic effects of ortho-, meta- and para-xylene. Toxicology. 1980;18(1):61-74.

Ungvary G, Varga B, Horvath E, Tatrai E, Folly G. Study on the role of maternal sex steroid production and metabolism in the embryotoxicity of para-xylene. Toxicology. 1981;19(3):263-8.

Valcke M, Haddad S. Assessing human variability in kinetics for exposures to multiple environmental chemicals: a physiologically based pharmacokinetic modeling case study with dichloromethane, benzene, toluene, ethylbenzene, and m-xylene. Journal of toxicology and environmental health Part A. 2015;78(7):409-31.

Vlasov VN. On probable use of general vibration as a functional load in studies of xylene and toluene exposure. Meditsina truda i promyshlennaia ekologiia. 2006(9):12-6.

Vodickova L, Frantik E, Vodickova A. Neutrotropic effects and blood levels of solvents at combined exposures: binary mixtures of toluene, o-xylene and acetone in rats and mice. Central European journal of public health. 1995;3(2):57-64.

Von Burg R. Toxicology updates. Xylene. Journal of applied toxicology : JAT. 1982;2(5):269-71.

Warden H, Richardson H, Richardson L, Siemiatycki J, Ho V. Associations between occupational exposure to benzene, toluene and xylene and risk of lung cancer in Montreal. Occupational and environmental medicine. 2018.

Washington WJ, Murthy RC, Doye A, Eugene K, Brown D, Bradley I. Induction of morphologically abnormal sperm in rats exposed to O-Xylene. Archives of andrology. 1983;11(3):233-7.

Winnicka A, Chmielewski J, Mardkowicz T. Blood xylene and activity of various enzymes following exposure in industrial plants. Polski tygodnik lekarski (Warsaw, Poland : 1960). 1977;32(30):1149-51.

Wisiewski M, Sein Anand J, Wiergowski M, Chodorowski Z. Oral intoxication with xylene--a case report. Przeglad lekarski. 2007;64(4-5):324-5.

Wisniewska-Knypl JM, Wronska-Nofer T. Induction of cytochrome P-450 monooxygenase after combined exposure of rats to xylene and ethanol. Folia medica Cracoviensia. 1990;31(3):185-92.

Wisniewska-Knypl JM, Wronska-Nofer T, Jajte J, Jedlinska U. The effect of combined exposures to ethanol and xylene on rat hepatic microsomal monooxygenase activities. Alcohol (Fayetteville, NY). 1989;6(5):347-52.

Xiao G, Pan C, Cai Y, Lin H, Fu Z. Effect of benzene, toluene, xylene on the semen quality of exposed workers. Chinese medical journal. 1999;112(8):709-12.

Xiao G, Pan C, Cai Y, Lin H, Fu Z. Effect of benzene, toluene, xylene on the semen quality and the function of accessory gonad of exposed workers. Industrial health. 2001;39(2):206-10.

Yan S, Zhou Q. Toxic effects of Hydrilla verticillata exposed to toluene, ethylbenzene and xylene and safety assessment for protecting aquatic macrophytes. Chemosphere. 2011;85(6):1088-94.

Yokoyama K, Araki S, Murata K, Nishikitani M, Nakaaki K, Yokota J, et al. Postural sway frequency analysis in workers exposed to n-hexane, xylene, and toluene: assessment of subclinical cerebellar dysfunction. Environmental research. 1997;74(2):110-5.

Yu IJ, Lee JY, Chung YH, Kim KJ, Han JH, Cha GY, et al. Co-administration of toluene and xylene antagonized the testicular toxicity but not the hematopoietic toxicity caused by ethylene glycol monoethyl ether in Sprague-Dawley rats. Toxicology letters. 1999;109(1-2):11-20.

Toxicity of xylene? Munchener medizinische Wochenschrift (1950). 1972;114(29):1302-3.

Recirculation air creates xylene intoxication hazard. Hospital risk management. 1980;2(6):84.

Comparison of chronic effects on blood cells of workers exposed to low concentration of benzene, toluene or xylene. Zhonghua yu fang yi xue za zhi [Chinese journal of preventive medicine]. 1983;17(2):101-4.

BIB-5. Carbon Disulfide

Aaserud O, Gjerstad L, Nakstad P, Nyberg-Hansen R, Hommeren OJ, Tvedt B, et al. Neurological examination, computerized tomography, cerebral blood flow and neuropsychological examination in workers with long-term exposure to carbon disulfide. Toxicology. 1988;49(2-3):277-82.

Aaserud O, Hommeren OJ, Tvedt B, Nakstad P, Mowe G, Efskind J, et al. Carbon disulfide exposure and neurotoxic sequelae among viscose rayon workers. American journal of industrial medicine. 1990;18(1):25-37.

Aaserud O, Russell D, Nyberg-Hansen R, Rootwelt K, Jorgensen EB, Nakstad P, et al. Regional cerebral blood flow after long-term exposure to carbon disulfide. Acta neurologica Scandinavica. 1992;85(4):266-71.

Afendikova AP. Nature of body disturbances in carbon disulfide exposure. Vrachebnoe delo. 1982(2):111-3.

Andreeva-Galanina EC, Dragnea M. Changes in the galvano-cutaneous reflex in chronic carbon disulfide poisoning. Igiena. 1954;4:23-31.

Andreeva-Galanina ET, Bykhovskaia AN, Galat NI, Dragnea MA. Condition of the central nervous system in persons exposed to the prolonged effects of carbon disulfide. Trudy Leningradskogo sanitarno-gigienicheskogo meditsinskogo instituta. 1958;44:127-54.

Andruszczak K. Occurrence of ulcerative disease in workers exposed to carbon disulfide. Medycyna pracy. 1966;17(6):555-60.

Andruszczak K. Behavior of the ceruloplasmin level in the blood serum in workers exposed to carbon disulfide. Medycyna pracy. 1967;18(2):120-7.

Andrzejewska W, Tokarz-Sawinska E. Visual space localization in persons permanently exposed to the influence of carbon disulfide. Klinika oczna. 1976;46(8):909-14.

Balabaeva L, Davidkova E, Kurchatova G. Effect of long-term exposure to carbon disulfide on various biochemical indices in albino rats. Problemi na khigienata. 1982;7:101-8.

Balabaeva L, Tabakova S. Changes in lipid metabolism in pregnant white rats and their fetuses in inhalational exposure to carbon disulfide. Problemi na khigienata. 1979;4:92-100.

Beauchamp RO, Jr., Bus JS, Popp JA, Boreiko CJ, Goldberg L. A critical review of the literature on carbon disulfide toxicity. Critical reviews in toxicology. 1983;11(3):169-278.

Besarabic M. "Antabus test" and absenteeism in workers exposed to carbon disulfide. Arhiv za higijenu rada i toksikologiju. 1978;29(4):321-6.

Bi Y, Tan X, Wang F, Kong D. Effects of long-term exposure to lower concentration of carbon disulfide on cardiovascular system of workers in a viscose rayon factory. Wei sheng yan jiu = Journal of hygiene research. 1999;28(5):259-60.

Bi Y, Tao N, Tan X, Wang F, Li Y, Su Y. Study on relationship between carbon disulfide exposure and symptoms and signs of nervous system in workers. Journal of Tongji Medical University = Tong ji yi ke da xue xue bao. 1999;19(4):280-4.

Bittersohl G, Krause-Liebscher I. Results of retinal photographic studies of carbon disulfide-exposed workers. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1980;26(4):260-2.

Bittersohl G, Thiele H. Health condition of workers exposed to carbon disulfide. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1978;24(11):852-3.

Bittersohl G, Thiele H, Balasch E, Donnerstag G, Kruger K, Kruger S, et al. Health status of workers exposed to carbon disulfide in the synthetic fibre industry. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1978;24(7):541-4.

Bobnis W, Kosmider K, Millo B, Wojcicki J. Blood serum glycoproteins in men exposed to carbon disulfide. Medycyna pracy. 1980;31(6):489-92.

Bobnis W, Millo B, Gregorczyk J. Immunologic evaluation of beta-lipoprotein antigen in the serum of men exposed to carbon disulfide over protracted periods of time. Archivum immunologiae et therapiae experimentalis. 1976;24(1):21-8.

Boillat MA. The iodine-azide test in low exposure to carbon disulfide. Sozial- und Praventivmedizin. 1980;25(4):203-4.

Borch-Johnsen K, Kruse A, Pedersen LM. Carbon disulfide. A toxicological review and a case of poisoning. Ugeskrift for laeger. 1981;143(6):328-32.

Borek-Lichota I, Warzel B. Chronaximetric studies in humans exposed to the toxic effect of carbon disulfide. Acta physiologica Polonica. 1967;18(5):703-13.

Bortkiewicz A, Gadzicka E, Szymczak W. Heart rate variability in workers exposed to carbon disulfide. Journal of the autonomic nervous system. 1997;66(1-2):62-8.

Bortkiewicz A, Gadzicka E, Szymczak W. Cardiovascular disturbances in workers exposed to carbon disulfide. Applied occupational and environmental hygiene. 2001;16(4):455-63.

Bourguignon G, Guillore. Electronic tests of chronic professional poisoning with carbon disulfide. Comptes rendus des seances de la Societe de biologie et de ses filiales. 1956;150(11):1908-10.

Braeckman L, Kotseva K, Duprez D, De Bacquer D, De Buyzere M, Van De Veire N, et al. Vascular changes in workers exposed to carbon disulfide. Annals of the Academy of Medicine, Singapore. 2001;30(5):475-80.

Braemer M, Herborn H. General practice evaluation of a psychologico-neurological questionnaire and special psychological follow-up studies in patients exposed to carbon disulfide. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1986;32(11):640-2.

Bratkowska-Seniow B, Oleniacz W, Smolik R, Szymanska J. Serum immunoelectrophoretic pattern in subjects chronically exposed to carbon disulfide. Polskie Archiwum Medycyny Wewnetrznej. 1965;35(11):1557-9.

Bremer F, Verstappen A, Verougstraete C. Development of a case of retinopathy caused by carbon disulfide poisoning. Bulletin de la Societe belge d'ophtalmologie. 1984;212:47-54.

Bus JS. The relationship of carbon disulfide metabolism to development of toxicity. Neurotoxicology. 1985;6(4):73-80.

Calabrese EJ. Does use of oral contraceptives enhance the toxicity of carbon disulfide through interactions with pyridoxine and tryptophan metabolism? Medical hypotheses. 1980;6(1):21-33.

Candura F, Franco G, Malamani T, Piazza A. Altered glucose tolerance in carbon disulfide exposed workers. Acta diabetologica latina. 1979;16(3):259-63.

Carreon T, Hein MJ, Hanley KW, Viet SM, Ruder AM. Coronary artery disease and cancer mortality in a cohort of workers exposed to vinyl chloride, carbon disulfide, rotating shift work, and o-toluidine at a chemical manufacturing plant. American journal of industrial medicine. 2014;57(4):398-411.

Cassitto MG, Camerino D, Imbriani M, Contardi T, Masera L, Gilioli R. Carbon disulfide and the central nervous system: a 15-year neurobehavioral surveillance of an exposed population. Environmental research. 1993;63(2):252-63.

Cati P. Research on modifications of the ocular fundus and retinal arterial pressure caused by the toxic action of carbon disulfide, with particular regard to the importance of these as attributable early symptoms of carbon disulfide poisoning. Folia medica Folia medica (Naples, Italy). 1955;38(8):860-93.

Cavalleri A, Maugeri U, Visconti E. Urinary excretion of testosterone and gonadotropins stimulating interstitial cells (ICSH) in persons exposed to carbon disulfide. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1970;31(1):23-30.

Cavalleri A, Taccola A, Graovac-Leposavic L, Maugeri U, Djuric D. Blood thyroxine levels in subjects exposed to carbon disulfide. Lavoro umano. 1971;23(6):183-7.

Cesaro AN. Arterial pressure in the retina in workers exposed to carbon disulfide hazards. La Medicina del lavoro. 1952;43(8-9):312-4.

Chalansonnet M, Carreres-Pons M, Venet T, Thomas A, Merlen L, Seidel C, et al. Combined exposure to carbon disulfide and low-frequency noise reversibly affects vestibular function. Neurotoxicology. 2018;67:270-8.

Chang S-J, Chen C-J, Shih T-S, Chou T-C, Sung F-C. Risk for hypertension in workers exposed to carbon disulfide in the viscose rayon industry. American journal of industrial medicine. 2007;50(1):22-7.

Chang S-J, Shih T-S, Chou T-C, Chen C-J, Chang H-Y, Chen P-C, et al. Electrocardiographic abnormality for workers exposed to carbon disulfide at a viscose rayon plant. Journal of occupational and environmental medicine. 2006;48(4):394-9.

Chang S-J, Shih T-S, Chou T-C, Chen C-J, Chang H-Y, Sung F-C. Hearing loss in workers exposed to carbon disulfide and noise. Environmental health perspectives. 2003;111(13):1620-4.

Chapman LJ, Sauter SL, Henning RA, Levine RL, Matthews CG, Peters HA. Finger tremor after carbon disulfide-based pesticide exposures. Archives of neurology. 1991;48(8):866-70.

Chen J, Li Y-J, Yang W-P. Effects of carbon disulfide on blood pressure and electrocardiogram for workers exposed to levels below the national maximum allowable concentration. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2009;27(11):644-8.

Chen X-q, Tan X-d. Studies on DNA damage in workers with long-term exposure to lower concentration of carbon disulfide. Zhonghua yu fang yi xue za zhi [Chinese journal of preventive medicine]. 2004;38(1):36-8.

Chengelis CP. Changes in hepatic glutathione concentrations during carbon disulfide induced hepatotoxicity in the rat. Research communications in chemical pathology and pharmacology. 1988;61(1):97-109.

Chengelis CP. Paradoxical effect of cobaltous chloride on carbon disulfide induced hepatotoxicity in rats. Research communications in chemical pathology and pharmacology. 1988;61(1):83-96.

Cherrie JW. RE: Effect of Skin Protection and Skin Irritation on the Internal Exposure to Carbon Disulfide in Employees of the Viscose Industry. The Annals of occupational hygiene. 2016;60(4):525-7.

Chou T-C, Sheu H-M, Chiu J-E, Wu J-D, Shih T-S, Chang H-Y. Combined exposure to carbon disulfide and sulfuric acid simultaneously increases the risk of hand dermatitis in rayon industry. Journal of exposure analysis and environmental epidemiology. 2004;14(7):551-7.

Chou T-C, Shih T-S, Sheu H-M, Chang S-J, Huang C-C, Chang H-Y. The effect of personal factors on the relationship between carbon disulfide exposure and urinary 2-thiothiazolidine-4-carboxylic acid levels in rayon manufacturing workers. The Science of the total environment. 2004;322(1-3):51-62.

Chou T-C, Tsai J-C, Sheu H-M, Jen C-J, Shih T-S, Chang H-Y. Topical exposure to carbon disulfide induces epidermal permeability alterations in physiological and pathological changes. Toxicology letters. 2005;158(3):225-36.

Chung H, Youn K, Kim K, Park K. Carbon disulfide exposure estimate and prevalence of chronic diseases after carbon disulfide poisoning-related occupational diseases. Annals of occupational and environmental medicine. 2017;29:52.

Chwirot R. Results of studies on the eye in workers exposed to the effect of carbon disulfide. Annales Academiae Medicae Stetinensis. 1969;15:435-41.

Coppock RW, Buck WB, Mabee RL. Toxicology of carbon disulfide; a review. Veterinary and human toxicology. 1981;23(5):331-6.

Cox C, Hee SS, Tolos WP. Biological monitoring of workers exposed to carbon disulfide. American journal of industrial medicine. 1998;33(1):48-54.

Cox C, Que Hee SS, Lynch DW. Urinary 2-thiothiazolidine-4-carboxylic acid (TTCA) as the major urinary marker of carbon disulfide vapor exposure in rats. Toxicology and industrial health. 1996;12(1):81-92.

Craveri A, Lanfredini M, Tornaghi G, Citella C, Malamani T, Marasco SD, et al. Determination of antithrombin III in a group workers with long-term exposure to carbon disulfide (CS2). Giornale di clinica medica. 1980;61(11):805-11.

Craveri A, Lanfredini M, Tornaghi G, Frangione A, Milella AM, Ranieri R, et al. Determination of platelet activation products (platelet factor IV and beta-thromboglobulin) in a group of workers with long-term exposure to carbon disulfide. Giornale di clinica medica. 1980;61(11):812-21.

Dalvi PS, Dalvi RR, Billups LH. Potentiation of the hepatic toxicity of carbon disulfide by chlordane. Toxicology international. 2013;20(2):132-7.

Dalvi RR. Mechanism of the neurotoxic and hepatotoxic effects of carbon disulfide. Drug metabolism and drug interactions. 1988;6(3-4):275-84.

Dalvi RR, Deoras DP. Metabolism of a dithiocarbamate fungicide thiram to carbon disulfide in the rat and its hepatotoxic implications. Acta pharmacologica et toxicologica. 1986;58(1):38-42.

Dalvi RR, Hunter AL, Neal RA. Toxicological implications of the mixed-function oxidase catalyzed metabolism of carbon disulfide. Chemico-biological interactions. 1975;10(5):347-61.

Dantin Gallego J. Diagnosis of carbon disulfide poisoning. La Medicina del lavoro. 1975;66(3):221-9.

De Fruyt F, Thiery E, De Bacquer D, Vanhoorne M. Neuropsychological effects of occupational exposures to carbon disulfide and hydrogen sulfide. International journal of occupational and environmental health. 1998;4(3):139-46.

de Gandarias JM, Echevarria E, Irazusta J, Casis O, Casis L. Regional distribution of neuropeptide-degrading enzyme activity in the rat brain: effects of subacute exposure to carbon disulfide. Journal of biochemical toxicology. 1992;7(3):171-5.

de Gandarias JM, Echevarria E, Mugica J, Serrano R, Casis L. Changes in brain enkephalin immunostaining after acute carbon disulfide exposure in rats. Journal of biochemical toxicology. 1994;9(2):59-62.

DeMartino AW, Zigler DF, Fukuto JM, Ford PC. Carbon disulfide. Just toxic or also bioregulatory and/or therapeutic? Chemical Society reviews. 2017;46(1):21-39.

Dietzmann K, Laass W. Histological and histochemical studies on the rat brain under conditions of carbon disulfide intoxication. Experimentelle Pathologie. 1977;13(6):320-7.

Dimitrova M, Usheva G, Pavlova S. Results of a longitudinal study of coronary diseases in occupational exposure to carbon disulfide. Problemi na khigienata. 1984;9:107-11.

Djuric D, Postic-Grujin A, Graovac-Leposavic L, Delic V. Disulfiram as an indicator of human susceptibility to carbon disulfide. Excretion of diethyldithiocarbamate sodium in the urine of workers exposed to CS 2 after oral administration of disulfiram. Archives of environmental health. 1973;26(6):287-9.

Domergue J, Lison D, Haufroid V. No evidence of cardiovascular toxicity in workers exposed below 5ppm carbon disulfide. International archives of occupational and environmental health. 2016;89(5):835-45.

Dong Q, Song H-y, Song W. Analysis of electrophysiological examination result of workers exposed to carbon disulfide. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2012;30(6):464-6.

Dzialek E, Sinczuk-Walczak H, Borczyk A. Rhythm disorders of basic bioelectric activity of the brain in alcoholism and exposure to carbon disulfide (CS2). Medycyna pracy. 1990;41(2):119-24.

El-Dessoukey EA, Awadallah R. Serum mineral changes under the effect of carbon disulfide intoxication. Zeitschrift fur Ernahrungswissenschaft. 1977;16(3):153-7.

El-Dessoukey EA, Awadallah R, Mikhail TH. Serum enzyme changes associated with carbon disulfide hepatotoxicity in experimental animals. Zeitschrift fur Ernahrungswissenschaft. 1977;16(4):262-7.

El-Dessouky EA, Hawary MF, El-Shobaki FA, El-Hawary Z, Massoud AA. Serum and urine amino acid pattern under the effect of carbon disulfide intoxication. Zeitschrift fur Ernahrungswissenschaft. 1977;16(1):31-8.

Fabre A. Biological researches to be done in carbon disulfide poisoning. La Presse medicale. 1953;61(17):352.

Fabrizi G, Fioretti M, Rocca LM. Occupational exposure to complex mixtures of volatile organic compounds in ambient air: desorption from activated charcoal using accelerated solvent extraction can replace carbon disulfide? Analytical and bioanalytical chemistry. 2013;405(2-3):961-76.

Fajen J, Albright B, Leffingwell SS. A cross-sectional medical and industrial hygiene survey of workers exposed to carbon disulfide. Scandinavian journal of work, environment & health. 1981;7 Suppl 4:20-7.

Ferrero GP. Frequency of diabetes mellitus in workers exposed to the risk of carbon disulfide poisoning. La Medicina del lavoro. 1969;60(1):38-42.

Filipovic N, Bilalbegovic Z, Sefic M, Djuric D. Changes in serum angiotensin I converting enzyme activity due to carbon disulfide exposure. Giornale italiano di medicina del lavoro. 1984;6(3-4):113-4.

Fischer J, Michalova C. Study of histological changes in the central nervous system in rats and guinea pigs after carbon disulfide exposure. Pracovni lekarstvi. 1956;8(1):16-9.

Fliukhin AG. Serum lipids of workers exposed to carbon disulfide. Gigiena truda i professional'nye zabolevaniia. 1979(7):34-6.

Franco G, Malamani T. Systolic time intervals as a measure of left ventricular function in viscose rayon workers exposed to carbon disulfide. Scandinavian journal of work, environment & health. 1976;2(2):107-4.

Franco G, Malamani T, Germani L, Candura F. Assessment of coronary heart disease risk among viscose rayon workers exposed to carbon disulfide at concentrations of about 30 mg/m3. Scandinavian journal of work, environment & health. 1982;8(2):113-20.

Franco G, Rizzo S, Taccola A. On electrocardiographic changes in carbon disulfide poisoning: the Macruz index in exposed subjects. La Medicina del lavoro. 1973;64(11):444-6.

Freundt KJ, Schauenburg KJ, Eichhorn P. Effect of acute exposure to carbon disulfide vapour upon some components of the hepatic-microsomal enzyme system in rats. Archives of toxicology. 1974;32(3):233-40.

Frumkin H. Multiple system atrophy following chronic carbon disulfide exposure. Environmental health perspectives. 1998;106(9):611-3.

Furusawa S, Sasaki K, Takayanagi G. Reduction of cyclophosphamide-induced toxicity by diethyldithiocarbamate and carbon disulfide and its possible mechanism. Journal of pharmacobio-dynamics. 1988;11(4):284-7.

Gagnaire F, Simon P, Bonnet P, De Ceaurriz J. The influence of simultaneous exposure to carbon disulfide and hydrogen sulfide on the peripheral nerve toxicity and metabolism of carbon disulfide in rats. Toxicology letters. 1986;34(2-3):175-83.

Gelbke H-P, Goen T, Maurer M, Sulsky SI. A review of health effects of carbon disulfide in viscose industry and a proposal for an occupational exposure limit. Critical reviews in toxicology. 2009;39 Suppl 2:1-126.

Ghittori S, Maestri L, Contardi I, Zadra P, Marraccini P, Imbriani M. Biological monitoring of workers exposed to carbon disulfide (CS2) in a viscose rayon fibers factory. American journal of industrial medicine. 1998;33(5):478-84.

Glenn MW, Burr WM. Toxicity of a piperazine-carbon disulfide-phenothiazine preparation in the horse. Journal of the American Veterinary Medical Association. 1972;160(7):988-92.

Gluszcz M, Sulkowski W, Rogaczewska T, Wronska-Nofer T, Sinczuk-Walczak H, Lesnik H, et al. Reduction of health risk factors in workers exposed to carbon disulfide. Medycyna pracy. 1984;35(3):217-21.

Gluszczowa M. Causes of early retirement of workers chronically exposed to carbon disulfide. Medycyna pracy. 1983;34(2):183-9.

Godlewski A, Michalak J, Fortak W. Studies of sudanophilia and PAS-positive substances in the neutrophils of persons chronically exposed to carbon disulfide. Medycyna pracy. 1981;32(2):83-9.

Godlewski A, Michalak J, Fortak W. Phagocytosis of Candida albicans L-45 in vitro and evaluation of the changes in the intensity of the reaction to 5'-nucleotidase of neutrophils in men chronically exposed to carbon disulfide. Medycyna pracy. 1982;33(5-6):295-300.

Goen T, Schramm A, Baumeister T, Uter W, Drexler H. Current and historical individual data about exposure of workers in the rayon industry to carbon disulfide and their validity in calculating the cumulative dose. International archives of occupational and environmental health. 2014;87(6):675-83.

Gohlke R. Histological findings on organs of rabbits following chronic exposure to carbon disulfide. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1968;14(2):81-7.

Gong MZ. Electroretinographic changes in experimental animals with chronic carbon disulfide intoxication. [Zhonghua yan ke za zhi] Chinese journal of ophthalmology. 1983;19(2):65-7.

Gottfried MR, Graham DG, Morgan M, Casey HW, Bus JS. The morphology of carbon disulfide neurotoxicity. Neurotoxicology. 1985;6(4):89-96.

Grabowski Z. Causes of disability related to occupational exposure to carbon disulfide. Medycyna pracy. 1985;36(6):387-95.

Graham DG, Amarnath V, Valentine WM, Pyle SJ, Anthony DC. Pathogenetic studies of hexane and carbon disulfide neurotoxicity. Critical reviews in toxicology. 1995;25(2):91-112.

Green EC, Hunter A. Toxicity of carbon disulfide in developing rats: LD50 values and effects on the hepatic mixed-function oxidase enzyme system. Toxicology and applied pharmacology. 1985;78(1):130-8.

Grigorenko DE. Cytoarchitectonics of the tracheobronchial lymph nodes in rats exposed to carbon disulfide. Arkhiv anatomii, gistologii i embriologii. 1988;94(3):60-5.

Grunewald A. Relation of the concentration of carbon disulfide in the air to carbon disulfide excretion in the urine of workers exposed to carbon disulfide. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1966;12(4):251-60.

Grunewald A. The demonstration of carbon disulfide in the urine as a biological test for workers exposed to thiram. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1975;21(7):567-8.

Guo Y, Ma Y, Chen G, Cheng J. The Effects of Occupational Exposure of Carbon Disulfide on Sexual Hormones and Semen Quality of Male Workers From a Chemical Fiber Factory. Journal of occupational and environmental medicine. 2016;58(8):e294-300.

Hanninen H, Nurminen M, Tolonen M, Martelin T. Psychological tests as indicators of excessive exposure to carbon disulfide. Scandinavian journal of psychology. 1978;19(2):163-74.

Harashima S, Kondo H, Satowa S, Sakurai H. Glucuronic acid excretion in urine of rabbits by exposure to carbon disulfide, benzol, and lead. Nihon eiseigaku zasshi Japanese journal of hygiene. 1961;16:423-9.

Harry GJ, Graham DG, Valentine WM, Morgan DL, Sills RC. Carbon disulfide neurotoxicity in rats: VIII. Summary. Neurotoxicology. 1998;19(1):159-61.

Hassman P, Hradsky M, Herout V, Simko A. Contribution to the problem of chronic gastritis in workers exposed to the hazard of carbon disulfide. Pracovni lekarstvi. 1962;14:81-4.

Herber RF. The application of a new carbon disulfide exposure test in occupational health. International archives of occupational and environmental health. 1976;38(2):115-20.

Hernberg S. Epidemiological study of health damage caused by exposure to carbon disulfide. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1978;24(11):846-52.

Hernberg S, Tolonen M, Nurminen M. Eight-year follow-up of viscose rayon workers exposed to carbon disulfide. Scandinavian journal of work, environment & health. 1976;2(1):27-30.

Herr DW, Vo KT, Morgan DL, Sills RC. Carbon disulfide neurotoxicity in rats: VI. Electrophysiological examination of caudal tail nerve compound action potentials and nerve conduction velocity. Neurotoxicology. 1998;19(1):129-46.

Heubusch P, DiStefano V. Activation of brain tyrosine hydroxylase in rats exposed to carbon disulfide and sodium diethyldithiocarbamate. Toxicology and applied pharmacology. 1978;46(1):143-9.

Hirata M, Ogawa Y, Okayama A, Goto S. A cross-sectional study on the brainstem auditory evoked potential among workers exposed to carbon disulfide. International archives of occupational and environmental health. 1992;64(5):321-4.

Hirata M, Ogawa Y, Okayama A, Goto S. Changes in auditory brainstem response in rats chronically exposed to carbon disulfide. Archives of toxicology. 1992;66(5):334-8.

Hoffmann P, Klapperstuck M. Effects of carbon disulfide on cardiovascular function after acute and subacute exposure of rats. Biomedica biochimica acta. 1990;49(1):121-8.

Hoffmann P, Muller S. Subacute carbon disulfide exposure modifies adrenergic cardiovascular actions in rats. Biomedica biochimica acta. 1990;49(1):115-20.

Horvath M, Michalova C. Electroencephalographic changes in experimental exposure to carbon disulfide in the light of Wedenskii's teachings on parabiosis. Archiv fur Gewerbepathologie und Gewerbehygiene. 1956;15(2):131-6.

Hu C-x, Zhang B-z, Li C-h, Wu Y-l, Yang L, Wang Z-p. DNA damage of splenic lymphocytes in pregnant mice exposed to carbon disulfide in implantation phase. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2013;31(8):576-80.

Huang C-C. Carbon disulfide neurotoxicity: Taiwan experience. Acta neurologica Taiwanica. 2004;13(1):3-9.

Huang X, Zhou Y, Ma J, Wang N, Zhang Z, Ji J, et al. Nitric oxide mediated effects on reproductive toxicity caused by carbon disulfide in male rats. Environmental toxicology and pharmacology. 2012;34(3):679-87.

Iaroslavskii VK. Toxic effect of carbon disulfide on the function of reproduction and increase in the effect produced by tryptophan. Biulleten' eksperimental'noi biologii i meditsiny. 1969;68(10):88-91.

Invernizzi G, Riva M. Neurotoxicosis due to carbon disulfide. Clinical and electroencephalographic study. Rivista sperimentale di freniatria e medicina legale delle alienazioni mentali. 1961;85:1699-722.

Isler UM. Renal changes in chronic carbon disulfide poisoning in rats; contribution to the problem of vascular toxicity of CS2. Zeitschrift fur die gesamte experimentelle Medizin. 1957;128(3):314-28.

Iudeles AL, Bessarabova RV. Detoxication of the effect of carbon disulfide in experimental conditions. Farmakologiia i toksikologiia. 1955;18(3):50-2.

Jakubowski M. EVALUATION OF THE DEGREE OF EXPOSURE TO CARBON DISULFIDE. I. ATTEMPTED APPLICATION OF THE INDEX OF ABSORPTION DESCRIBED BY V. VASAK AND CO-AUTHORS UNDER INDUSTRIAL CONDITIONS. Medycyna pracy. 1965;16:1-8.

Jakubowski M. Studies on the degree of exposure to carbon disulfide. 3. Quantitative evaluation of the absorption of carbon disulfide vapors in subjects under experimental conditions according to the iodine-azide test. Medycyna pracy. 1966;17(5):388-400.

Jankovic S, Plamenac P. Cytologic changes in the respiratory tract in workers exposed to carbon disulfide inhalation. Plucne bolesti : casopis Udruzenja pneumoftiziologa Jugoslavije = the journal of Yugoslav Association of Phthisiology and Pneumology. 1985;37(1-2):56-8.

Jhun H-J, Cho S-I, Kim M-J, Sung J. Electrocardiographic features of Korean carbon disulfide poisoned subjects after discontinuation of exposure. International archives of occupational and environmental health. 2007;80(6):547-51.

Jian L, Hu D. Antioxidative stress response in workers exposed to carbon disulfide. International archives of occupational and environmental health. 2000;73(7):503-6.

Jiang B, Zhang S, Huang J, Lu J. Study on electroneuromyography of 175 workers exposed to carbon disulfide. Wei sheng yan jiu = Journal of hygiene research. 1998;27(2):84-6.

Jiang K-y, Wu H, Qin W-h, Xiao Q-f, Lu Y-y, Cui S-m, et al. The rervising of biological exposure index for carbon disulfide exposuring. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2012;30(6):479-81.

Jiang X, Jiann L, Hu D. A preliminary study on body level of nitric oxide in workers exposed to carbon disulfide. Zhonghua yu fang yi xue za zhi [Chinese journal of preventive medicine]. 2000;34(6):348-50.

Jindrichova J, Simko A. Exposure to carbon disulfide during the manufacturing of ropes. Internationales Archiv fur Arbeitsmedizin. 1967;23(1):72-8.

Johnson BL, Boyd J, Burg JR, Lee ST, Xintaras C, Albright BE. Effects on the peripheral nervous system of workers' exposure to carbon disulfide. Neurotoxicology. 1983;4(1):53-65.

Johnson DJ, Amarnath V, Amarnath K, Valentine H, Valentine WM. Characterizing the influence of structure and route of exposure on the disposition of dithiocarbamates using toluene-3,4-dithiol analysis of blood and urinary carbon disulfide metabolites. Toxicological sciences : an official journal of the Society of Toxicology. 2003;76(1):65-74.

Kamal AA, Ahmed A, Saied K, Metwally M. Quantitative evaluation of ECG components of workers exposed to carbon disulfide. Environmental health perspectives. 1991;90:301-4.

Kane FJ, Jr. Carbon disulfide intoxication from overdosage of disulfiram. The American journal of psychiatry. 1970;127(5):690-4.

Kashin LM. General immunological reactivity of the organism and morbidity of workers exposed to carbon disulfide. Gigiena i sanitariia. 1965;30(6):23-6.

Kazakova B, Antov G, Stefanova M, Pavlova S. Metabolic and ultrastructural changes in the myocardium after prolonged exposure to low concentrations of carbon disulfide. Problemi na khigienata. 1982;7:81-7.

Khalkova Z, Vangelova K, Zaikov K. An experimental study of the effect of an artichoke preparation on the activity of the sympathetic-adrenal system in carbon disulfide exposure. Problemi na khigienata. 1995;20:162-71.

Kilo S, Zonnur N, Uter W, Goen T, Drexler H. Effect of Skin Protection and Skin Irritation on the Internal Exposure to Carbon Disulfide in Employees of the Viscose Industry. The Annals of occupational hygiene. 2015;59(8):972-81.

Kissel P, Pernot C, Dureux JB, Schmitt J, Duc M. SEVERE POLYNEURITIS CAUSED BY CARBON DISULFIDE POISONING. Annales medicales de Nancy. 1963;2:1283-7.

Klapperstuck M, Muller S, Hoffmann P. Carbon disulfide exposure attenuates adrenergic inotropic response in rats. Journal of hygiene, epidemiology, microbiology, and immunology. 1991;35(2):113-20.

Kleczenski A, Cieslinska A, Kowal-Gierczak B, Kuczynska-Sekieta K, Plamieniak L, Szott M. Behavior of some biochemical tests in persons exposed to the carbon disulfide. Medycyna pracy. 1966;17(5):380-7.

Kleczenski A, Malolepszy J, Wrzyszcz M, Szott M. Glutathione level in erythrocytes of workers exposed to the action of carbon disulfide. Medycyna pracy. 1966;17(2):99-103.

Klein O, Fiserova M, Lambl V, Zak L. Levels of serum oxidoreductases (LD, MD, ICD), blood proteins, immunoglobulins, and ceruloplasmin in a group of workers exposed to carbon disulfide. Sbornik lekarsky. 1987;89(4):108-13.

Klein O, Paulova M. Changes of absorption activity of the small intestine of the rabbit for xylose in acute intoxication with carbon disulfide. Ceskoslovenska gastroenterologie a vyziva. 1977;31(7):461-4.

Klimkova-Deutschova E. Neurologic picture in chronic exposure to carbon disulfide. Acta Universitatis Carolinae Medica. 1966;12(8):547-59.

Knave B, Kolmodin-Hedman B, Persson HE, Goldberg JM. Chronic exposure to carbon disulfide: effects on occupationally exposed workers with special reference to the nervous system. Work, environment, health. 1974;11(1):49-58.

Kolbeneva LI, Veselovskaia KA, Loshchilov IA. Morphofunctional changes in the rat peripheral nervous system during separate and combined exposure to carbon disulfide and noise. Gigiena truda i professional'nye zabolevaniia. 1982(12):35-9.

Kondo H, Sakurai H, Onodera M. (GLUCURONIC ACID EXCRETION IN URINE OF RABBITS BY EXPOSURE TO TOLUENE, XYLENE AND CARBON DISULFIDE.). Nihon eiseigaku zasshi Japanese journal of hygiene. 1964;19:219-24.

Konikova GS. Cholesterol and phospholipids in the blood during prolonged exposure to some industrial poisons (lead, carbon disulfide and benzene). Terapevticheskii arkhiv. 1962;34:96-101.

Kotseva K. Occupational exposure to low concentrations of carbon disulfide as a risk factor for hypercholesterolaemia. International archives of occupational and environmental health. 2001;74(1):38-42.

Kotseva K, Braeckman L, De Bacquer D, Bulat P, Vanhoorne M. Cardiovascular effects in viscose rayon workers exposed to carbon disulfide. International journal of occupational and environmental health. 2001;7(1):7-13.

Kowalska S, Sulkowski W, Sinczuk-Walczak H. Assessment of the hearing system in workers chronically exposed to carbon disulfide and noise. Medycyna pracy. 2000;51(2):123-38.

Krajewska B, Kieres H, Prazanowski M. Iron metabolism in workers exposed to carbon disulfide. Polski tygodnik lekarski (Warsaw, Poland : 1960). 1981;36(31):1183-6.

Krajewska B, Osinska J, Podobinski M. Use of the RBJ-131 test for evaluation of liver lesions in persons chronically exposed to carbon disulfide. Medycyna pracy. 1980;31(2):123-7.

Krstev S, Mitic V, Farkic B. Evaluation of the health status of workers exposed to carbon disulfide. Arhiv za higijenu rada i toksikologiju. 1989;40(2):221-6.

Krstev S, Perunicic B, Farkic B, Varagic M. Environmental and biological monitoring in carbon disulfide exposure assessment. La Medicina del lavoro. 1993;84(6):473-81.

Krstev S, Perunicic B, Farkic B, Banicevic R. Neuropsychiatric effects in workers with occupational exposure to carbon disulfide. Journal of occupational health. 2003;45(2):81-7.

Ku M-C, Huang C-C, Kuo H-C, Yen T-C, Chen C-J, Shih T-S, et al. Diffuse white matter lesions in carbon disulfide intoxication: microangiopathy or demyelination. European neurology. 2003;50(4):220-4.

Kuligowski D. The influence of chronic exposure to carbon disulfide on metabolism of catecholamines and serotonin in women. Annales Academiae Medicae Stetinensis. 1996;42:139-56.

Kuo HW, Lai JS, Lin M, Su ES. Effects of exposure to carbon disulfide (CS2) on electrocardiographic features of ischemic heart disease among viscose rayon factory workers. International archives of occupational and environmental health. 1997;70(1):61-6.

Kushnerova NF, Rakhmanin IA, Kushnerova TV, Drugova ES. Prevention of abnormal physiological and biochemical characteristics of red blood cells in carbon disulfide intoxication. Gigiena i sanitariia. 2010(4):17-21.

Lam CW, DiStefano V. Blood-bound carbon disulfide: an indicator of carbon disulfide exposure, and its accumulation in repeatedly exposed rats. Toxicology and applied pharmacology. 1983;70(3):402-10.

Lesage R. Occupational poisoning; carbon disulfide poisoning. Concours medical. 1954;76(8):751.

Lesnik H, Poborc-Godlewska J. Dark adaptation in workers chronically exposed to carbon disulfide. II. Impairment of dark adaptation and degree of exposure. Klinika oczna. 1982;84(11):365-8.

Leuschke W, Kohler R, Hohi H, Kruger K. Usefulness of carbon disulfide excretion in the urine for determining the exposure risk in carbon disulfide-exposed workmen. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1980;26(5):332-5.

Lewis JG, Graham DG, Valentine WM, Morris RW, Morgan DL, Sills RC. Exposure of C57BL/6 mice to carbon disulfide induces early lesions of atherosclerosis and enhances arterial fatty deposits induced by a high fat diet. Toxicological sciences : an official journal of the Society of Toxicology. 1999;49(1):124-32.

Li K-r, Cui S-m, Wu H, Guo L-m, Ma J-y, Gu G-z, et al. Carbon disulfide exposure level of workers in a chemical fiber industry. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2012;30(6):448-52.

Li K-r, Wang S-h, Wang J, Su D-m, Gu G-z, Cui S-m, et al. Effects of carbon disulfide on cardiovascular system of workers occupationally exposed to carbon disulfide. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2012;30(6):403-7.

Li K, Zhou W, Gu G, Zhou S, Zheng Y, Yu S. Detection rate analysis on neurological sign of workers exposed to different concentrations of carbon disulfide. Zhonghua yu fang yi xue za zhi [Chinese journal of preventive medicine]. 2014;48(10):888-92.

Lilis R, Gavrilescu N, Moscovici B, Teculescu D, Roventa A, Nestorescu B, et al. Cardiovascular effects of prolonged exposure to carbon disulfide. La Medicina del lavoro. 1968;59(1):41-52.

Liss GM, Finkelstein MM. Mortality among workers exposed to carbon disulfide. Archives of environmental health. 1996;51(3):193-200.

Liu J, Qiao S, Ding L, Wang S, Cao J, Zhong L, et al. Effect of carbon disulfide exposure on fatty acid metabolism in ApoE knockout and C57BL/6J mice. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2015;33(7):538-40.

Locati G, Sassi C. The iodo-azide test as an index of exposure to carbon disulfide in workers of a viscose factory. La Medicina del lavoro. 1967;58(6):431-7.

Lukas E. Conduction speed of peripheral nerves in persons exposed to carbon disulfide (Electromyography study). Internationale Zeitschrift fur klinische Pharmakologie, Therapie, und Toxikologie International journal of clinical pharmacology, therapy, and toxicology. 1969;2(4):354-8.

Lukas E. Problems in the diagnosis of polyneuropathy in epidemiological studies involving chemical exposure (with special reference to carbon disulfide). Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1978;24(11):887-8.

Luo H, Li Y, Wang F-j, Chen X-q, Tan X-d. Urinary excretion pattern of 2-thio-thiazolidine-4-carboxylic acid in workers exposed to carbon disulfide. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2003;21(6):426-8.

Luo J-CJ, Shih T-S, Chang C-P, Huang C-C. Blood oxidative stress in Taiwan workers exposed to carbon disulfide. American journal of industrial medicine. 2011;54(8):637-45.

Magos L. Some data on toxic or maximum allowable concentrations of carbon disulfide. Pracovni lekarstvi. 1959;11(3):149.

Maintz G, Scheunert E, Schneider WD. Mechanocardiographic and lung function diagnostic studies of workers exposed to carbon disulfide. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1981;27(1):63-7.

Makowska Z. Psychomotor performance of persons chronically exposed to carbon disulfide. I. Medycyna pracy. 1983;34(4):327-33.

Makowska Z. Psychomotor efficiency of persons chronically exposed to carbon disulfide. II. Medycyna pracy. 1984;35(5):355-64.

Manu P, Lilis R, Lancranjan I, Ionescu S, Neagu F, Vasilescu I. Toxic polyneuritis caused by carbon disulfide. Medicina interna. 1969;21(3):303-12.

Marinova G. Use, toxicity and effect of carbon disulfide on the female genital system and reproduction (a review). Akusherstvo i ginekologiia. 1980;19(4):362-6.

Massoud AA, El-Hawary MF, Awadallah R, El-Dessoukey EA. Effect of carbon-disulfide intoxication on the levels of serum copper and ceruloplasmin. Zeitschrift fur Ernahrungswissenschaft. 1977;16(2):77-80.

Masuda Y, Nakayama N. Protective effect of diethyldithiocarbamate and carbon disulfide against liver injury induced by various hepatotoxic agents. Biochemical pharmacology. 1982;31(17):2713-25.

Masuda Y, Nakayama N. Protective action of diethyldithiocarbamate and carbon disulfide against acute toxicities induced by 1,1-dichloroethylene in mice. Toxicology and applied pharmacology. 1983;71(1):42-53.

Masuda Y, Nakayama N, Yamaguchi A, Murohashi M. The effects of diethyldithiocarbamate and carbon disulfide on acute nephrotoxicity induced by furan, bromobenzene and cephaloridine in mice. Japanese journal of pharmacology. 1984;34(2):221-9.

Maugeri U, Graovac Leposavic LJ, Visconti E, Iovicic M, Cavalleri A. The cerebrovascular damage in young workers exposed to the risk of carbon disulfide. Rheographic study. La Medicina del lavoro. 1966;57(11):701-8.

Maugeri U, Iovicic M, Cavalleri A, Graovac Leposavic LJ, Visconti E, Rezman I. The peripheral vascular system in young workers exposed to the risk of carbon disulfide. La Medicina del lavoro. 1966;57(11):709-14.

Maugeri U, Visconti E, Cavalleri A. Retinal vascular changes in young workers exposed to the risk of carbon disulfide. La Medicina del lavoro. 1966;57(12):741-5.

Melissinos JC, Jacobides G. Various neurological forms of poisoning observed in Greece in subjects exposed to carbon disulfide. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1967;28(7):605-11.

Merigan WH, Wood RW, Zehl DN. Recent observations on the neurobehavioral toxicity of carbon disulfide. Neurotoxicology. 1985;6(4):81-8.

Merlevede E. Biochemical disorders in industrial toxicology; mechanism of poisonings caused by lead, volatile hydrocarbons and carbon disulfide. Archives belges de medecine sociale, hygiene, medecine du travail et medecine legale Belgisch archief van sociale geneeskunde, hygiene, arbeidsgeneeskunde en gerechtelijke geneeskunde. 1956;14(4):194-222.

Meyer CR. Semen quality in workers exposed to carbon disulfide compared to a control group from the same plant. Journal of occupational medicine : official publication of the Industrial Medical Association. 1981;23(6):435-9.

Michalova C, Frydl Z. Changes of higher nervous function & of certain humoral factors after parenteral intoxication of rabbits with carbon disulfide. Archiv fur Gewerbepathologie und Gewerbehygiene. 1957;15(6):553-64.

Mihalache C, Mihalache G. Histologic aspects of the testis in experimental carbon disulfide poisoning. Revista medico-chirurgicala a Societatii de Medici si Naturalisti din Iasi. 1989;93(2):339-41.

Mihalache C, Mihalache G, Veteleanu I, Vlad N, Calugar A. Histopathological aspects of the heart in experimental carbon disulfide poisoning. I. Revista medico-chirurgicala a Societatii de Medici si Naturalisti din Iasi. 1977;81(3):439-42.

Mikhailova A, Antov G, Khristova V, Georgieva R, Zaprianov Z. An evaluation of the biological action of carbon disulfide in clinico-laboratory studies of exposed workers. Problemi na khigienata. 1994;19:81-8.

Mikhailova A, Petrova S, Donchev N. Biochemical and histological research on lung tissue in experimental carbon disulfide exposure. Problemi na khigienata. 1987;12:103-8.

Minden H. Review of the literature of the pathogenesis of chronic carbon disulfide intoxication. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1967;13(10):722-8.

Misiakiewicz Z, Szulinska G. Determination of the influence on animal organism of a prolonged exposure to low concentrations of carbon disulfide (CS2) in the air. Roczniki Panstwowego Zakladu Higieny. 1971;22(1):7-16.

Misiakiewicz Z, Szulinska G, Chyba A. Effect of carbon disulfide and sulphurated hydrogen mixture on white rat under conditions of permanent exposure. Roczniki Panstwowego Zakladu Higieny. 1972;23(4):465-75.

Mochida K, Ito Y, Saito K, Gomyoda M. Cytotoxic effects of 1,2-dichloroethane, nitrobenzene, and carbon disulfide on human KB and monkey AGMK cells. Journal of pharmaceutical sciences. 1986;75(12):1190-1.

Model AA, Chepkoi LP. Early symptoms of intoxication with small doses of carbon disulfide. Zhurnal vysshei nervnoi deiatelnosti imeni I P Pavlova. 1954;4(2):159-65.

Model AA, Krasniuk EP, Medvedovskaia TP, Timofeeva NT. State of health in adolescents exposed to the action of carbon disulfide. Gigiena i sanitariia. 1974;39(3):37-40.

Montanini R. Electroencephalographic observations on toxic encephalopathy caused by carbon disulfide. Rivista di neurologia. 1956;26(5):485-94.

Moore L. Carbon disulfide hepatoxicity and inhibition of liver microsome calcium pump. Biochemical pharmacology. 1982;31(7):1465-7.

Moorman MP, Sills RC, Collins BJ, Morgan DL. Carbon disulfide neurotoxicity in rats: II. Toxicokinetics. Neurotoxicology. 1998;19(1):89-97.

Morata TC. Study of the effects of simultaneous exposure to noise and carbon disulfide on workers' hearing. Scandinavian audiology. 1989;18(1):53-8.

Moser VC, Phillips PM, Morgan DL, Sills RC. Carbon disulfide neurotoxicity in rats: VII. Behavioral evaluations using a functional observational battery. Neurotoxicology. 1998;19(1):147-57.

Murawska T. ECG picture in persons exposed to carbon disulfide. Medycyna pracy. 1977;28(4):275-81.

Nikiforova NA, Dumkin VN, Nabiev TM. Dynamics of the changes in muscle bioelectrical activity in prolonged exposure to carbon disulfide. Gigiena truda i professional'nye zabolevaniia. 1980(9):17-9.

Novak L, Djuric D, Fridman V. Specificity of the iodine-azide test for carbon disulfide exposure. Archives of environmental health. 1969;19(4):473-7.

Nurminen M, Hernberg S. Cancer mortality among carbon disulfide-exposed workers. Journal of occupational medicine : official publication of the Industrial Medical Association. 1984;26(5):341.

Nurminen M, Mutanen P, Tolonen M, Hernberg S. Quantitated effects of carbon disulfide exposure, elevated blood pressure and aging on coronary mortality. American journal of epidemiology. 1982;115(1):107-18.

Ogata M, Taguchi T. Determination of urinary 2-thiothiazolidine-4-carboxylic acid by automated high performance liquid chromatography, as an index of carbon disulfide exposure. Industrial health. 1989;27(1):31-5.

Okayama A, Fun L, Yamatodani A, Ogawa Y, Wada H, Goto S. Effect of exposure to carbon disulfide on tryptophan metabolism and the tissue vitamin B6 contents of rats. Archives of toxicology. 1987;60(6):450-3.

Okayama A, Ogawa Y, Goto S, Yamatodani A, Wada H, Okuno E, et al. Enzymatic studies on tryptophan metabolism disorder in rats chronically exposed to carbon disulfide. Toxicology and applied pharmacology. 1988;94(3):356-61.

Okrojek MS. Glucose tolerance disorders in individuals chronically exposed to carbon disulfide (CS2). Polski tygodnik lekarski (Warsaw, Poland : 1960). 1989;44(21-22):492-5, 502.

Orzechowska-Juzwenko K, Wronska-Nofer T, Wiela A, Milejski P, Laurman W. Effect of chronic exposure to carbon disulfide on biotransformation of phenazone in rabbits. Toxicology letters. 1984;22(2):171-4.

Osipov AP, Matiash BL. Prevention of the toxic action of carbon disulfide on the oral mucosa of experimental animals. Stomatologiia. 1987;66(3):17-20.

Pan G-b, Song F-y, Zhao X-l, Yu L-h, Zhou G-z, Xie K-q. Alterations of microtubule and microfilament expression in spinal cord of carbon disulfide intoxicated rats. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2007;25(3):148-51.

Pankiewicz K, Krajewski J. Use of the exposure test and the gas concentration measurements in the breathing zones for the evaluation of the workers' exposure to carbon disulfide. Medycyna pracy. 1982;33(5-6):289-93.

Pavlova SD, Charykchiev DD, Trendafilova RB, Krysteva SS, Karadzhova NV. Changes in biochemical indicators after exposure to carbon disulfide. Gigiena truda i professional'nye zabolevaniia. 1988(9):12-5.

Pepllonska B, Sobala W, Szeszenia-Dabrowska N. Mortality pattern in the cohort of workers exposed to carbon disulfide. International journal of occupational medicine and environmental health. 2001;14(3):267-74.

Peplonska B. Epidemiologic evaluation of health effects of occupational and non-occupational exposure to carbon disulfide. Medycyna pracy. 1994;45(4):359-69.

Pergal M, Vukojevic N, Cirin-Popov N, Djuric D, Bojovic T. Carbon disulfide metabolites excreted in the urine of exposed workers. I. Isolation and identification of 2-mercapto-2-thiazolinone-5. Archives of environmental health. 1972;25(1):38-41.

Pergal M, Vukojevic N, Djuric D. Carbon disulfide metabolites excreted in the urine of exposed workers. II. Isolation and identification of thiocarbamide. Archives of environmental health. 1972;25(1):42-4.

Peters HA, Levine RL, Matthews CG, Chapman LJ. Extrapyramidal and other neurologic manifestations associated with carbon disulfide fumigant exposure. Archives of neurology. 1988;45(5):537-40.

Peters HA, Levine RL, Matthews CG, Sauter S, Chapman L. Synergistic neurotoxicity of carbon tetrachloride/carbon disulfide (80/20 fumigants) and other pesticides in grain storage workers. Acta pharmacologica et toxicologica. 1986;59 Suppl 7:535-46.

Petrovic D, Duric D. Carbon disulfide in the air exhaled by exposed workers. Arhiv za higijenu rada i toksikologiju. 1966;17(2):159-63.

Pirotskaia EN. Changes in the protein-forming function of the liver in workers exposed to carbon disulfide. Vrachebnoe delo. 1972;9:132-4.

Podobinski M, Kajewska B. Diagnostic value of antabuse and CBJ-131 test in workers chronically exposed to carbon disulfide. Medycyna pracy. 1981;32(5):331-5.

Podobinski M, Kieres H. Urinary excretion of diethyldithiocarbamate (DDC) after antabuse administration to workers chronically exposed to carbon disulfide. Medycyna pracy. 1982;33(1-3):39-43.

Poniatowska M, Stankiewicz A. Porphyrinogenic effect of carbon disulfide during occupational exposure. Polski tygodnik lekarski (Warsaw, Poland : 1960). 1982;37(36):1059-61.

Prazanowski M, Gluszczowa M. Peripheral blood picture in workers chronically exposed to carbon disulfide. Medycyna pracy. 1983;34(3):259-62.

Prerovska I, Srbova J. EFFECT OF CARBON DISULFIDE ON BIOCHEMICAL CHANGES IN THE SERUM OF EXPOSED SUBJECTS IN RELATION TO ATHEROSCLEROSIS. Pracovni lekarstvi. 1963;15:25-30.

Price B, Bergman TS, Rodriguez M, Henrich RT, Moran EJ. A review of carbon disulfide exposure data and the association between carbon disulfide exposure and ischemic heart disease mortality. Regulatory toxicology and pharmacology : RTP. 1997;26(1 Pt 1):119-28.

Price B, Berner T, Henrich RT, Stewart JM, Moran EJ. A benchmark concentration for carbon disulfide: analysis of the NIOSH carbon disulfide exposure database. Regulatory toxicology and pharmacology : RTP. 1996;24(2 Pt 1):171-6.

Putz-Anderson V, Albright BE, Lee ST, Johnson BL, Chrislip DW, Taylor BJ, et al. A behavioral examination of workers exposed to carbon disulfide. Neurotoxicology. 1983;4(1):67-77.

Qingfen T, Xirang G, Weijing Y, Jianduan L, Yingli D, Zhimin H. An experimental study on damage of retina function due to toxicity of carbon disulfide and lipid peroxidation. Acta ophthalmologica Scandinavica. 1999;77(3):298-301.

Rainey JM, Jr. Disulfiram toxicity and carbon disulfide poisoning. The American journal of psychiatry. 1977;134(4):371-8.

Raitta C, Teir H, Tolonen M, Nurminen M, Helpio E, Malmstrom S. Impaired color discrimination among viscose rayon workers exposed to carbon disulfide. Journal of occupational medicine : official publication of the Industrial Medical Association. 1981;23(3):189-92.

Raitta C, Tolonen M. Ocular pulse wave in workers exposed to carbon disulfide. Albrecht von Graefes Archiv fur klinische und experimentelle Ophthalmologie Albrecht von Graefe's archive for clinical and experimental ophthalmology. 1975;195(3):149-54.

Raitta C, Tolonen M, Nurminen M. Microcirculation of ocular fundus in viscose rayon workers exposed to carbon disulfide. Albrecht von Graefes Archiv fur klinische und experimentelle Ophthalmologie Albrecht von Graefe's archive for clinical and experimental ophthalmology. 1974;191(3):151-64.

Ribeiro BA, Stettiner HM, Bedrikow B, Lambert MI. Exposure to carbon disulfide and hydrogen sulfide in the manufacture of rayon by the viscose process in the state of Sao Paulo. Arquivos da Faculdade de Higiene e Saude Publica da Universidade de Sao Paulo. 1959;13:219-41.

Riihimaki V, Kivisto H, Peltonen K, Helpio E, Aitio A. Assessment of exposure to carbon disulfide in viscose production workers from urinary 2-thiothiazolidine-4-carboxylic acid determinations. American journal of industrial medicine. 1992;22(1):85-97.

Rogaczewska T, Gromiec J, Wozniczka M. Usefulness of passive dosimeters of carbon disulfide made in the East Germany for evaluating individual occupational exposure to this compound. Medycyna pracy. 1987;38(6):460-5.

Roh J, Kim CN, Lim NG, Chang JH, Cho YB. Simultaneous analysis of urinary 2-thiothiazolidine-4-carboxylic acid and thiocarbamide as a biological exposure index for carbon disulfide exposure. Yonsei medical journal. 1999;40(3):265-72.

Rosier J, Vanhoorne M, Grosjean R, Van de Walle E, Billemont G, Van Peteghem C. Preliminary evaluation of urinary 2-thio-thiazolidine-4-carboxylic-acid (TTCA) levels as a test for exposure to carbon disulfide. International archives of occupational and environmental health. 1982;51(2):159-67.

Rosier J, Vanhoorne M, Van Peteghem C. The determination of urinary 2-thio-thiazolidine-4-carboxylic-acid (TTCA) as a test for exposure to carbon disulfide. Giornale italiano di medicina del lavoro. 1984;6(3-4):119-21.

Rosier J, Veulemans H, Masschelein R, Vanhoorne M, Van Peteghem C. Experimental human exposure to carbon disulfide. I. Respiratory uptake and elimination of carbon disulfide under rest and physical exercise. International archives of occupational and environmental health. 1987;59(3):233-42.

Rosier J, Veulemans H, Masschelein R, Vanhoorne M, Van Peteghem C. Experimental human exposure to carbon disulfide. II. Urinary excretion of 2-thiothiazolidine-4-carboxylic acid (TTCA) during and after exposure. International archives of occupational and environmental health. 1987;59(3):243-50.

Rubin HH, Arieff AJ, Tauber FW. Carbon disulfide and hydrogen sulfide. II. A follow-up clinical study of low grade exposures. AMA archives of industrial hygiene and occupational medicine. 1950;2(5):529-33.

Rubin RJ. Role of metabolic activation in the renal toxicity of carbon disulfide (CS2). Toxicology letters. 1990;53(1-2):211-3.

Rubin RJ, Kroll R. Further evidence for a role of isozymes of P450 in the metabolism and toxicity of carbon disulfide (CS2). Advances in experimental medicine and biology. 1986;197:237-42.

Rudkowska A, Misztal S, Pawlowicz J, Paradowski B, Ujma B, Klimowicz H. Selected parameters of fat metabolism in subjects with occupational exposure to carbon disulfide. Polski tygodnik lekarski (Warsaw, Poland : 1960). 1978;33(42):1641-4.

Saf'Ian BE. On the influence of various nonprofessional factors on the course of chronic intoxication with carbon disulfide. Gigiena i sanitariia. 1960;25:69-72.

Saillenfait AM, Bonnet P, de Ceaurriz J. Effects of inhalation exposure to carbon disulfide and its combination with hydrogen sulfide on embryonal and fetal development in rats. Toxicology letters. 1989;48(1):57-66.

Saitanov AO, Grodetskaia NS, Tutnova AV, Kononova AM. Clinico-experimental study of the heart condition after long-term exposure to carbon disulfide. Gigiena truda i professional'nye zabolevaniia. 1977(9):37-40.

Savic S. Ophthalmological and angiographic findings in workers exposed to carbon disulfide (author's transl). Klinische Monatsblatter fur Augenheilkunde. 1982;180(1):90-1.

Schramm A, Uter W, Brandt M, Goen T, Kohrmann M, Baumeister T, et al. Increased intima-media thickness in rayon workers after long-term exposure to carbon disulfide. International archives of occupational and environmental health. 2016;89(3):513-9.

Sefic M, Bilalbegovic Z, Pikula B, Filipovic N, Djuric D. Study of ocular tissue changes, brain GABA and polyamine levels in rats exposed to carbon disulfide. Giornale italiano di medicina del lavoro. 1984;6(3-4):127-9.

Seppalainen AM, Linnoila I. Electrophysiological studies on rabbits in long-term exposure to carbon disulfide. Scandinavian journal of work, environment & health. 1975;1(3):178-83.

Shen C-Z, Wang Z-P, Sun S-A. DNA damage of mice endometrial cells at implantation phase exposed to carbon disulfide. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2010;28(4):268-71.

Shih T-S, Chou T-C, Chang H-Y, Wu C-C, Wang P-Y. Accumulation of urinary 2-thiothiazolidine-4-carboxylic acid (TTCA) among workers occupationally exposed to carbon disulfide for 1 week. The Science of the total environment. 2003;308(1-3):37-47.

Sieja K, von Mach-Szczypinski J, von Mach-Szczypinski J. Health effect of chronic exposure to carbon disulfide (C2) on women employed in viscose industry. Medycyna pracy. 2018;69(3):329-35.

Sikora A, Langauer-Lewowicka H. Evaluation of mental functions in workers exposed to metallic mercury, inorganic lead and carbon disulfide. Medycyna pracy. 1992;43(2):109-21.

Sills RC, Harry GJ, Morgan DL, Valentine WM, Graham DG. Carbon disulfide neurotoxicity in rats: V. Morphology of axonal swelling in the muscular branch of the posterior tibial nerve and spinal cord. Neurotoxicology. 1998;19(1):117-27.

Sills RC, Morgan DL, Harry GJ. Carbon disulfide neurotoxicity in rats: I. Introduction and study design. Neurotoxicology. 1998;19(1):83-7.

Sills RC, Valentine WM, Moser V, Graham DG, Morgan DL. Characterization of carbon disulfide neurotoxicity in C57BL6 mice: behavioral, morphologic, and molecular effects. Toxicologic pathology. 2000;28(1):142-8.

Sills RC, Harry GJ, Valentine WM, Morgan DL. Interdisciplinary neurotoxicity inhalation studies: carbon disulfide and carbonyl sulfide research in F344 rats. Toxicology and applied pharmacology. 2005;207(2 Suppl):245-50.

Silvestroni A, Fimiani R. Microcirculation in the chronic intoxication with carbon disulfide, action of nicotinic acid. Folia medica Folia medica (Naples, Italy). 1970;53(1):1-26.

Simko A, Jindrichova J, Kovarik J, Preiningerova O, Klimova A, Finkova A, et al. Various findings concerning the status of health of working women exposed to carbon disulfide. Zentralblatt fur Arbeitsmedizin und Arbeitsschutz. 1973;23(6):173-9.

Simmons JE, Sloane RA, Van Stee EW. Hepatic cholesterol metabolism following exposure to carbon disulfide in phenobarbital-treated rats. Archives of environmental contamination and toxicology. 1989;18(5):678-87.

Simon P, Nicot T, Dieudonne M. Dietary habits, a non-negligible source of 2-thiothiazolidine-4-carboxylic acid and possible overestimation of carbon disulfide exposure. International archives of occupational and environmental health. 1994;66(2):85-90.

Sinczuk-Walczak H. Certain diagnostic-certification problems in workers exposed chronically to carbon disulfide. Medycyna pracy. 1993;44(5):415-21.

Sinczuk-Walczak H. Methodologic guidelines related to neurologic and neurophysiologic examinations in a population occupationally exposed to carbon disulfide (CS2). Medycyna pracy. 1997;48(5):605-9.

Sinczuk-Walczak H. Diagnostic neurologic procedures and certification in persons chronically exposed to carbon disulfide in light of personal cases. Medycyna pracy. 2000;51(4):345-9.

Sinczuk-Walczak H, Szymczak M. Rhythm patterns of basic brain bioelectric activity in workers chronically exposed to carbon disulfide. International journal of occupational medicine and environmental health. 1997;10(4):429-40.

Solov'ev VA, Solov'eva LN. Changes in the oral mucosa in rats chronically exposed to carbon disulfide. Stomatologiia. 1974;53(2):73-5.

Song H-y, Wei C-l, Dong Q, Wang M-l, Ji C-p, Hou Z-g, et al. Studing the health status of workers occupationally exposed to carbon disulfide. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua

laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2012;30(6):443-7.

Soucek B, Madlo Z. Determination of sulfhydryl groups in blood serum following exposure to carbon disulfide. Bulletin de la Societe de chimie biologique. 1955;37(12):1373-8.

Sperlingova I, Kujalova V, Frantik E. Chronic carbon disulfide exposure and impaired glucose tolerance. Environmental research. 1982;29(1):151-9.

Spyker DA, Gallanosa AG, Suratt PM. Health effects of acute carbon disulfide exposure. Journal of toxicology Clinical toxicology. 1982;19(1):87-93.

Stanosz S, Kuligowska E, Kuligowski D. Coefficient of linear correlation between levels of fibrinogen, antithrombin III, thrombin-antithrombin complex and lipid fractions in women exposed chronically to carbon disulfide. Medycyna pracy. 1998;49(1):51-7.

Stanosz S, Kuligowski D, Pieleszek A. Concentration of dihydroepiandrosterone, dihydroepiandrosterone sulphate and testosterone during premature menopause in women chronically exposed to carbon disulfide. Medycyna pracy. 1995;46(4):337-40.

Stanosz S, Kuligowski D, Pieleszek A. Evaluation of the relationship between concentration of serotonin in plasma and blood platelets and hypertension in women chronically exposed to carbon disulfide. Medycyna pracy. 1995;46(2):137-40.

Stanosz S, Kuligowski D, Zuk E, Rzechula D, Kosciuszkiewicz B, Chlubek D. The pattern of some lipid fractions in the serum of women chronically exposed to carbon disulfide. Industrial health. 1994;32(3):183-6.

Stanosz S, Pieleszek A, Kuligowski D. The linear correlation coefficient of serotonin and prolactin concentrations in plasma of women chronically exposed to carbon disulfide. Medycyna pracy. 1995;46(3):235-8.

Straneo G, Caffi M. Contribution to the knowledge of carbon disulfide poisoning. Study of the visual apparatus in exposed subjects. Folia medica Folia medica (Naples, Italy). 1961;44:917-40.

Sugimoto K, Goto S, Hotta R. An epidemiological study on retinopathy due to carbon disulfide: CS2 exposure level and development of retinopathy. International archives of occupational and environmental health. 1976;37(1):1-8.

Sugimoto K, Goto S, Kanda S, Taniguchi H, Nakamura K, Baba T. Studies on angiopathy due to carbon disulfide. Retinopathy and index of exposure dosages. Scandinavian journal of work, environment & health. 1978;4(2):151-8.

Sugimoto K, Goto S, Taniguchi H, Baba T, Raitta C. Ocular fundus photography of workers exposed to carbon disulfide--a comparative epidemiological study between Japan and Finland. International archives of occupational and environmental health. 1977;39(2):97-101.

Sulsky SI, Hooven FH, Burch MT, Mundt KA. Critical review of the epidemiological literature on the potential cardiovascular effects of occupational carbon disulfide exposure. International archives of occupational and environmental health. 2002;75(6):365-80.

Sun Y, Dai B, Wu Y, Yang L, Liu P, Wang Z. Carbon disulfide exposure at peri-implantation disrupts embryo implantation by decreasing integrin beta3 expression in the uterine tissue of pregnant mice. Chemico-biological interactions. 2013;206(2):126-33.

Swaen GM, Braun C, Slangen JJ. Mortality of Dutch workers exposed to carbon disulfide. International archives of occupational and environmental health. 1994;66(2):103-10.

Szendzikowski S, Stetkiewicz J, Wronska-Nofer T, Zdrajkowska I. Structural aspects of experimental carbon disulfide neuropathy. I. Development of neurohistological changes in chronically intoxicated rats. Internationales Archiv fur Arbeitsmedizin. 1973;31(2):135-49.

Szott M, Kuczynska-Sekieta K. Uropepsin level in subjects exposed to carbon disulfide. Polski tygodnik lekarski (Warsaw, Poland : 1960). 1969;24(12):438-41.

Szott M, Wrzyszcz M. Diurnal urinary excretion of 17-hydroxycorticosteroids in people exposed to carbon disulfide. Polski tygodnik lekarski (Warsaw, Poland : 1960). 1971;26(5):165-7.

Szymanska B. Serum activity of malate dehydrogenase, alanine and asparagine aminotransferases, non-specific cholinesterase as well as bromsulphalein test in workers exposed to long-term carbon disulfide action. Annales Academiae Medicae Stetinensis. 1970;16:353-73.

Tabakova S, Khinkova L. Early behavioral and neurofunctional deviations following prenatal carbon disulfide exposure. Problemi na khigienata. 1981;6:21-6.

Taccola A, Anselmi G, Visconti E. THE RELATION: ELECTRIC SYSTOLE TO MECHANICAL SYSTOLE IN SUBJECTS EXPOSED TO CARBON DISULFIDE RISK. Folia medica Folia medica (Naples, Italy). 1964;47:952-61.

Taccola A, Majeron M. THE ECG OF SUBJECTS EXPOSED TO THE RISK OF CARBON DISULFIDE. Folia medica Folia medica (Naples, Italy). 1964;47:229-37.

Taccola A, Maugeri U, Graovac-Leposavic L, Cavalleri A, Djuric D. Vascular changes in subjects exposed to carbon disulfide. La Medicina del lavoro. 1971;62(8):404-11.

Takebayashi T, Nishiwaki Y, Nomiyama T, Uemura T, Yamauchi T, Tanaka S, et al. Lack of relationship between occupational exposure to carbon disulfide and endocrine dysfunction: a six-year cohort study of the Japanese rayon workers. Journal of occupational health. 2003;45(2):111-8.

Tan X, Bi Y, Su Y, Li Y, He J, Yi P, et al. Carbon disulfide at a Chinese viscose factory external and internal exposure assessment. Journal of environmental monitoring : JEM. 2000;2(6):666-9.

Tan X, Wang F, Bi Y, He J, Su Y, Braeckman L, et al. Carbon disulfide exposure assessment in a Chinese viscose filament plant. International journal of hygiene and environmental health. 2001;203(5-6):465-71.

Tan X, Wang F, Bi Y, Su Y, Li Y, He J, et al. The cross-sectional study of the health effects of occupational exposure to carbon disulfide in a Chinese viscose plant. Environmental toxicology. 2001;16(5):377-82.

Tan X, Peng X, Wang Y, Wang F, Joyeux M, Hartemann P. Carbon disulfide cytotoxicity on cultured cardiac myocytes of rats. Environmental toxicology. 2002;17(4):324-8.

Tan X, Peng X, Wang Y, Wang F, Joyeux M, Hartemann P. Carbon disulfide cytotoxicity on cultured cardiac myocyte cell of rats. Ecotoxicology and environmental safety. 2003;55(2):168-72.

Tarkowski S. Activity of glutamate decarboxylase in the brain of rats exposed to carbon disulfide. Internationales Archiv fur Arbeitsmedizin. 1974;33(1):79-82.

Tarkowski S. Disorders of energy metabolism in the brain tissue of rats exposed to carbon disulfide. Medycyna pracy. 1980;31(3):255-8.

Teisinger J. 1972 Yant Memorial Lecture. New advances in the toxicology of carbon disulfide. American Industrial Hygiene Association journal. 1974;35(2):55-61.

Tepper LB. Toxic hazards: carbon disulfide (bisulfide). The New England journal of medicine. 1960;262:580-1.

Toews AD, Harry GJ, Lowrey KB, Morgan DL, Sills RC. Carbon disulfide neurotoxicity in rats: IV. Increased mRNA expression of low-affinity nerve growth factor receptor--a sensitive and early indicator of PNS damage. Neurotoxicology. 1998;19(1):109-16.

Tolonen M, Hanninen H. Psychological tests specific to individual carbon disulfide exposure. Scandinavian journal of psychology. 1978;19(3):241-5.

Tolonen M, Hernberg S, Nordman CH, Goto S, Sugimoto K, Baba T. Angina pectoris, electrocardiographic findings and blood pressure in Finnish and Japanese workers exposed to carbon disulfide. International archives of occupational and environmental health. 1976;37(4):249-64.

Tolonen M, Nurminen M, Hernberg S. Ten-year coronary mortality of workers exposed to carbon disulfide. Scandinavian journal of work, environment & health. 1979;5(2):109-14.

Tomasini M, Chiappino G, Spotti D. Study of the incidence of coronary disease in pensioned workers of a viscose-rayon factory exposed to carbon disulfide. La Medicina del lavoro. 1974;65(9-10):368-78.

Torres M, Jarvisalo J, Feldmann G, Hakim J. Superoxide anion: its involvement in carbon disulfide hepatotoxicity in phenobarbital-treated rats. Bulletin europeen de physiopathologie respiratoire. 1981;17 Suppl:237-45.

Truhaut R, Boudene C, Phu-Lich N, Baquet A. Further research on the continuous measurement of individual exposure to carbon disulfide in industry by means of a portable apparatus. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1972;33(7):341-6.

Tsai ML, Chang JH, Huang BM, Liu MY. In vivo exposure to carbon disulfide increases the contraction frequency of pregnant rat uteri through an indirect pathway. Life sciences. 2000;66(3):201-8.

Uschewa G, Pavlova S. Blood ceruloplasmin levels during exposure to low levels of carbon disulfide exposure. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1974;20(11):753-4.

Valentine WM, Valentine HL, Amarnath K, Amarnath V. Toluene-3,4-dithiol analysis of blood for assessing carbon disulfide exposure. Toxicological sciences : an official journal of the Society of Toxicology. 1999;50(2):155-63.

van Doorn R, Delbressine LP, Leijdekkers CM, Vertin PG, Henderson PT. Identification and determination of 2-thiothiazolidine-4-carboxylic acid in urine of workers exposed to carbon disulfide. Archives of toxicology. 1981;47(1):51-8.

van Doorn R, Leijdekkers CP, Henderson PT, Vanhoorne M, Vertin PG. Determination of thio compounds in urine of workers exposed to carbon disulfide. Archives of environmental health. 1981;36(6):289-97.

Vasak V. ASSESSMENT OF THE EXPOSURE OF WORKERS IN AREAS CONTAMINATED BY CARBON DISULFIDE VAPORS. I. INTRODUCTORY REPORT. Pracovni lekarstvi. 1963;15:143-5.

Vasak V, Vanecek M, Kimmelova B. ASSESSMENT OF THE EXPOSURE OF WORKERS IN AREAS CONTAMINATED BY CARBON DISULFIDE VAPORS. II. USE OF THE IODINE AZIDE REACTION FOR THE DETECTION AND ESTIMATION OF SULFIDE METABOLITES IN THE URINE. Pracovni lekarstvi. 1963;15:145-9.

Venet T, Carreres-Pons M, Chalansonnet M, Thomas A, Merlen L, Nunge H, et al. Continuous exposure to low-frequency noise and carbon disulfide: Combined effects on hearing. Neurotoxicology. 2017;62:151-61.

Vermel AE, Nikitina LS, Gasanian GA, Shatskaia NN. Incidence of ischemic heart disease and arterial hypertension among persons exposed to carbon disulfide (based on the data from a 1-time epidemiological examination of workers in viscose manufacture). Terapevticheskii arkhiv. 1986;58(12):35-9.

Vertin PG. The toxicology of carbon disulfide. Tijdschrift voor sociale geneeskunde. 1962;40:255-7.

Vigliani EC. Clinical observations on carbon disulfide intoxication in Italy. Industrial medicine & surgery. 1950;19(5):240-2.

Villa A, Tomasini M, Andreini GC, Quadrelli L. Effects of prolonged exposure to carbon disulfide on myocardial contractile efficiency. La Medicina del lavoro. 1981;72(1):52-60.

Villa A, Tomasini M, Cirla A. Coronary disease and chronic exposure to carbon disulfide. Cardiologia pratica. 1973;24(3):251-4.

Visconti E, Rezman I, Maugeri U, Vidakovic A, Cavalleri A. Hematochemical findings in young workers exposed to carbon disulfide. II. The behavior of lipoproteins and the "clearing factor". La Medicina del lavoro. 1966;57(11):677-83.

Visconti E, Vidakovic A, Cavalleri A, Visnjic V, Maugeri U, Rezman I. Hematochemical findings in young workers exposed to carbon disulfide. I. The behavior of fibrinolysis. La Medicina del lavoro. 1966;57(11):667-76.

Visconti E, Vidakovic A, Maugeri U, Visnjic V, Cavalleri A, Dodic S. Hematochemical findings in young workers exposed to carbon disulfide. IV. Thromboelastographic study of the process of coagulation. La Medicina del lavoro. 1966;57(12):751-4.

Visconti E, Visnjic V, Cavalleri A, Vidakovic A, Maugeri U, Rezman I. Hematochemical findings in young workers exposed to carbon disulfide. 3. The behavior of anti-heparin activity. La Medicina del lavoro. 1966;57(12):745-50.

Von Rechenberg HK. Carbon disulfide poisoning & the late sulfocarbotoxic vascular syndrome. Archiv fur Gewerbepathologie und Gewerbehygiene. 1957;15(5):487-530.

Wagar G, Tolonen M, Stenman UH, Helpio E. Endocrinologic studies in men exposed occupationally to carbon disulfide. Journal of toxicology and environmental health. 1981;7(3-4):363-71.

Wagar G, Tolonen M, Tanner P, Helpio E. Serum gonadotropins and testosterone in men occupationally exposed to carbon disulfide. Journal of toxicology and environmental health. 1983;11(4-6):691-701.

Wang C, Bi Y, Tan X, Yan J. Serum sex hormone and urinary metabolites of male workers exposed to carbon disulfide. Wei sheng yan jiu = Journal of hygiene research. 1999;28(3):132-3.

Wang C, Tan X, Bi Y, Yan J. Study on FM100-HUE color vision in male workers exposed to lower concentration of carbon disulfide. Wei sheng yan jiu = Journal of hygiene research. 2001;30(3):179-81.

Wang S, Gao Y, Wang Y, Kou R, Zou C, Xie K, et al. Changes in expression of motor protein for axonal transport in nerve tissues of carbon disulfide-intoxicated rats. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2014;32(9):660-3.

Wang S, Sun Y, Wu Y, Zhang T, Hu C, Zhang B, et al. Down-regulation of uterine LIF expression induced by the hormonal level disorder causes embryo implantation loss after mice exposed to carbon disulfide at peri-implantation. Biochemical and biophysical research communications. 2015;467(1):7-13.

Wang Z-p, Xie K-q, Li H-q. Effect of carbon disulfide exposure at different phases on the embryonic development in mid-pregnancy of female mice. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2005;23(2):139-41.

Washuttl J, Winker N, Steiner I. Effect of carbon disulfide on serum vitamin B1 in exposed workers. MMW, Munchener medizinische Wochenschrift. 1979;121(24):819-20.

Weiss B, Wood RW, Macys DA. Behavioral toxicology of carbon disulfide and toluene. Environmental health perspectives. 1979;30:39-45.

Weist HJ. Toxic parkinsonism with Quarelli syndrome & cardiovascular disorders after chronic carbon disulfide poisoning. Archiv fur Gewerbepathologie und Gewerbehygiene. 1957;15(6):542-52.

Weist HJ. Carbon disulfide determinations in the blood without and after carbon disulfide exposure. The behavior of the blood and urine titer of skilled chemical workers of the synthetic textile and viscose industries. Archiv fur Gewerbepathologie und Gewerbehygiene. 1959;17:430-41.

Wesolowska T. Effects of chronic inhalation intoxication with carbon disulfide on the content of various lipid metabolism indices in the serum, aorta and cardiac muscle in rabbits. II. Lipid phosphorus and phospholipid fractions in the serum, aorta and cardiac muscle. Medycyna pracy. 1979;30(5):323-30.

Wesolowska T, Gregorczyk J. Effect of chronic inhalation of carbon disulfide intoxication on the content of various lipid metabolism indices in rat serum, aorta and cardiac muscle. I. Total fats, triglycerides, free fatty acids in serum, free and esterified cholesterol in serum, aorta and cardiac muscle. Medycyna pracy. 1978;29(6):471-9.

Winkelmann H, Bender U, Horn K. Exposure analysis of the effect of air pollution by carbon disulfide. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1990;36(7):371-2.

Winkelmann H, Prosch J, Engewald W, Horn K. Carbon disulfide excretion in urine--a biological exposure test for the workplace and environmental concentration ranges. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1991;37(3):102-4.

Wojtczak-Jaroszowa J, Kubow S. Carbon monoxide, carbon disulfide, lead and cadmium--four examples of occupational toxic agents linked to cardiovascular disease. Medical hypotheses. 1989;30(2):141-50.

Wolburg I. The effect of chronic carbon disulfide exposure on the rabbit electroencephalogram. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1969;15(2):104-7.

Wolburg I, Brauer D, Lau H. Effect of chronic carbon disulfide exposure on the electroencephalogram of rabbits. 2d communication. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1969;15(12):939-40.

Wood RW. Neurobehavioral toxicity of carbon disulfide. Neurobehavioral toxicology and teratology. 1981;3(4):397-405.

Woyke M, Cwajda H, Wojcicki J, Kosmider K. Platelet aggregation in workers chronically exposed to carbon disulfide and subjected to prophylactic treatment with Cynarex. Medycyna pracy. 1981;32(4):261-4.

Wronska-Nofer T. Various disorders of cholesterol metabolism and their effect on the development of experimental arteriosclerosis in rats exposed to carbon disulfide. Medycyna pracy. 1979;30(2):121-34.

Wronska-Nofer T, Laurman W, Nofer JR, Seedorf U, Walter M. Carbon disulfide-induced modification and cytotoxicity of low-density lipoproteins. Toxicology in vitro : an international journal published in association with BIBRA. 1996;10(4):423-9.

Wronska-Nofer T, Stetkiewicz J, Szendzikowski S. Structural alterations and content of nicotinamide-adenine nucleotides in skeletal muscle of rat in chronic experimental carbon disulfide intoxication. Internationales Archiv fur Arbeitsmedizin. 1973;31(2):123-34.

Wronska-Nofer T, Chojnowska-Jezierska J, Nofer J-R, Halatek T, Wisniewska-Knypl J. Increased oxidative stress in subjects exposed to carbon disulfide (CS2)--an occupational coronary risk factor. Archives of toxicology. 2002;76(3):152-7.

Wronska-Nofer T, Nofer J-R, Stetkiewicz J, Wierzbicka M, Bolinska H, Fobker M, et al. Evidence for oxidative stress at elevated plasma thiol levels in chronic exposure to carbon disulfide (CS2) and coronary heart disease. Nutrition, metabolism, and cardiovascular diseases : NMCD. 2007;17(7):546-53.

Yang L, Zhang B, Yuan Y, Li C, Wang Z. Oxidative stress and DNA damage in utero and embryo implantation of mice exposed to carbon disulfide at peri-implantation. Human & experimental toxicology. 2014;33(4):424-34.

Yang L, Wang Z-p. Effect of carbon disulfide exposure during peri-implantation period on levels of calcitonin and progesterone in uterus of mice. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2013;31(12):881-5.

Yang XF, Lee BL, New AL, Ong HY, Ma L, Zhang Q, et al. Urinary homovanillic acid and vanillylmandelic acid in workers exposed to carbon disulfide. American journal of industrial medicine. 1996;29(3):269-74.

Yang X, Zhuang Z, Tan B. Studies on biological monitoring of adrenocortical function in workers exposed to carbon disulfide. Zhonghua yu fang yi xue za zhi [Chinese journal of preventive medicine]. 1998;32(3):147-9.

Yu S-f, Zheng Y-x. To promote the research and control of carbon disulfide exposure based on evidence and verification at workplace. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2012;30(6):401-2.

Zenick H, Blackburn K, Hope E, Baldwin D. An evaluation of the copulatory, endocrinologic, and spermatotoxic effects of carbon disulfide in the rat. Toxicology and applied pharmacology. 1984;73(2):275-83.

Zhang B-z, Wu Y-l, Dai B-q, Li C-h, Yang L, Wang Z-p. Effects of carbon disulfide exposure during peri-implantation on estrogen receptor-alpha expression in uterus and serum level of estrogen in pregnant mice. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2013;31(2):88-91.

Zhang B, Shen C, Yang L, Li C, Yi A, Wang Z. DNA damage and apoptosis of endometrial cells cause loss of the early embryo in mice exposed to carbon disulfide. Toxicology and applied pharmacology. 2013;273(2):381-9.

Zhou SY, Liang YX, Chen ZQ, Wang YL. Effects of occupational exposure to low-level carbon disulfide (CS2) on menstruation and pregnancy. Industrial health. 1988;26(4):203-14.

Neurofilamentous axonopathies. The neurotoxicology of acrylamides, hexacarbons, IDPN and carbon disulfide. Proceedings of the Second International Conference on Neurotoxicology of Selected Chemicals. September 11-15, 1983, Chicago, Illinois, U.S.A. Neurotoxicology. 1985;6(4):1-98.

BIB-6. Ethyl Acetate

Indoor air guide values for ethyl acetate. Communication of the German Ad Hoc Working Group on Indoor Air Guidelines of the Indoor Air Hygiene Committee and the Supreme State Health Authorities. Bundesgesundheitsblatt, Gesundheitsforschung, Gesundheitsschutz. 2014;57(12):1442-50.

Angerer P, Marstaller H, Bahemann-Hoffmeister A, Rommelt H, Hoppe P, Kessel R. Alterations in lung function due to mixtures of organic solvents used in floor laying. International archives of occupational and environmental health. 1991;63(1):43-50.

Christoph GR, Hansen JF, Leung H-W. Subchronic inhalation neurotoxicity studies of ethyl acetate in rats. Neurotoxicology. 2003;24(6):861-74.

Cosnier F, Nunge H, Brochard C, Burgart M, Remy A, Decret M-J, et al. Impact of coexposure on toluene biomarkers in rats. Xenobiotica; the fate of foreign compounds in biological systems. 2014;44(3):217-28.

Crowell SR, Smith JN, Creim JA, Faber W, Teeguarden JG. Physiologically based pharmacokinetic modeling of ethyl acetate and ethanol in rodents and humans. Regulatory toxicology and pharmacology : RTP. 2015;73(1):452-62.

Dawson DA, Mooneyham T, Jeyaratnam J, Schultz TW, Poch G. Mixture toxicity of S(N)2-reactive soft electrophiles: 2-evaluation of mixtures containing ethyl alpha-halogenated acetates. Archives of environmental contamination and toxicology. 2011;61(4):547-57.

Deshusses M, Johnson CT, Leson G. Biofiltration of high loads of ethyl acetate in the presence of toluene. Journal of the Air & Waste Management Association (1995). 1999;49(8):973-9.

Freundt KJ, Romer KG, Federsel RJ. Decrease of inhaled toluene, ethyl benzene, m-xylene, or mesitylene in rat blood after combined exposure to ethyl acetate. Bulletin of environmental contamination and toxicology. 1989;42(4):495-8.

Gonzalez M, Velten M, Cantineau A. Increased acquired dyschromatopsia among solvent-exposed workers: an epidemiology study on 249 employees of an aluminum-foil printing factory. International archives of occupational and environmental health. 1998;71(5):317-24.

Jovanovic JM, Jovanovic MM, Spasic MJ, Lukic SR. Peripheral nerve conduction study in workers exposed to a mixture of organic solvents in paint and lacquer industry. Croatian medical journal. 2004;45(6):769-74.

Kawai T, Miyama Y, Horiguchi S, Sakamoto K, Zhang ZW, Higashikawa K, et al. Possible metabolic interaction between hexane and other solvents co-exposed at sub-occupational exposure limit levels. International archives of occupational and environmental health. 2000;73(7):449-56.

Kawai T, Yasugi T, Mizunuma K, Horiguchi S, Ikeda M. Urinalysis vs. blood analysis, as a tool for biological monitoring of solvent exposure. Toxicology letters. 1992;63(3):333-43.

Kim K-W, Won YL, Park DJ, Kim YS, Jin ES, Lee SK. Combined Toxic Effects of Polar and Nonpolar Chemicals on Human Hepatocytes (HepG2) Cells by Quantitative Property-Activity Relationship Modeling. Toxicological research. 2016;32(4):337-43.

Kleinbeck S, Juran SA, Kiesswetter E, Schaper M, Blaszkewicz M, Bruning T, et al. Evaluation of ethyl acetate on three dimensions: investigation of behavioral, physiological and psychological indicators of adverse chemosensory effects. Toxicology letters. 2008;182(1-3):102-9.

Kupczewska-Dobecka M, Czerczak S, Jakubowski M, Maciaszek P, Janasik B. Application of predictive model to estimate concentrations of chemical substances in the work environment. Medycyna pracy. 2010;61(3):307-14.

Loh CH, Shih TS, Liou SH, Lin YC, Hsieh AT, Chen CY, et al. Haematological effects among silk screening workers exposed to 2-ethoxy ethyl acetate. Occupational and environmental medicine. 2003;60(9):E7.

McNally K, Warren N, Fransman W, Entink RK, Schinkel J, van Tongeren M, et al. Advanced REACH Tool: a Bayesian model for occupational exposure assessment. The Annals of occupational hygiene. 2014;58(5):551-65.

Muijser H, Geuskens RB, Hooisma J, Emmen HH, Kulig BM. Behavioral effects of exposure to organic solvents in carpet layers. Neurotoxicology and teratology. 1996;18(4):455-62.

Niimi A, Amitani R, Yamada K, Tanaka K, Kuze F. Late respiratory response and associated eosinophilic inflammation induced by repeated exposure to toluene diisocyanate in guinea pigs. The Journal of allergy and clinical immunology. 1996;97(6):1308-19.

Perez-Legaspi IA, Rico-Martinez R. Phospholipase A2 activity in three species of littoral freshwater rotifers exposed to several toxicants. Environmental toxicology and chemistry. 2003;22(10):2349-53.

Perocco P, Bolognesi S, Alberghini W. Toxic activity of seventeen industrial solvents and halogenated compounds on human lymphocytes cultured in vitro. Toxicology letters. 1983;16(1-2):69-75.

Seeber A, Blaszkewicz M, Golka K, Kiesswetter E. Solvent exposure and ratings of well-being: dose-effect relationships and consistency of data. Environmental research. 1997;73(1-2):81-91.

Seeber A, Kiesswetter E, Blaszkewicz M. Correlations between subjective disturbances due to acute exposure to organic solvents and internal dose. Neurotoxicology. 1992;13(1):265-9.

Seeber A, van Thriel C, Haumann K, Kiesswetter E, Blaszkewicz M, Golka K. Psychological reactions related to chemosensory irritation. International archives of occupational and environmental health. 2002;75(5):314-25.

Solomin GI, Gorban GM, Bizin IP, Tikhonova GP, Pilipiuk ZI. Toxicological evaluation of ethyl acetate in conditions of sealed cabin atmospheres. Kosmicheskaia biologiia i aviakosmicheskaia meditsina. 1975;9(2):40-4.

Tao X-y, Yu S-y, Kang L, Huang H-x, Wei A-y. Study on the genetic damage in mice induced by the volatile organic compounds of decoration materials. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2004;22(3):194-6.

Vangala RR, Blaszkewicz M, Bolt HM, Golka K, Kiesswetter E, Seeber A. Acute experimental exposures to acetone and ethyl acetate. Archives of toxicology Supplement = Archiv fur Toxikologie Supplement. 1991;14:259-62.

BIB-7. Ethyl Benzene

Indoor air guide values for ethylbenzene. Bundesgesundheitsblatt, Gesundheitsforschung, Gesundheitsschutz. 2012;55(9):1192-200.

Adeyemo OK, Kroll KJ, Denslow ND. Developmental abnormalities and differential expression of genes induced in oil and dispersant exposed Menidia beryllina embryos. Aquatic toxicology (Amsterdam, Netherlands). 2015;168:60-71.

Aguilera I, Garcia-Esteban R, Iniguez C, Nieuwenhuijsen MJ, Rodriguez A, Paez M, et al. Prenatal exposure to traffic-related air pollution and ultrasound measures of fetal growth in the INMA Sabadell cohort. Environmental health perspectives. 2010;118(5):705-11.

Aguilera I, Guxens M, Garcia-Esteban R, Corbella T, Nieuwenhuijsen MJ, Foradada CM, et al. Association between GIS-based exposure to urban air pollution during pregnancy and birth weight in the INMA Sabadell Cohort. Environmental health perspectives. 2009;117(8):1322-7.

Aguilera I, Sunyer J, Fernandez-Patier R, Hoek G, Aguirre-Alfaro A, Meliefste K, et al. Estimation of outdoor NO(x), NO(2), and BTEX exposure in a cohort of pregnant women using land use regression modeling. Environmental science & technology. 2008;42(3):815-21.

Alvarez PJJ, Hunt CS. The effect of fuel alcohol on monoaromatic hydrocarbon biodegradation and natural attenuation. Revista latinoamericana de microbiologia. 2002;44(2):83-104.

An YJ. Toxicity of benzene, toluene, ethylbenzene, and xylene (BTEX) mixtures to Sorghum bicolor and Cucumis sativus. Bulletin of environmental contamination and toxicology. 2004;72(5):1006-11.

Angerer J, Lehnert G. Occupational chronic exposure to organic solvents. VIII. Phenolic compounds--metabolites of alkylbenzenes in man. Simultaneous exposure to ethylbenzene and xylenes. International archives of occupational and environmental health. 1979;43(2):145-50.

Applegate BM, Kehrmeyer SR, Sayler GS. A chromosomally based tod-luxCDABE whole-cell reporter for benzene, toluene, ethybenzene, and xylene (BTEX) sensing. Applied and environmental microbiology. 1998;64(7):2730-5.

Astel AM, Giorgini L, Mistaro A, Pellegrini I, Cozzutto S, Barbieri P. Urban BTEX Spatiotemporal Exposure Assessment by Chemometric Expertise. Water, air, and soil pollution. 2013;224(4):1503.

Astrand I, Engstrom J, Ovrum P. Exposure to xylene and ethylbenzene. I. Uptake, distribution and elimination in man. Scandinavian journal of work, environment & health. 1978;4(3):185-94.

Atari DO, Luginaah IN. Assessing the distribution of volatile organic compounds using land use regression in Sarnia, "Chemical Valley", Ontario, Canada. Environmental health : a global access science source. 2009;8:16.

Avens HJ, Maskrey JR, Insley AL, Unice KM, Reid RCD, Sahmel J. Characterization of airborne BTEX exposures during use of lawnmowers and trimmers. Archives of environmental & occupational health. 2018:1-9.

Avens HJ, Unice KM, Sahmel J, Gross SA, Keenan JJ, Paustenbach DJ. Analysis and modeling of airborne BTEX concentrations from the Deepwater Horizon oil spill. Environmental science & technology. 2011;45(17):7372-9.

Bardodej Z, Bardodejova E. Value and application of exposure tests. X. Exposure test for ethyl benzene. Ceskoslovenska hygiena. 1961;6:537-45.

Bardodej Z, Cirek A. Long-term study on workers occupationally exposed to ethylbenzene. Journal of hygiene, epidemiology, microbiology, and immunology. 1988;32(1):1-5.

Barron MG, Conmy RN, Holder EL, Meyer P, Wilson GJ, Principe VE, et al. Toxicity of Cold Lake Blend and Western Canadian Select dilbits to standard aquatic test species. Chemosphere. 2018;191:1-6.

Bergauer P, Fonteyne P-A, Nolard N, Schinner F, Margesin R. Biodegradation of phenol and phenol-related compounds by psychrophilic and cold-tolerant alpine yeasts. Chemosphere. 2005;59(7):909-18.

Bieniek G. Simultaneous determination of ethylbenzene, indan, indene and acenaphthene in air by capillary gas chromatography. Journal of chromatography A. 2000;891(2):361-5.

Blair C, Walls J, Davies NW, Jacobson GA. Volatile organic compounds in runners near a roadway: increased blood levels after short-duration exercise. British journal of sports medicine. 2010;44(10):731-5.

Bolden AL, Kwiatkowski CF, Colborn T. New Look at BTEX: Are Ambient Levels a Problem? Environmental science & technology. 2015;49(9):5261-76.

Borgie M, Garat A, Cazier F, Delbende A, Allorge D, Ledoux F, et al. Traffic-related air pollution. A pilot exposure assessment in Beirut, Lebanon. Chemosphere. 2014;96:122-8.

Botton S, Parsons JR. Degradation of btex compounds under iron-reducing conditions in contaminated aquifer microcosms. Environmental toxicology and chemistry. 2006;25(10):2630-8.

Brajenovic N, Karaconji IB, Bulog A. Evaluation of Urinary Btex, Nicotine, and Cotinine as Biomarkers of Airborne Pollutants in Nonsmokers and Smokers. Journal of toxicology and environmental health Part A. 2015;78(17):1133-6.

Bratveit M, Kirkeleit J, Hollund BE, Moen BE. Biological monitoring of benzene exposure for process operators during ordinary activity in the upstream petroleum industry. The Annals of occupational hygiene. 2007;51(5):487-94.

Brcic Karaconji I, Skender L. Comparison between dynamic headspace and headspace solid-phase microextraction for gas chromatography of BTEX in urine. Arhiv za higijenu rada i toksikologiju. 2007;58(4):421-7.

Brcic I. General population exposure to volatile aromatic hydrocarbons. Arhiv za higijenu rada i toksikologiju. 2004;55(4):291-300.

Bundesgesundheitsblatt - Gesundheitsforschung G. Bundesgesundheitsblatt, Gesundheitsforschung, Gesundheitsschutz. 2016;59(11):1522-39.

Burrini C. The simultaneous determination of hippuric acid, o-, m-, p-methylhippuric acids, mandelic acid and phenylglyoxylic acid in urine by HPLC. La Medicina del lavoro. 1998;89(5):404-11.

Campo L, Rossella F, Mercadante R, Fustinoni S. Exposure to BTEX and Ethers in Petrol Station Attendants and Proposal of Biological Exposure Equivalents for Urinary Benzene and MTBE. The Annals of occupational hygiene. 2016;60(3):318-33.

Cappaert NL, Klis SF, Baretta AB, Muijser H, Smoorenburg GF. Ethyl benzene-induced ototoxicity in rats: a dose-dependent mid-frequency hearing loss. Journal of the Association for Research in Otolaryngology : JARO. 2000;1(4):292-9.

Cappaert NL, Klis SF, Muijser H, de Groot JC, Kulig BM, Smoorenburg GF. The ototoxic effects of ethyl benzene in rats. Hearing research. 1999;137(1-2):91-102.

Cappaert NL, Klis SF, Muijser H, Kulig BM, Smoorenburg GF. Simultaneous exposure to ethyl benzene and noise: synergistic effects on outer hair cells. Hearing research. 2001;162(1-2):67-79.

Cappaert NLM, Klis SFL, Muijser H, Kulig BM, Ravensberg LC, Smoorenburg GF. Differential susceptibility of rats and guinea pigs to the ototoxic effects of ethyl benzene. Neurotoxicology and teratology. 2002;24(4):503-10.

Chakroun R, Faidi F, Hedhili A, Charbaji K, Nouaigui H, Laiba MB. Inhalant abuse detection and evaluation in young Tunisians. Journal of forensic sciences. 2008;53(1):232-7.

Chambers DM, Reese CM, Thornburg LG, Sanchez E, Rafson JP, Blount BC, et al. Distinguishing Petroleum (Crude Oil and Fuel) From Smoke Exposure within Populations Based on the Relative Blood Levels of Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX), Styrene and 2,5-Dimethylfuran by Pattern Recognition Using Artificial Neural Networks. Environmental science & technology. 2018;52(1):308-16.

Chambers DM, McElprang DO, Waterhouse MG, Blount BC. An improved approach for accurate quantitation of benzene, toluene, ethylbenzene, xylene, and styrene in blood. Analytical chemistry. 2006;78(15):5375-83.

Chambers DM, Ocariz JM, McGuirk MF, Blount BC. Impact of cigarette smoking on volatile organic compound (VOC) blood levels in the U.S. population: NHANES 2003-2004. Environment international. 2011;37(8):1321-8.

Chan PC, Hasemani JK, Mahleri J, Aranyi C. Tumor induction in F344/N rats and B6C3F1 mice following inhalation exposure to ethylbenzene. Toxicology letters. 1998;99(1):23-32.

Chang C-T, Chen B-Y. Toxicity assessment of volatile organic compounds and polycyclic aromatic hydrocarbons in motorcycle exhaust. Journal of hazardous materials. 2008;153(3):1262-9.

Chang FK, Chen ML, Cheng SF, Shih TS, Mao IF. Field protection effectiveness of chemical protective suits and gloves evaluated by biomonitoring. Occupational and environmental medicine. 2007;64(11):759-62.

Chang F-K, Chen M-L, Cheng S-F, Shih T-S, Mao IF. Dermal absorption of solvents as a major source of exposure among shipyard spray painters. Journal of occupational and environmental medicine. 2007;49(4):430-6.

Chang F-K, Chen M-L, Cheng S-F, Shih T-S, Mao IF. Evaluation of dermal absorption and protective effectiveness of respirators for xylene in spray painters. International archives of occupational and environmental health. 2007;81(2):145-50.

Chang F-K, Mao IF, Chen M-L, Cheng S-F. Urinary 8-hydroxydeoxyguanosine as a biomarker of oxidative DNA damage in workers exposed to ethylbenzene. The Annals of occupational hygiene. 2011;55(5):519-25.

Chen M-L, Chen S-H, Guo B-R, Mao IF. Relationship between environmental exposure to toluene, xylene and ethylbenzene and the expired breath concentrations for gasoline service workers. Journal of environmental monitoring : JEM. 2002;4(4):562-6.

Cheng S, Bois FY. A mechanistic modeling framework for predicting metabolic interactions in complex mixtures. Environmental health perspectives. 2011;119(12):1712-8.

Chung J-K, Yuan W, Liu G, Zheng J. Investigation of bioactivation and toxicity of styrene in CYP2E1 transgenic cells. Toxicology. 2006;226(2-3):99-106.

Compton JR, Dwiggins GA, Feigley CE, Ludwig DA. The effect of square wave exposure profiles upon the performance of passive organic vapor monitoring badges. American Industrial Hygiene Association journal. 1984;45(7):446-50.

Cossec B, Cosnier F, Burgart M, Nunge H, Grossmann S. Glutathione pathway in ethylbenzene metabolism: novel biomarkers of exposure in the rat. Chemosphere. 2010;81(10):1334-41.

Cragg ST, Clarke EA, Daly IW, Miller RR, Terrill JB, Ouellette RE. Subchronic inhalation toxicity of ethylbenzene in mice, rats, and rabbits. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1989;13(3):399-408.

Cruzan G, Bus J, Banton M, Gingell R, Carlson G. Mouse specific lung tumors from CYP2F2-mediated cytotoxic metabolism: an endpoint/toxic response where data from multiple chemicals converge to support a mode of action. Regulatory toxicology and pharmacology : RTP. 2009;55(2):205-18.

da Rosa JCF, Fiegenbaum M, Soledar AL, Claus MS, de Souza Nunes AD, Cardoso VV. Cytogenetic evaluation and the association with polymorphisms of the CPY1A1 and NR1I3 genes in individuals exposed to BTEX. Environmental monitoring and assessment. 2013;185(7):5883-90.

Da Silva MLB, Alvarez PJJ. Enhanced anaerobic biodegradation of benzene-toluene-ethylbenzene-xylene-ethanol mixtures in bioaugmented aquifer columns. Applied and environmental microbiology. 2004;70(8):4720-6.

Daghio M, Espinoza Tofalos A, Leoni B, Cristiani P, Papacchini M, Jalilnejad E, et al. Bioelectrochemical BTEX removal at different voltages: assessment of the degradation and characterization of the microbial communities. Journal of hazardous materials. 2018;341:120-7.

Dateki M, Kunitomo M, Yoshioka K, Yanai K, Nakasono S, Negishi T. Adaptive gene regulation of pyruvate dehydrogenase kinase isoenzyme 4 in hepatotoxic chemical-induced liver injury and its stimulatory potential for DNA repair and cell proliferation. Journal of receptor and signal transduction research. 2011;31(1):85-95.

Dawson JJC, Iroegbu CO, Maciel H, Paton GI. Application of luminescent biosensors for monitoring the degradation and toxicity of BTEX compounds in soils. Journal of applied microbiology. 2008;104(1):141-51.

De Celis R, Feria-Velasco A, Bravo-Cuellar A, Hicks-Gomez JJ, Garcia-Iglesias T, Preciado-Martinez V, et al. Expression of NK cells activation receptors after occupational exposure to toxics: a preliminary study. Immunology letters. 2008;118(2):125-31.

De Palma G, Poli D, Manini P, Andreoli R, Mozzoni P, Apostoli P, et al. Environmental and biological monitoring of exposure to monoaromatic hydrocarbons and to methyl tert-butyl ether in a group of petrol station workers. Giornale italiano di medicina del lavoro ed ergonomia. 2011;33(3 Suppl):49-52.

Dehghani F, Omidi F, Heravizadeh O, Barati Chamgordani S, Gharibi V, Sotoudeh Manesh A. Occupational health risk assessment of volatile organic compounds emitted from the coke production unit of a steel plant. International journal of occupational safety and ergonomics : JOSE. 2018:1-6.

Dehghani M, Fazlzadeh M, Sorooshian A, Tabatabaee HR, Miri M, Baghani AN, et al. Characteristics and health effects of BTEX in a hot spot for urban pollution. Ecotoxicology and environmental safety. 2018;155:133-43.

Demirel G, Ozden O, Dogeroglu T, Gaga EO. Personal exposure of primary school children to BTEX, NOâ‚‚ and ozone in Eskisehir, Turkey: relationship with indoor/outdoor concentrations and risk assessment. The Science of the total environment. 2014;473-474:537-48.

Dennison JE, Andersen ME, Dobrev ID, Mumtaz MM, Yang RSH. PBPK modeling of complex hydrocarbon mixtures: gasoline. Environmental toxicology and pharmacology. 2004;16(1-2):107-19.

Dennison JE, Bigelow PL, Mumtaz MM, Andersen ME, Dobrev ID, Yang RSH. Evaluation of potential toxicity from co-exposure to three CNS depressants (toluene, ethylbenzene, and xylene) under resting and working conditions using PBPK modeling. Journal of occupational and environmental hygiene. 2005;2(3):127-35.

Doherty BT, Kwok RK, Curry MD, Ekenga C, Chambers D, Sandler DP, et al. Associations between blood BTEXS concentrations and hematologic parameters among adult residents of the U.S. Gulf States. Environmental research. 2017;156:579-87.

Doherty VF, Otitoloju AA. Occurrence and distribution of monocyclic aromatic hydrocarbons (BTEX) and the impact on macrobenthic community structure in Lagos lagoon, Nigeria. Environmental monitoring and assessment. 2016;188(10):571.

Dou J, Liu X, Hu Z, Deng D. Anaerobic BTEX biodegradation linked to nitrate and sulfate reduction. Journal of hazardous materials. 2008;151(2-3):720-9.

Drummond L, Caldwell J, Wilson HK. The metabolism of ethylbenzene and styrene to mandelic acid: stereochemical considerations. Xenobiotica; the fate of foreign compounds in biological systems. 1989;19(2):199-207.

Druzdz A, Dabrowicz K, Grzybowski G. Examination of visual evoked potentials in persons exposed to prolonged contact with ethyl benzene vapors. Klinika oczna. 1997;99(1):47-50.

Durmusoglu E, Taspinar F, Karademir A. Health risk assessment of BTEX emissions in the landfill environment. Journal of hazardous materials. 2010;176(1-3):870-7.

Elovaara E, Engstrom K, Nickels J, Aito A, Vainio H. Biochemical and morphological effects of long-term inhalation exposure of rats to ethylbenzene. Xenobiotica; the fate of foreign compounds in biological systems. 1985;15(4):299-308.

Engelhardt G. In vivo micronucleus test in mice with 1-phenylethanol. Archives of toxicology. 2006;80(12):868-72.

Engstrom J, Bjurstrom R. Exposure to xylene and ethylbenzene. II. Concentration in subcutaneous adipose tissue. Scandinavian journal of work, environment & health. 1978;4(3):195-203.

Engstrom KM. Metabolism of inhaled ethylbenzene in rats. Scandinavian journal of work, environment & health. 1984;10(2):83-7.

Engstrom K, Riihimaki V, Laine A. Urinary disposition of ethylbenzene and m-xylene in man following separate and combined exposure. International archives of occupational and environmental health. 1984;54(4):355-63.

Erickson T, Amed V, Leibach SJ, Bushnik P, Saxon A, Hryhorczuk DO, et al. Acute bone marrow toxicity and pancytopenia following exposure to lead chromate, xylene, and ethylbenzene in a degloving injury. American journal of hematology. 1994;47(4):257-61.

Esplugues A, Ballester F, Estarlich M, Llop S, Fuentes-Leonarte V, Mantilla E, et al. Indoor and outdoor air concentrations of BTEX and determinants in a cohort of one-year old children in Valencia, Spain. The Science of the total environment. 2010;409(1):63-9.

Faber WD, Roberts LSG, Stump DG, Beck M, Kirkpatrick D, Regan KS, et al. Inhalation developmental neurotoxicity study of ethylbenzene in Crl-CD rats. Birth defects research Part B, Developmental and reproductive toxicology. 2007;80(1):34-48.

Fechter LD, Gearhart C, Fulton S, Campbell J, Fisher J, Na K, et al. Promotion of noise-induced cochlear injury by toluene and ethylbenzene in the rat. Toxicological sciences : an official journal of the Society of Toxicology. 2007;98(2):542-51.

Fishbein L. An overview of environmental and toxicological aspects of aromatic hydrocarbons. IV. Ethylbenzene. The Science of the total environment. 1985;44(3):269-87.

Fustinoni S, Buratti M, Giampiccolo R, Pulvirenti S, Colombi A. Biological monitoring of exposure to solvents: a method for the gas-chromatographic determination of aromatic hydrocarbons in the blood and urine. La Medicina del lavoro. 1996;87(1):63-75.

Fustinoni S, Giampiccolo R, Pulvirenti S, Buratti M, Colombi A. Headspace solid-phase microextraction for the determination of benzene, toluene, ethylbenzene and xylenes in urine. Journal of chromatography B, Biomedical sciences and applications. 1999;723(1-2):105-15.

Gagnaire F, Langlais C. Relative ototoxicity of 21 aromatic solvents. Archives of toxicology. 2005;79(6):346-54.

Gagnaire F, Langlais C, Grossmann S, Wild P. Ototoxicity in rats exposed to ethylbenzene and to two technical xylene vapours for 13 weeks. Archives of toxicology. 2007;81(2):127-43.

Gamberale F, Annwall G, Hultengren M. Exposure to xylene and ethylbenzene. III. Effects on central nervous functions. Scandinavian journal of work, environment & health. 1978;4(3):204-11.

Gherardi M, Gordiani A, Gatto M. Development and validation of method for analysis of some ototoxic solvents in saliva matrix by headspace gas chromatography/mass spectrometry. Journal of chromatography B, Analytical technologies in the biomedical and life sciences. 2010;878(26):2391-6.

Ghosh JKC, Wilhelm M, Su J, Goldberg D, Cockburn M, Jerrett M, et al. Assessing the influence of traffic-related air pollution on risk of term low birth weight on the basis of land-use-based regression models and measures of air toxics. American journal of epidemiology. 2012;175(12):1262-74.

Gil GC, Kim YJ, Gu MB. Enhancement in the sensitivity of a gas biosensor by using an advanced immobilization of a recombinant bioluminescent bacterium. Biosensors & bioelectronics. 2002;17(5):427-32.

Gjesteland I, Hollund BE, Kirkeleit J, Daling P, Bratveit M. Oil Spill Field Trial at Sea: Measurements of Benzene Exposure. Annals of work exposures and health. 2017;61(6):692-9.

Godoi RHM, Godoi AFL, Goncalves Junior SJ, Paralovo SL, Borillo GC, Goncalves Gregorio Barbosa C, et al. Healthy environment--indoor air quality of Brazilian elementary schools nearby petrochemical industry. The Science of the total environment. 2013;463-464:639-46.

Gonzalez JL, Pell A, Lopez-Mesas M, Valiente M. Simultaneous determination of BTEX and their metabolites using solid-phase microextraction followed by HPLC or GC/MS: An application in teeth as environmental biomarkers. The Science of the total environment. 2017;603-604:109-17.

Gonzalez JL, Pell A, Lopez-Mesas M, Valiente M. Hollow fibre supported liquid membrane extraction for BTEX metabolites analysis in human teeth as biomarkers. The Science of the total environment. 2018;630:323-30.

Grayson MH, Gill SS. Effect of in vitro exposure to styrene, styrene oxide, and other structurally related compounds on murine cell-mediated immunity. Immunopharmacology. 1986;11(3):165-73.

Gromiec JP, Piotrowski JK. Urinary mandelic acid as an exposure test for ethylbenzene. International archives of occupational and environmental health. 1984;55(1):61-72.

Groth C, Banerjee S, Ramachandran G, Stenzel MR, Sandler DP, Blair A, et al. Bivariate Left-Censored Bayesian Model for Predicting Exposure: Preliminary Analysis of Worker Exposure during the Deepwater Horizon Oil Spill. Annals of work exposures and health. 2017;61(1):76-86.

Haddad S, Tardif R, Charest-Tardif G, Krishnan K. Physiological modeling of the toxicokinetic interactions in a quaternary mixture of aromatic hydrocarbons. Toxicology and applied pharmacology. 1999;161(3):249-57.

Han X, Aguilar-Villalobos M, Allen J, Carlton CS, Robinson R, Bayer C, et al. Traffic-related occupational exposures to PM2.5, CO, and VOCs in Trujillo, Peru. International journal of occupational and environmental health. 2005;11(3):276-88.

Harati B, Shahtaheri SJ, Karimi A, Azam K, Ahmadi A, Afzali Rad M, et al. Evaluation of Respiratory Symptoms among Workers in an Automobile Manufacturing Factory, Iran. Iranian journal of public health. 2018;47(2):237-45.

Hard GC. Significance of the renal effects of ethyl benzene in rodents for assessing human carcinogenic risk. Toxicological sciences : an official journal of the Society of Toxicology. 2002;69(1):30-41.

Hazrati S, Rostami R, Fazlzadeh M. BTEX in indoor air of waterpipe cafes: Levels and factors influencing their concentrations. The Science of the total environment. 2015;524-525:347-53.

Heibati B, Godri Pollitt KJ, Charati JY, Ducatman A, Shokrzadeh M, Karimi A, et al. Biomonitoring-based exposure assessment of benzene, toluene, ethylbenzene and xylene among workers at petroleum distribution facilities. Ecotoxicology and environmental safety. 2018;149:19-25.

Heibati B, Pollitt KJG, Karimi A, Yazdani Charati J, Ducatman A, Shokrzadeh M, et al. BTEX exposure assessment and quantitative risk assessment among petroleum product distributors. Ecotoxicology and environmental safety. 2017;144:445-9.

Henderson L, Brusick D, Ratpan F, Veenstra G. A review of the genotoxicity of ethylbenzene. Mutation research. 2007;635(2-3):81-9.

Hill M, Stabile C, Steffen LK, Hill A. Toxic effects of endocrine disrupters on freshwater sponges: common developmental abnormalities. Environmental pollution (Barking, Essex : 1987). 2002;117(2):295-300.

Hinwood AL, Rodriguez C, Runnion T, Farrar D, Murray F, Horton A, et al. Risk factors for increased BTEX exposure in four Australian cities. Chemosphere. 2007;66(3):533-41.

Hoang T, Castorina R, Gaspar F, Maddalena R, Jenkins PL, Zhang Q, et al. VOC exposures in California early childhood education environments. Indoor air. 2017;27(3):609-21.

Holz O, Scherer G, Brodtmeier S, Koops F, Warncke K, Krause T, et al. Determination of low level exposure to volatile aromatic hydrocarbons and genotoxic effects in workers at a styrene plant. Occupational and environmental medicine. 1995;52(6):420-8.

Hopf NB, Kirkeleit J, Bratveit M, Succop P, Talaska G, Moen BE. Evaluation of exposure biomarkers in offshore workers exposed to low benzene and toluene concentrations. International archives of occupational and environmental health. 2012;85(3):261-71.

Hristeva-Mirtcheva V. Changes in the peripheral blood of workers with occupational exposure to aromatic hydrocarbons. International archives of occupational and environmental health. 1998;71 Suppl:S81-3.

Hu Z-F, Dou J-F, Liu X, Zheng X-L, Deng D. Anaerobic biodegradation of benzene series compounds by mixed cultures based on optional electronic acceptors. Journal of environmental sciences (China). 2007;19(9):1049-54.

Huang Y, Li L. Biodegradation characteristics of naphthalene and benzene, toluene, ethyl benzene, and xylene (BTEX) by bacteria enriched from activated sludge. Water environment research : a research publication of the Water Environment Federation. 2014;86(3):277-84.

Huff J, Chan P, Melnick R. Clarifying carcinogenicity of ethylbenzene. Regulatory toxicology and pharmacology : RTP. 2010;58(2):167-9; discussion 70-2.

Ivanov SV. TOXICOLOGY AND HYGIENIC RATING OF ETHYLBENZENE IN THE AIR OF INDUSTRIAL PREMISES. Gigiena truda i professional'nye zabolevaniia. 1964;8:9-14.

Jang JY, Droz PO, Kim S. Biological monitoring of workers exposed to ethylbenzene and co-exposed to xylene. International archives of occupational and environmental health. 2001;74(1):31-7.

Jiang B, Zhou Z, Dong Y, Tao W, Wang B, Jiang J, et al. Biodegradation of Benzene, Toluene, Ethylbenzene, and o-, m-, and p-Xylenes by the Newly Isolated Bacterium Comamonas sp. JB. Applied biochemistry and biotechnology. 2015;176(6):1700-8.

Jimenez-Garza O, Guo L, Byun H-M, Carrieri M, Bartolucci GB, Barron-Vivanco BS, et al. Aberrant promoter methylation in genes related to hematopoietic malignancy in workers exposed to a VOC mixture. Toxicology and applied pharmacology. 2018;339:65-72.

Jimenez-Garza O, Marquez-Gamino S, Albores A, Caudillo-Cisneros C, Carrieri M, Bartolucci GB, et al. CYP2E1 phenotype in Mexican workers occupationally exposed to low levels of toluene. Toxicology letters. 2012;210(2):254-63.

Joshi G, Schmidt R, Scow KM, Denison MS, Hristova KR. Effect of benzene and ethylbenzene on the transcription of methyl-tert-butyl ether degradation genes of Methylibium petroleiphilum PM1. Microbiology (Reading, England). 2016;162(9):1563-71.

Kasi M, Wadhawan T, McEvoy J, Padmanabhan G, Khan E. Effect of carbon source during enrichment on BTEX degradation by anaerobic mixed bacterial cultures. Biodegradation. 2013;24(2):279-93.

Kawai T, Zhang ZW, Takeuchi A, Miyama Y, Sakamoto K, Higashikawa K, et al. Methyl isobutyl ketone and methyl ethyl ketone in urine as biological markers of occupational exposure to these solvents at low levels. International archives of occupational and environmental health. 2003;76(1):17-23.

Kerchich Y, Kerbachi R. Measurement of BTEX (benzene, toluene, ethybenzene, and xylene) levels at urban and semirural areas of Algiers City using passive air samplers. Journal of the Air & Waste Management Association (1995). 2012;62(12):1370-9.

Kerchich Y, Kerbachi R. Measurement of BTEX (benzene, toluene, ethybenzene, and xylene) levels at urban and semirural areas of Algiers City using passive air samplers. Journal of the Air & Waste Management Association (1995). 2012;62(12):1370-9.

Khristeva V. Changes in the peripheral blood of workers engaged in ethylbenzene-styrene and synthetic rubber and latex manufacture. Problemi na khigienata. 1986;11:90-5.

Kim B-M, Park Ek, LeeAn S-Y, Ha M, Kim E-J, Kwon H, et al. BTEX exposure and its health effects in pregnant women following the Hebei Spirit oil spill. Journal of preventive medicine and public health = Yebang Uihakhoe chi. 2009;42(2):96-103.

Kim JK, Jung KH, Noh JH, Eun JW, Bae HJ, Xie HJ, et al. Identification of characteristic molecular signature for volatile organic compounds in peripheral blood of rat. Toxicology and applied pharmacology. 2011;250(2):162-9.

Kim JH, Moon JY, Park E-Y, Lee K-H, Hong Y-C. Changes in oxidative stress biomarker and gene expression levels in workers exposed to volatile organic compounds. Industrial health. 2011;49(1):8-14.

Knecht U, Reske A, Woitowitz HJ. Biological monitoring of standardized exposure to ethylbenzene: evaluation of a biological tolerance (BAT) value. Archives of toxicology. 2000;73(12):632-40.

Konggidinata MI, Chao B, Lian Q, Subramaniam R, Zappi M, Gang DD. Equilibrium, kinetic and thermodynamic studies for adsorption of BTEX onto Ordered Mesoporous Carbon (OMC). Journal of hazardous materials. 2017;336:249-59.

Leddy MB, Phipps DW, Ridgway HF. Catabolite-mediated mutations in alternate toluene degradative pathways in Pseudomonas putida. Journal of bacteriology. 1995;177(16):4713-20.

Lee C-W, Dai Y-T, Chien C-H, Hsu D-J. Characteristics and health impacts of volatile organic compounds in photocopy centers. Environmental research. 2006;100(2):139-49.

Leghrib R, Llobet E. Quantitative trace analysis of benzene using an array of plasma-treated metal-decorated carbon nanotubes and fuzzy adaptive resonant theory techniques. Analytica chimica acta. 2011;708(1-2):19-27.

Lehmann I, Rehwagen M, Diez U, Seiffart A, Rolle-Kampczyk U, Richter M, et al. Enhanced in vivo IgE production and T cell polarization toward the type 2 phenotype in association with indoor exposure to VOC: results of the LARS study. International journal of hygiene and environmental health. 2001;204(4):211-21.

Lehmann TP, Wrzesinski T, Jagodzinski PP. The effect of mitotane on viability, steroidogenesis and gene expression in NCIâ€˘H295R adrenocortical cells. Molecular medicine reports. 2013;7(3):893-900.

Li AA, Maurissen JPJ, Barnett JF, Jr., Foss J, Freshwater L, Garman RH, et al. Oral gavage subchronic neurotoxicity and inhalation subchronic immunotoxicity studies of ethylbenzene in the rat. Neurotoxicology. 2010;31(3):247-58.

Li X, Zhou Q, Luo Y, Yang G, Zhou T. Joint action and lethal levels of toluene, ethylbenzene, and xylene on midge (Chironomus plumosus) larvae. Environmental science and pollution research international. 2013;20(2):957-66.

Liaud C, Nguyen NT, Nasreddine R, Le Calve S. Experimental performances study of a transportable GC-PID and two thermo-desorption based methods coupled to FID and MS detection to assess BTEX exposure at sub-ppb level in air. Talanta. 2014;127:33-42.

Lim SK, Shin HS, Yoon KS, Kwack SJ, Um YM, Hyeon JH, et al. Risk assessment of volatile organic compounds benzene, toluene, ethylbenzene, and xylene (BTEX) in consumer products. Journal of toxicology and environmental health Part A. 2014;77(22-24):1502-21.

Lin C-W, Wu C-H, Guo P-Y, Chang S-H. Innovative encapsulated oxygen-releasing beads for bioremediation of BTEX at high concentration in groundwater. Journal of environmental management. 2017;204(Pt 1):12-6.

Lin YS, Egeghy PP, Rappaport SM. Relationships between levels of volatile organic compounds in air and blood from the general population. Journal of exposure science & environmental epidemiology. 2008;18(4):421-9.

Liu A, Hong N, Zhu P, Guan Y. Understanding benzene series (BTEX) pollutant load characteristics in the urban environment. The Science of the total environment. 2018;619-620:938-45.

Liu FF, Escher BI, Were S, Duffy L, Ng JC. Mixture effects of benzene, toluene, ethylbenzene, and xylenes (BTEX) on lung carcinoma cells via a hanging drop air exposure system. Chemical research in toxicology. 2014;27(6):952-9.

Liu FF, Peng C, Ng JC. BTEX in vitro exposure tool using human lung cells: trips and gains. Chemosphere. 2015;128:321-6.

Liu J, Drane W, Liu X, Wu T. Examination of the relationships between environmental exposures to volatile organic compounds and biochemical liver tests: application of canonical correlation analysis. Environmental research. 2009;109(2):193-9.

Liu Y, Zhou Q, Xie X, Lin D, Dong L. Oxidative stress and DNA damage in the earthworm Eisenia fetida induced by toluene, ethylbenzene and xylene. Ecotoxicology (London, England). 2010;19(8):1551-9.

Lopez E, Schuhmacher M, Domingo JL. Human health risks of petroleum-contaminated groundwater. Environmental science and pollution research international. 2008;15(3):278-88.

Low LK, Meeks JR, Mackerer CR. Health effects of the alkylbenzenes. I. Toluene. Toxicology and industrial health. 1988;4(1):49-75.

Magagnotti N, Picchi G, Sciarra G, Spinelli R. Exposure of mobile chipper operators to diesel exhaust. The Annals of occupational hygiene. 2014;58(2):217-26.

Mannisto T, Mendola P, Laughon Grantz K, Leishear K, Sundaram R, Sherman S, et al. Acute and recent air pollution exposure and cardiovascular events at labour and delivery. Heart (British Cardiac Society). 2015;101(18):1491-8.

Mao IF, Chang FK, Chen ML. Delayed and competitively inhibited excretion of urinary hippuric acid in field workers coexposed to toluene, ethyl benzene, and xylene. Archives of environmental contamination and toxicology. 2007;53(4):678-83.

Marais AAS, Laurens JB. Analysis of urinary biomarkers for exposure to alkyl benzenes by isotope dilution gas chromatography-mass spectrometry. Journal of separation science. 2005;28(18):2526-33.

Marchand A, Aranda-Rodriguez R, Tardif R, Nong A, Haddad S. Human inhalation exposures to toluene, ethylbenzene, and m-xylene and physiologically based pharmacokinetic modeling of exposure biomarkers in exhaled air, blood, and urine. Toxicological sciences : an official journal of the Society of Toxicology. 2015;144(2):414-24.

Martins EM, Borba PFdS, Dos Santos NE, Dos Reis PTB, Silveira RS, Correa SM. The relationship between solvent use and BTEX concentrations in occupational environments. Environmental monitoring and assessment. 2016;188(11):608.

Masten LW, Boeri RL, Walker JD. Strategies employed to determine the acute aquatic toxicity of ethyl benzene, a highly volatile, poorly water-soluble chemical. Ecotoxicology and environmental safety. 1994;27(3):335-48.

Mathur AK, Majumder CB, Chatterjee S. Combined removal of BTEX in air stream by using mixture of sugar cane bagasse, compost and GAC as biofilter media. Journal of hazardous materials. 2007;148(1-2):64-74.

Mazzeo DEC, Fernandes TCC, Marin-Morales MA. Cellular damages in the Allium cepa test system, caused by BTEX mixture prior and after biodegradation process. Chemosphere. 2011;85(1):13-8.

Mazzeo DEC, Levy CE, de Angelis DdF, Marin-Morales MA. BTEX biodegradation by bacteria from effluents of petroleum refinery. The Science of the total environment. 2010;408(20):4334-40.

Meszka G, Jakubowski M. Determination of mandelic acid in urine by means of gas chromatography. Medycyna pracy. 1977;28(4):305-10.

Miao Q, Chen X, Liu L, Peng J, Fang Y. Synergetic effect based gel-emulsions and their utilization for the template preparation of porous polymeric monoliths. Langmuir : the ACS journal of surfaces and colloids. 2014;30(45):13680-8.

Modrzynski JJ, Christensen JH, Mayer P, Brandt KK. Limited recovery of soil microbial activity after transient exposure to gasoline vapors. Environmental pollution (Barking, Essex : 1987). 2016;216:826-35.

Mohammad BT, Veiga MC, Kennes C. Mesophilic and thermophilic biotreatment of BTEX-polluted air in reactors. Biotechnology and bioengineering. 2007;97(6):1423-38.

Moolla R, Curtis CJ, Knight J. Assessment of occupational exposure to BTEX compounds at a bus diesel-refueling bay: A case study in Johannesburg, South Africa. The Science of the total environment. 2015;537:51-7.

Moolla R, Curtis CJ, Knight J. Occupational exposure of diesel station workers to BTEX compounds at a bus depot. International journal of environmental research and public health. 2015;12(4):4101-15.

Morlett-Chavez JA, Ascacio-Martinez JA, Haskins WE, Acuna-Askar K, Barrera-Saldana HA. Gene Expression during BTEX Biodegradation by a Microbial Consortium Acclimatized to Unleaded Gasoline and a Pseudomonas putida Strain (HM346961) Isolated from It. Polish journal of microbiology. 2017;66(2):189-99.

Moro AM, Charao M, Brucker N, Bulcao R, Freitas F, Guerreiro G, et al. Effects of low-level exposure to xenobiotics present in paints on oxidative stress in workers. The Science of the total environment. 2010;408(20):4461-7.

Muller A, Becker R, Dorgerloh U, Simon F-G, Braun U. The effect of polymer aging on the uptake of fuel aromatics and ethers by microplastics. Environmental pollution (Barking, Essex : 1987). 2018;240:639-46.

Mutti A, Falzoi M, Romanelli A, Bocchi MC, Ferroni C, Franchini I. Brain dopamine as a target for solvent toxicity: effects of some monocyclic aromatic hydrocarbons. Toxicology. 1988;49(1):77-82.

Na Roi-Et V, Chiemchaisri W, Chiemchaisri C. Genotoxicity Assessment of Volatile Organic Compounds in Landfill Gas Emission Using Comet Assay in Higher Terrestrial Plant. Bulletin of environmental contamination and toxicology. 2017;98(2):283-9.

Neri F, Foderi C, Laschi A, Fabiano F, Cambi M, Sciarra G, et al. Determining exhaust fumes exposure in chainsaw operations. Environmental pollution (Barking, Essex : 1987). 2016;218:1162-9.

Nicholson WJ, Selikoff IJ, Seidman H. Mortality experience of styrene-polystyrene polymerization workers. Initial findings. Scandinavian journal of work, environment & health. 1978;4 Suppl 2:247-52.

Nwaichi EO, Onyeike EN, Wegwu MO. Characterization and safety evaluation of the impact of hydrocarbon contaminants on ecological receptors. Bulletin of environmental contamination and toxicology. 2010;85(2):199-204.

Ongwandee M, Chavalparit O. Commuter exposure to BTEX in public transportation modes in Bangkok, Thailand. Journal of environmental sciences (China). 2010;22(3):397-404.

Parreira FV, de CCR, de CZL. Evaluation of indoor exposition to benzene, toluene, ethylbenzene, xylene, and styrene by passive sampling with a solid-phase microextraction device. Journal of chromatographic science. 2002;40(3):122-6.

Peng C, Lee J-W, Sichani HT, Ng JC. Toxic effects of individual and combined effects of BTEX on Euglena gracilis. Journal of hazardous materials. 2015;284:10-8.

Perbellini L, Pasini F, Romani S, Princivalle A, Brugnone F. Analysis of benzene, toluene, ethylbenzene and m-xylene in biological samples from the general population. Journal of chromatography B, Analytical technologies in the biomedical and life sciences. 2002;778(1-2):199-210.

Prenafeta-Boldu FX, Ballerstedt H, Gerritse J, Grotenhuis JTC. Bioremediation of BTEX hydrocarbons: effect of soil inoculation with the toluene-growing fungus Cladophialophora sp. strain T1. Biodegradation. 2004;15(1):59-65.

Presto AA, Dallmann TR, Gu P, Rao U. BTEX exposures in an area impacted by industrial and mobile sources: Source attribution and impact of averaging time. Journal of the Air & Waste Management Association (1995). 2016;66(4):387-401.

Rafiee A, Delgado-Saborit JM, Gordi E, Quemerais B, Kazemi Moghadam V, Lu W, et al. Use of urinary biomarkers to characterize occupational exposure to BTEX in healthcare waste autoclave operators. The Science of the total environment. 2018;631-632:857-65.

Ramakrishnan A, Lupo PJ, Agopian AJ, Linder SH, Stock TH, Langlois PH, et al. Evaluating the effects of maternal exposure to benzene, toluene, ethyl benzene, and xylene on oral clefts among offspring in Texas: 1999-2008. Birth defects research Part A, Clinical and molecular teratology. 2013;97(8):532-7.

Ramsey SA, Mustacich RV, Smith PA, Hook GL, Eckenrode BA. Directly heated high surface area solid phase microextraction sampler for rapid field forensic analyses. Analytical chemistry. 2009;81(21):8724-33.

Ran J, Qiu H, Sun S, Tian L. Short-term effects of ambient benzene and TEX (toluene, ethylbenzene, and xylene combined) on cardiorespiratory mortality in Hong Kong. Environment international. 2018;117:91-8.

Rezazadeh Azari M, Naghavi Konjin Z, Zayeri F, Salehpour S, Seyedi MD. Occupational exposure of petroleum depot workers to BTEX compounds. The international journal of occupational and environmental medicine. 2012;3(1):39-44.

Romieu I, Ramirez M, Meneses F, Ashley D, Lemire S, Colome S, et al. Environmental exposure to volatile organic compounds among workers in Mexico City as assessed by personal monitors and blood concentrations. Environmental health perspectives. 1999;107(7):511-5.

Saillenfait AM, Gallissot F, Morel G, Bonnet P. Developmental toxicities of ethylbenzene, ortho-, meta-, para-xylene and technical xylene in rats following inhalation exposure. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2003;41(3):415-29.

Saillenfait AM, Gallissot F, Sabate JP, Bourges-Abella N, Cadot R, Morel G, et al. Developmental toxicity of combined ethylbenzene and methylethylketone administered by inhalation to rats. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2006;44(8):1287-98.

Saillenfait A-M, Gallissot F, Sabate J-P, Bourges-Abella N, Muller S. Developmental toxic effects of ethylbenzene or toluene alone and in combination with butyl acetate in rats after inhalation exposure. Journal of applied toxicology : JAT. 2007;27(1):32-42.

Sakai T, Takeuchi Y, Ikeya Y, Araki T, Ushio K. Method for simultaneous determination of six metabolites of toluene, xylene and ethylbenzene, and its application to exposure monitoring of workers in a printing factory with gravure machines. Sangyo igaku Japanese journal of industrial health. 1989;31(1):9-16.

Schneider P, Lorinci G, Gebefugi IL, Heinrich J, Kettrup A, Wichmann HE. Vertical and horizontal variability of volatile organic compounds in homes in Eastern Germany. Journal of exposure analysis and environmental epidemiology. 1999;9(4):282-92.

Scholten K, Fan X, Zellers ET. A microfabricated optofluidic ring resonator for sensitive, high-speed detection of volatile organic compounds. Lab on a chip. 2014;14(19):3873-80.

Schupfer PY, Huynh CK. Solid phase microextraction as a short-term sampling technique for BTEX occupational exposure. Journal of occupational and environmental hygiene. 2008;5(8):490-500.

Sequeira DJ, Cawley GF, Eyer CS, Backes WL. Temporal changes in P-450 2E1 expression with continued ethylbenzene exposure. Biochimica et biophysica acta. 1994;1207(2):179-86.

Sequeira DJ, Eyer CS, Cawley GF, Nick TG, Backes WL. Ethylbenzene-mediated induction of cytochrome P450 isozymes in male and female rats. Biochemical pharmacology. 1992;44(6):1171-82.

Serron SC, Dwivedi N, Backes WL. Ethylbenzene induces microsomal oxygen free radical generation: antibody-directed characterization of the responsible cytochrome P450 enzymes. Toxicology and applied pharmacology. 2000;164(3):305-11.

Shahtaheri SJ, Nourozi MA, Neghab M, Mansoori Y, Bazzaz JT, Nedjat S. Effects of Genetic Polymorphism on Susceptibility to Nephrotoxic Properties of BTEXs Compounds. Journal of occupational and environmental medicine. 2018.

Shakeri H, Arshadi M, Salvacion JWL. Removal of BTEX by using a surfactant--Bio originated composite. Journal of colloid and interface science. 2016;466:186-97.

Shanh FG, Rahimnejad S, Bahrami A, Farhadian M. Risk Assessment of Workers' Exposure to Volatile Organic Compounds in the Air of a Petrochemical Complex in Iran. Indian journal of occupational and environmental medicine. 2017;21(3):121-7.

Shen Y. In vitro cytotoxicity of BTEX metabolites in HeLa cells. Archives of environmental contamination and toxicology. 1998;34(3):229-34.

Silva RLB, Barra CM, Monteiro TCdN, Brilhante OM. A study of groundwater contamination with organic fuels and potential public health impact in Itaguai, Rio de Janeiro State, Brazil. Cadernos de saude publica. 2002;18(6):1599-607.

Simantiraki F, Gidarakos E. Comparative assessment of compost and zeolite utilisation for the simultaneous removal of BTEX, Cd and Zn from the aqueous phase: Batch and continuous flow study. Journal of environmental management. 2015;159:218-26.

Skender L, Brcic I, Karacic V. Urine analysis for the evaluation of environmental exposures to aromatic hydrocarbons. Archives of environmental health. 2004;59(5):237-44.

Soleimani E, Bahrami A, Afkhami A, Shahna FG. Selective determination of mandelic acid in urine using molecularly imprinted polymer in microextraction by packed sorbent. Archives of toxicology. 2018;92(1):213-22.

Som D, Dutta C, Chatterjee A, Mallick D, Jana TK, Sen S. Studies on commuters' exposure to BTEX in passenger cars in Kolkata, India. The Science of the total environment. 2007;372(2-3):426-32.

Sram RJ, Beskid O, Binkova B, Rossner P, Smerhovsky Z. Cytogenetic analysis using fluorescence in situ hybridization (FISH) to evaluate occupational exposure to carcinogens. Toxicology letters. 2004;149(1-3):335-44.

Sriprapat W, Suksabye P, Areephak S, Klantup P, Waraha A, Sawattan A, et al. Uptake of toluene and ethylbenzene by plants: removal of volatile indoor air contaminants. Ecotoxicology and environmental safety. 2014;102:147-51.

Stancu MM. Physiological cellular responses and adaptations of Rhodococcus erythropolis IBBPo1 to toxic organic solvents. Journal of environmental sciences (China). 2014;26(10):2065-75.

Stancu MM. Response Mechanisms in Serratia marcescens IBBPo15 During Organic Solvents Exposure. Current microbiology. 2016;73(6):755-65.

Stasik S, Wick LY, Wendt-Potthoff K. Anaerobic BTEX degradation in oil sands tailings ponds: Impact of labile organic carbon and sulfate-reducing bacteria. Chemosphere. 2015;138:133-9.

Stingone JA, McVeigh KH, Claudio L. Early-life exposure to air pollution and greater use of academic support services in childhood: a population-based cohort study of urban children. Environmental health : a global access science source. 2017;16(1):2.

Svecova V, Topinka J, Solansky I, Sram RJ. Personal exposure to volatile organic compounds in the Czech Republic. Journal of exposure science & environmental epidemiology. 2012;22(5):455-60.

Sweeney LM, Kester JE, Kirman CR, Gentry PR, Banton MI, Bus JS, et al. Risk assessments for chronic exposure of children and prospective parents to ethylbenzene (CAS No. 100-41-4). Critical reviews in toxicology. 2015;45(8):662-726.

Symanski E, Stock TH, Tee PG, Chan W. Demographic, residential, and behavioral determinants of elevated exposures to benzene, toluene, ethylbenzene, and xylenes among the U.S. population: results from 1999-2000 NHANES. Journal of toxicology and environmental health Part A. 2009;72(14):915-24.

Tang W, Hemm I, Eisenbrand G. Estimation of human exposure to styrene and ethylbenzene. Toxicology. 2000;144(1-3):39-50.

Toda C, Uchida T, Midorikawa K, Murata M, Hiraku Y, Okamoto Y, et al. DNA damage by ethylbenzenehydroperoxide formed from carcinogenic ethylbenzene by sunlight irradiation. Biochemical and biophysical research communications. 2003;304(4):638-42.

Tohon HG, Fayomi B, Valcke M, Coppieters Y, Bouland C. BTEX air concentrations and self-reported common health problems in gasoline sellers from Cotonou, Benin. International journal of environmental health research. 2015;25(2):149-61.

Tsangari X, Andrianou XD, Agapiou A, Mochalski P, Makris KC. Spatial characteristics of urinary BTEX concentrations in the general population. Chemosphere. 2017;173:261-6.

Tunsaringkarn T, Siriwong W, Rungsiyothin A, Nopparatbundit S. Occupational exposure of gasoline station workers to BTEX compounds in Bangkok, Thailand. The international journal of occupational and environmental medicine. 2012;3(3):117-25.

Ungvary G, Tatrai E. On the embryotoxic effects of benzene and its alkyl derivatives in mice, rats and rabbits. Archives of toxicology Supplement = Archiv fur Toxikologie Supplement. 1985;8:425-30.

van Kleef RGDM, Vijverberg HPM, Westerink RHS. Selective inhibition of human heteromeric alpha9alpha10 nicotinic acetylcholine receptors at a low agonist concentration by low concentrations of ototoxic organic solvents. Toxicology in vitro : an international journal published in association with BIBRA. 2008;22(6):1568-72.

van Thriel C, Haumann K, Kiesswetter E, Blaszkewicz M, Seeber A. Time courses of sensory irritations due to 2-butanone and ethyl benzene exposure: influences of self-reported multiple chemical sensitivity (sMCS). International journal of hygiene and environmental health. 2002;204(5-6):367-9.

Vitali M, Ensabella F, Stella D, Guidotti M. Exposure to organic solvents among handicraft car painters: A pilot study in Italy. Industrial health. 2006;44(2):310-7.

Vyskocil A, Leroux T, Truchon G, Lemay F, Gendron M, Gagnon F, et al. Ethyl benzene should be considered ototoxic at occupationally relevant exposure concentrations. Toxicology and industrial health. 2008;24(4):241-6.

Vyskocil A, Truchon G, Leroux T, Lemay F, Gendron M, Gagnon F, et al. A weight of evidence approach for the assessment of the ototoxic potential of industrial chemicals. Toxicology and industrial health. 2012;28(9):796-819.

Wang Y-r, Yang D-y, Zhang M, Wang Q, Liu J, Li J-g. The changes of blood neurotransmitter levels in workers occupationally exposed to ethylbenzene. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2011;29(2):125-7.

Wathier L, Venet T, Thomas A, Nunge H, Bonfanti E, Cosnier F, et al. Membrane fluidity does not explain how solvents act on the middle-ear reflex. Neurotoxicology. 2016;57:13-21.

Waul C, Arvin E, Schmidt JE. Modeling the competitive effect of ammonium oxidizers and heterotrophs on the degradation of MTBE in a packed bed reactor. Water research. 2008;42(12):3098-108.

Werder EJ, Gam KB, Engel LS, Kwok RK, Ekenga CC, Curry MD, et al. Predictors of blood volatile organic compound levels in Gulf coast residents. Journal of exposure science & environmental epidemiology. 2018;28(4):358-70.

Westphal GA, Krahl J, Bruning T, Hallier E, Bunger J. Ether oxygenate additives in gasoline reduce toxicity of exhausts. Toxicology. 2010;268(3):198-203.

Wheeler AJ, Wong SL, Khouri C, Zhu J. Predictors of indoor BTEX concentrations in Canadian residences. Health reports. 2013;24(5):11-7.

Wiesmuller GA, Van Thriel C, Steup A, Bachert C, Clinic ENT, Blaszkewicz M, et al. Nasal function in self-reported chemically intolerant individuals. Archives of environmental health. 2002;57(3):247-54.

Wocka-Marek T, Zajac-Nedza M, Braszczynska Z, Zygan U, Wojcik-Chrobok B, Lukas A, et al. Hematologic disorders in workers exposed to benzene and ethylbenzene. Przeglad lekarski. 1988;45(12):836-9.

Wu C, Zhou Y, Wang P, Guo S. Improving hydrolysis acidification by limited aeration in the pretreatment of petrochemical wastewater. Bioresource technology. 2015;194:256-62.

Xiong F, Li Q, Zhou B, Huang J, Liang G, Zhang Le, et al. Oxidative Stress and Genotoxicity of Long-Term Occupational Exposure to Low Levels of BTEX in Gas Station Workers. International journal of environmental research and public health. 2016;13(12).

Xue B-X, Li T-Y, Li C-Y, Wei L, Hou X-H. Study on the sediment characteristics of the snow in a typical residential community and its integrated biological treatment pattern in Harbin. Environmental science and pollution research international. 2017;24(32):25010-20.

Yan S, Zhou Q. Toxic effects of Hydrilla verticillata exposed to toluene, ethylbenzene and xylene and safety assessment for protecting aquatic macrophytes. Chemosphere. 2011;85(6):1088-94.

Yang S-B, Chun H-H, Tayade RJ, Jo W-K. Iron-functionalized titanium dioxide on flexible glass fibers for photocatalysis of benzene, toluene, ethylbenzene, and o-xylene (BTEX) under visible- or ultraviolet-light irradiation. Journal of the Air & Waste Management Association (1995). 2015;65(3):365-73.

Yuan W, White TB, White JW, Strobel HW, Backes WL. Relationship between hydrocarbon structure and induction of P450: effect on RNA levels. Xenobiotica; the fate of foreign compounds in biological systems. 1995;25(1):9-16.

Zapor L, Skowron J, Golofit-Szymczak M. The cytotoxicity of some organic solvents on isolated hepatocytes in monolayer culture. International journal of occupational safety and ergonomics : JOSE. 2002;8(1):121-9.

Zhang M, Wang Y-r, Yang D-y, Wang Q. Effect of subchronic inhalation of ethylbenzene on expression of heme oxygenase-1 in rat renal tissues. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2013;31(8):585-8.

Zhang M, Wang Y-r, Yang D-y, Wang Q, Liu J, Li J-g. The neurobehavioral effects of population occupationally exposed to ethylbenzene. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2011;29(2):128-30.

Zhang M, Wang Y, Wang Q, Yang D, Zhang J, Wang F, et al. Ethylbenzene-induced hearing loss, neurobehavioral function, and neurotransmitter alterations in petrochemical workers. Journal of occupational and environmental medicine. 2013;55(9):1001-6.

Zhang M, Wang Y, Wang Q, Yang J, Yang D, Liu J, et al. Involvement of mitochondria-mediated apoptosis in ethylbenzene-induced renal toxicity in rat. Toxicological sciences : an official journal of the Society of Toxicology. 2010;115(1):295-303.

Zhang M, Wang Y, Wang X, Liu J, Zhang J, Gu Q. Roles of oxidative stress, apoptosis, and heme oxygenase-1 in ethylbenzene-induced renal toxicity in NRK-52E cells. Toxicology and industrial health. 2016;32(12):1952-60.

Zhang M, Wang Y, Yang D, Zhang J, Gu Q. Roles of oxidative damage and mitochondria-mediated apoptosis in ethylbenzene-induced hepatotoxic effects in rat. Inhalation toxicology. 2015;27(1):64-73.

Zheng S, Wang Y, Zhou Q, Chen C. Responses of oxidative stress biomarkers and DNA damage on a freshwater snail (Bellamya aeruginosa) stressed by ethylbenzene. Archives of environmental contamination and toxicology. 2013;65(2):251-9.

Zheng S, Zhou Q. Intoxication and biochemical responses of freshwater snail Bellamya aeruginosa to ethylbenzene. Environmental science and pollution research international. 2017;24(1):189-98.

Zheng S, Zhou Q, Gao J, Xiong H, Chen C. Behavioral alteration and DNA damage of freshwater snail Bellamya aeruginosa stressed by ethylbenzene and its tissue residue. Ecotoxicology and environmental safety. 2012;81:43-8.

Zhou Y, Shively D, Mao H, Russo RS, Pape B, Mower RN, et al. Air toxic emissions from snowmobiles in Yellowstone National Park. Environmental science & technology. 2010;44(1):222-8.

Zoleikha S, Mirzaei R, Roksana M. Exposure to chemical hazards in petrol pumps stations in Ahvaz City, Iran. Archives of environmental & occupational health. 2017;72(1):3-9.

BIB-8. Carbon Tetrachloride

Carbon tetrachloride poisoning: discussion apropos of a death. Review of cases of absorption of aliphatic chlorinated hydrocarbons. Bruxelles medical. 1968;48(4):255-6.

Carbon tetrachloride hepatotoxicity: seeing the wood through the trees. Food and cosmetics toxicology. 1970;8(1):87-93.

Carbon tetrachloride toxicity. Agency for Toxic Substances and Disease Registry. American family physician. 1992;46(4):1199-207.

Correction to: Krithika, Jyothi, Prasantha, and Ramtej, Mechanism of protective effect of phyllanthin against carbon tetrachloride-induced hepatotoxicity and experimental liver fibrosis in mice. Toxicology mechanisms and methods. 2017;27(6):476.

Aayadi H, Mittal SPK, Deshpande A, Gore M, Ghaskadbi SS. Protective effect of geraniin against carbon tetrachloride induced acute hepatotoxicity in Swiss albino mice. Biochemical and biophysical research communications. 2017;487(1):62-7.

Abakumova OI, Kotaev AI, Karagiulian SR, Gal'perin EI, Orekhovich VN. Effect of cytoplasmic proliferation stimulating factors and partial hepatectomy on DNA synthesis in the liver of rats subjected to prolonged carbon tetrachloride exposure. Voprosy meditsinskoi khimii. 1985;31(5):95-7.

Abdel Moneim AE. Prevention of carbon tetrachloride (CCl4)-induced toxicity in testes of rats treated with Physalis peruviana L. fruit. Toxicology and industrial health. 2016;32(6):1064-73.

Abdel Moneim AE, El-Khadragy MF. The potential effects of pomegranate (Punica granatum) juice on carbon tetrachloride-induced nephrotoxicity in rats. Journal of physiology and biochemistry. 2013;69(3):359-70.

Abdel-Hamid NM, Faddah LM, Al-Rehany MA, Ali AH, Bakeet AA. New role of antinutritional factors, phytic acid and catechin in the treatment of CCl4 intoxication. Annals of hepatology. 2007;6(4):262-6.

Abdel-Kader MS, Abulhamd AT, Hamad AM, Alanazi AH, Ali R, Alqasoumi SI. Evaluation of the hepatoprotective effect of combination between hinokiflavone and Glycyrrhizin against CCl4 induced toxicity in rats. Saudi pharmaceutical journal : SPJ : the official publication of the Saudi Pharmaceutical Society. 2018;26(4):496-503.

Abdel-Moneim AM, Essawy AE, Hamed SS, Abou-Gabal AA, Alzergy AA. Protective effect of Nigella sativa seeds against spermatocyte chromosomal aberrations and genotoxicity induced by carbon tetrachloride in mice. Environmental science and pollution research international. 2017;24(12):11677-82.

Abdelaziz DHA, Ali SA. The protective effect of Phoenix dactylifera L. seeds against CCl4-induced hepatotoxicity in rats. Journal of ethnopharmacology. 2014;155(1):736-43.

Abdelsalam EB, Adam SE, Tartour G. Modification of the hepatotoxicity of carbon tetrachloride and chloroform in goats by pre-treatment with dieldrin and phenobarbitone. Zentralblatt fur Veterinarmedizin Reihe A. 1982;29(2):142-8.

Abdou RH, Saleh SY, Khalil WF. Toxicological and biochemical studies on Schinus terebinthifolius concerning its curative and hepatoprotective effects against carbon tetrachloride-induced liver injury. Pharmacognosy magazine. 2015;11(Suppl 1):S93-S101.

Abdullah, Khan MA, Ahmad W, Ahmad M, Nisar M. Hepatoprotective effect of the solvent extracts of Viola canescens Wall. ex. Roxb. against CCl4 induced toxicity through antioxidant and membrane stabilizing activity. BMC complementary and alternative medicine. 2017;17(1):10.

Abe H, Orita M, Konishi H, Arichi S, Odashima S. Effects of saikosaponin-d on enhanced CCl4-hepatotoxicity by phenobarbitone. The Journal of pharmacy and pharmacology. 1985;37(8):555-9.

Abraham P, Wilfred G, Cathrine. Oxidative damage to the lipids and proteins pf the lungs, testis and kidney of rats during carbon tetrachloride intoxication. Clinica chimica acta; international journal of clinical chemistry. 1999;289(1-2):177-9.

Abramovich KG, Makotchenko VM, Malinina-Putsenko VP, Ol'shanskii VF. Acute renal insufficiency in acute intoxication with carbon tetrachloride. Terapevticheskii arkhiv. 1966;38(10):93-6.

Achudume AC. Effects of dimethyl sulfoxide (DMSO) on carbon (CCL4)-induced hepatotoxicity in mice. Clinica chimica acta; international journal of clinical chemistry. 1991;200(1):57-8.

Adam SE, Thorpe E. The interaction of cold environment and carbon tetrachloride hepatotoxicity in mice. British journal of experimental pathology. 1970;51(4):394-403.

Adams EM, Spencer HC, Rowe VK, McCollister DD, Irish DD. Vapor toxicity of carbon tetrachloride determined by experiments on laboratory animals. AMA archives of industrial hygiene and occupational medicine. 1952;6(1):50-66.

Adaramoye OA, Farombi EO, Nssien M, Idowu SO, Ademowo OG, Adeyemi EO. Hepatoprotective activity of purified fractions from Garcinia kola seeds in mice intoxicated with carbon tetrachloride. Journal of medicinal food. 2008;11(3):544-50.

Ademuyiwa O, Onitilo O, Dosumu O, Ayannuga O, Bakare A, Akinlatun W, et al. Zinc in CCl4 toxicity. Biomedical and environmental sciences : BES. 2002;15(3):187-95.

Adeneye AA. Protective activity of the stem bark aqueous extract of Musanga cecropioides in carbon tetrachloride- and acetaminophen-induced acute hepatotoxicity in rats. African journal of traditional, complementary, and alternative medicines : AJTCAM. 2009;6(2):131-8.

Adeneye AA, Awodele O, Aiyeola SA, Benebo AS. Modulatory potentials of the aqueous stem bark extract of Mangifera indica on carbon tetrachloride-induced hepatotoxicity in rats. Journal of traditional and complementary medicine. 2015;5(2):106-15.

Adzet T, Camarasa J, Laguna JC. Hepatoprotective activity of polyphenolic compounds from Cynara scolymus against CCl4 toxicity in isolated rat hepatocytes. Journal of natural products. 1987;50(4):612-7.

Agarwal AK, Mehendale HM. Potentiation of CCl4 hepatotoxicity and lethality by chlordecone in female rats. Toxicology. 1983;26(3-4):231-42.

Agarwal AK, Mehendale HM. Chlordecone potentiation of CCl4 hepatotoxicity in ovariectomized rats. Toxicology. 1984;29(4):315-23.

Agarwal AK, Mehendale HM. Excessive hepatic accumulation of intracellular Ca2+ in chlordecone potentiated CCl4 toxicity. Toxicology. 1984;30(1):17-24.

Aghel N, Kalantari H, Rezazadeh S. Hepatoprotective Effect of Ficus carica Leaf Extract on Mice Intoxicated with Carbon Tetrachloride. Iranian journal of pharmaceutical research : IJPR. 2011;10(1):63-8.

Ahmad B, Khan MR, Shah NA. Amelioration of carbon tetrachloride-induced pulmonary toxicity with Oxalis corniculata. Toxicology and industrial health. 2015;31(12):1243-51.

Ahmad SB, Rehman MU, Fatima B, Ahmad B, Hussain I, Ahmad SP, et al. Antifibrotic effects of D-limonene (5(1-methyl-4- 1-methylethenyl) cyclohexane) in CCl4 induced liver toxicity in Wistar rats. Environmental toxicology. 2018;33(3):361-9.

Ahn M, Kim J, Bang H, Moon J, Kim GO, Shin T. Hepatoprotective effects of allyl isothiocyanate against carbon tetrachloride-induced hepatotoxicity in rat. Chemico-biological interactions. 2016;254:102-8.

Ahn YK, Kim JH. Preventive effects of diphenyl dimethyl dicarboxylate on the immunotoxicity of carbon tetrachloride in ICR mice. The Journal of toxicological sciences. 1993;18(3):185-95.

Akindele AJ, Adeneye AA, Olatoye F, Benebo AS. Protective effect of selected calcium channel blockers and prednisolone, a phospholipase-A2 inhibitor, against gentamicin and carbon tetrachloride-induced nephrotoxicity. Human & experimental toxicology. 2014;33(8):831-46.

Al-Dosari MS. In vitro and in vivo antioxidant activity of alfalfa (Medicago sativa L.) on carbon tetrachloride intoxicated rats. The American journal of Chinese medicine. 2012;40(4):779-93.

Al-Harbi NO, Imam F, Nadeem A, Al-Harbi MM, Iqbal M, Ahmad SF. Carbon tetrachloride-induced hepatotoxicity in rat is reversed by treatment with riboflavin. International immunopharmacology. 2014;21(2):383-8.

Al-Olayan EM, El-Khadragy MF, Metwally DM, Abdel Moneim AE. Protective effects of pomegranate (Punica granatum) juice on testes against carbon tetrachloride intoxication in rats. BMC complementary and alternative medicine. 2014;14:164.

Al-Olayan EM, El-Khadragy MF, Aref AM, Othman MS, Kassab RB, Abdel Moneim AE. The potential protective effect of Physalis peruviana L. against carbon tetrachloride-induced hepatotoxicity in rats is mediated by suppression of oxidative stress and downregulation of MMP-9 expression. Oxidative medicine and cellular longevity. 2014;2014:381413.

Al-Rasheed NM, Attia HA, Mohamad RA, Al-Rasheed NM, Al-Amin MA, Al-Onazi A. Aqueous Date Flesh or Pits Extract Attenuates Liver Fibrosis via Suppression of Hepatic Stellate Cell Activation and Reduction of Inflammatory Cytokines, Transforming Growth Factor- beta 1 and Angiogenic Markers in Carbon Tetrachloride-Intoxicated Rats. Evidence-based complementary and alternative medicine : eCAM. 2015;2015:247357.

Al-Rasheed NM, El-Orabi NF, Fadda LM, Ali HM, Al-Rasheed NM, Bassiouni Y, et al. Role of Different Natural Antioxidants in the Modulation of mRNA-expression of Apoptotic Molecules in the Livers of Carbon Tetrachloride-Intoxicated Rats. Animal biotechnology. 2017;28(4):253-9.

Al-Rasheed NM, Fadda LM, Ali HM, Abdel Baky NA, El-Orabi NF, Al-Rasheed NM, et al. New mechanism in the modulation of carbon tetrachloride hepatotoxicity in rats using different natural antioxidants. Toxicology mechanisms and methods. 2016;26(4):243-50.

Al-Rasheed N, Faddah L, Al-Rasheed N, Bassiouni YA, Hasan IH, Mahmoud AM, et al. Protective Effects of Silymarin, Alone or in Combination with Chlorogenic Acid and/or Melatonin, Against Carbon Tetrachloride-induced Hepatotoxicity. Pharmacognosy magazine. 2016;12(Suppl 3):S337-45.

Al-Sayed E, Abdel-Daim MM. Protective role of Cupressuflavone from Cupressus macrocarpa against carbon tetrachloride-induced hepato- and nephrotoxicity in mice. Planta medica. 2014;80(18):1665-71.

Al-Sayed E, Abdel-Daim MM, Kilany OE, Karonen M, Sinkkonen J. Protective role of polyphenols from Bauhinia hookeri against carbon tetrachloride-induced hepato- and nephrotoxicity in mice. Renal failure. 2015;37(7):1198-207.

Al-Sayed E, El-Lakkany NM, Seif El-Din SH, Sabra A-NA, Hammam OA. Hepatoprotective and antioxidant activity of Melaleuca styphelioides on carbon tetrachloride-induced hepatotoxicity in mice. Pharmaceutical biology. 2014;52(12):1581-90.

Al-Sayed E, Esmat A. Hepatoprotective and antioxidant effect of ellagitannins and galloyl esters isolated from Melaleuca styphelioides on carbon tetrachloride-induced hepatotoxicity in HepG2 cells. Pharmaceutical biology. 2016;54(9):1727-35.

Al-Sayed E, Martiskainen O, Seif el-Din SH, Sabra A-NA, Hammam OA, El-Lakkany NM, et al. Hepatoprotective and antioxidant effect of Bauhinia hookeri extract against carbon tetrachloride-induced

hepatotoxicity in mice and characterization of its bioactive compounds by HPLC-PDA-ESI-MS/MS. BioMed research international. 2014;2014:245171.

Al-Seeni MN, El Rabey HA, Zamzami MA, Alnefayee AM. The hepatoprotective activity of olive oil and Nigella sativa oil against CCl4 induced hepatotoxicity in male rats. BMC complementary and alternative medicine. 2016;16(1):438.

Al-Shabanah OA, Alam K, Nagi MN, Al-Rikabi AC, Al-Bekairi AM. Protective effect of aminoguanidine, a nitric oxide synthase inhibitor, against carbon tetrachloride induced hepatotoxicity in mice. Life sciences. 2000;66(3):265-70.

Al-Tamimi J, Alhazza IM, Al-Khalifa M, Metwalli A, Rady A, Ebaid H. Potential effects of samsum ant, Brachyponera sennaarensis, venom on TNF-alpha/NF-kappaB mediated inflammation in CCL4-toxicity in vivo. Lipids in health and disease. 2016;15(1):198.

Al-Yahya M, Mothana R, Al-Said M, Al-Dosari M, Al-Musayeib N, Al-Sohaibani M, et al. Attenuation of CCl4-Induced Oxidative Stress and Hepatonephrotoxicity by Saudi Sidr Honey in Rats. Evidence-based complementary and alternative medicine : eCAM. 2013;2013:569037.

Alagbaoso CA, Osubor CC, Isikhuemhen OS. Protective Effects of Extract from Sclerotium of the King Tuber Medicinal Mushroom, Pleurotus tuberregium (Higher Basidiomycetes) on Carbon Tetrachloride-Induced Hepatotoxicity in Wistar Albino Rats. International journal of medicinal mushrooms. 2015;17(12):1137-43.

Alam K, Nagi MN, Badary OA, Al-Shabanah OA, Al-Rikabi AC, Al-Bekairi AM. The protective action of thymol against carbon tetrachloride hepatotoxicity in mice. Pharmacological research. 1999;40(2):159-63.

Alam MF, Safhi MM, Anwer T, Siddiqui R, Khan G, Moni SS. Therapeutic potential of Vanillylacetone against CCl4 induced hepatotoxicity by suppressing the serum marker, oxidative stress, inflammatory cytokines and apoptosis in Swiss albino mice. Experimental and molecular pathology. 2018;105(1):81-8.

Alavian SM, Banihabib N, Es Haghi M, Panahi F. Protective Effect of Cornus mas Fruits Extract on Serum Biomarkers in CCl4-Induced Hepatotoxicity in Male Rats. Hepatitis monthly. 2014;14(4):e10330.

Albano O, Francavilla A. Effect of CCl4 intoxication on the synthesis of beta-lipoprotein fractions in rat liver. Clinica chimica acta; international journal of clinical chemistry. 1968;19(3):363-6.

Albano O, Francavilla A. Hepatic synthesis of beta-lipoproteins in experimental carbon tetrachloride poisoning. Pathologie et biologie. 1968;16(15):735-8.

Alekseeva IN. Changes in the protein content and transaminase activity of the liver and blood serum of rats administered low doses of antihepatocytotoxic serum against a background of acute carbon tetrachloride lesion of the liver. Ukrains'kyi biokhimichnyi zhurnal. 1973;45(3):254-7.

Alekseeva IN, Bezprozvannyi BL, Il'chevich NV, Bryzgina TM. Effect of antihepatocytotoxic serum on liver structure and regeneration in a carbon tetrachloride lesion. Arkhiv patologii. 1980;42(9):93.

Alexeeff GV, Kilgore WW. Learning impairment in mice following acute exposure to dichloromethane and carbon tetrachloride. Journal of toxicology and environmental health. 1983;11(4-6):569-81.

Alha A. Carbon tetrachloride toxicosis. Duodecim; laaketieteellinen aikakauskirja. 1950;66(9):659-66.

Ali S, Khan MR, Sajid M. Protective potential of Parrotiopsis jacquemontiana (Decne) Rehder on carbon tetrachloride induced hepatotoxicity in experimental rats. Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie. 2017;95:1853-67.

Alkreathy HM, Khan RA, Khan MR, Sahreen S. CCl4 induced genotoxicity and DNA oxidative damages in rats: hepatoprotective effect of Sonchus arvensis. BMC complementary and alternative medicine. 2014;14:452.

Allis JW, Brown BL, Simmons JE, Hatch GE, McDonald A, House DE. Methanol potentiation of carbon tetrachloride hepatotoxicity: the central role of cytochrome P450. Toxicology. 1996;112(2):131-40.

Alqasoumi S. Carbon tetrachloride-induced hepatotoxicity: Protective effect of 'Rocket' Eruca sativa L. in rats. The American journal of Chinese medicine. 2010;38(1):75-88.

Altas S, Kizil G, Kizil M, Ketani A, Haris PI. Protective effect of Diyarbakir watermelon juice on carbon tetrachloride-induced toxicity in rats. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2011;49(9):2433-8.

Anders MW, Harris RN. Effect of 2-propanol treatment on carbon tetrachloride metabolism and toxicity. Advances in experimental medicine and biology. 1981;136 Pt A:591-602.

Andrabi K, Kaul N, Ganguly NK, Dilawari JB. Altered calcium homeostasis in carbon tetrachloride exposed rat hepatocytes. Biochemistry international. 1989;18(6):1287-95.

Andritoiu CV, Andritoiu V, Cuciureanu M, Nica-Badea D, Bibire N, Popa M. Effect of apitherapy products against carbon tetrachloride-induced toxicity in Wistar rats. Romanian journal of morphology and embryology = Revue roumaine de morphologie et embryologie. 2014;55(3):835-47.

Andritoiu CV, Ochiuz L, Andritoiu V, Popa M. Effect of apitherapy formulations against carbon tetrachloride-induced toxicity in Wistar rats after three weeks of treatment. Molecules (Basel, Switzerland). 2014;19(9):13374-91.

Anehus S, Yngner T, Engelbrecht C, Hafstrolm L, Heby O. Urinary polyamine excretion as related to cell death and cell proliferation induced by carbon tetrachloride intoxication. Experimental and molecular pathology. 1983;38(2):255-63.

Anon MT, Ubeda A, Alcaraz MJ. Protective effects of phenolic compounds on CCl4-induced toxicity in isolated rat hepatocytes. Zeitschrift fur Naturforschung C, Journal of biosciences. 1992;47(3-4):275-9.

Ansher SS, Dolan P, Bueding E. Chemoprotective effects of two dithiolthiones and of butylhydroxyanisole against carbon tetrachloride and acetaminophen toxicity. Hepatology (Baltimore, Md). 1983;3(6):932-5.

Antelava NA, Gogoluari MI, Gogoluari LI, Pirtskhalaishvili NN, Okudzhava MV. Efficacy and safety of heptral, vitamin B6 and folic acid during toxic hepatitis induced by CCL4. Georgian medical news. 2007(150):53-6.

Araki A, Kamigaito N, Sasaki T, Matsushima T. Mutagenicity of carbon tetrachloride and chloroform in Salmonella typhimurium TA98, TA100, TA1535, and TA1537, and Escherichia coli WP2uvrA/pKM101 and WP2/pKM101, using a gas exposure method. Environmental and molecular mutagenesis. 2004;43(2):128-33.

Aralbaeva AN, Mamataeva AT, Zhaparkulova NI, Utegalieva RS, Khanin M, Danilenko M, et al. A composition of medicinal plants with an enhanced ability to suppress microsomal lipid peroxidation and a protective activity against carbon tetrachloride-induced hepatotoxicity. Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie. 2017.

Aranda M, Albendea CD, Lostale F, Lopez-Pingarron L, Fuentes-Broto L, Martinez-Ballarin E, et al. In vivo hepatic oxidative stress because of carbon tetrachloride toxicity: protection by melatonin and pinoline. Journal of pineal research. 2010;49(1):78-85.

Arbab AH, Parvez MK, Al-Dosari MS, Al-Rehaily AJ, Ibrahim KE, Alam P, et al. Therapeutic efficacy of ethanolic extract of Aerva javanica aerial parts in the amelioration of CCl4-induced hepatotoxicity and oxidative damage in rats. Food & nutrition research. 2016;60:30864.

Arezziboza E. ALKALINE PHOSPHATASE, GLYCOGEN AND DEHYDROGENASE IN THE UTERUS OF RATS INTOXICATED WITH CARBON TETRACHLORIDE. Minerva ginecologica. 1964;16:15-9.

Armendariz-Borunda J, Seyer JM, Kang AH, Raghow R. Regulation of TGF beta gene expression in rat liver intoxicated with carbon tetrachloride. FASEB journal : official publication of the Federation of American Societies for Experimental Biology. 1990;4(2):215-21.

Armijo Valenzuela M, Rodriguez Rodriguez LP, Aguirre Miqueo D. Action of some medicinal mineral waters on growth and on hepato-toxicity of carbon tetrachloride in rats. Archivos del Instituto de Farmacologia Experimental (Medicina). 1965;17(2):127-36.

Arora RG. Enhanced susceptibility to aflatoxin B1 toxicity in weanling mice pretreated with carbon tetrachloride. Acta pathologica et microbiologica Scandinavica Section A, Pathology. 1981;89(4):303-8.

Arrigoni-Martelli E. Effects of antitoxic liver extracts on lipid infiltration of the liver by carbon tetrachloride. Bollettino chimico farmaceutico. 1965;104(7):409-17.

Arun M, Asha VV. Preliminary studies on antihepatotoxic effect of Physalis peruviana Linn. (Solanaceae) against carbon tetrachloride induced acute liver injury in rats. Journal of ethnopharmacology. 2007;111(1):110-4.

Atawia RT, Esmat A, Elsherbiny DA, El-Demerdash E. Telmisartan ameliorates carbon tetrachloride-induced acute hepatotoxicity in rats. Environmental toxicology. 2017;32(2):359-70.

Aterman K. Toxic effect of carbon tetrachloride on the liver cell. British journal of pharmacology and chemotherapy. 1962;19(2):219-25.

Aub JC, Beckman WW. Carbon tetrachloride intoxication. The New England journal of medicine. 1948;238(22):776-9.

Aufdermaur M, Muheim E. Acute carbon tetrachloride poisoning in acute alcoholic intoxication. Zeitschrift fur Unfallmedizin und Berufskrankheiten Revue de medecine des accidents et des maladies professionelles. 1953;46(4):275-82.

Aussel C, Stora C, Krebs B. Alpha-fetoprotein and serum hormone levels following liver intoxication with carbon tetrachloride. Biochemical and biophysical research communications. 1980;95(2):796-800.

Awaad AS, Soliman GA, El-Sayed DF, El-Gindi OD, Alqasoumi SI. Hepatoprotective activity of Cyperus alternifolius on carbon tetrachloride-induced hepatotoxicity in rats. Pharmaceutical biology. 2012;50(2):155-61.

Awadallah R, el-Dessoukey EA, Tahani HM. Microsomal enzymes inducers and serum minerals in carbon-tetrachloride hepatotoxicity. Zeitschrift fur Ernahrungswissenschaft. 1978;17(3):153-8.

Awodele O, Yemitan O, Ise PU, Ikumawoyi VO. Modulatory potentials of aqueous leaf and unripe fruit extracts of Carica papaya Linn. (Caricaceae) against carbon tetrachloride and acetaminophen-induced hepatotoxicity in rats. Journal of intercultural ethnopharmacology. 2016;5(1):27-35.

Azri S, Mata HP, Reid LL, Gandolfi AJ, Brendel K. Further examination of the selective toxicity of CCl4 in rat liver slices. Toxicology and applied pharmacology. 1992;112(1):81-6.

Babalola OO, Anetor JI, Adeniyi FA. Amelioration of carbon tetrachloride-induced hepatotoxicity by terpenoid extract from leaves of Vernonia amydgalina. African journal of medicine and medical sciences. 2001;30(1-2):91-3.

Babitha S, Banji D, Banji OJF. Antioxidant and hepatoprotective effects of flower extract of Millingtonia hortensis Linn. on carbon tetrachloride induced hepatotoxicity. Journal of pharmacy & bioallied sciences. 2012;4(4):307-12.

Badr AM, El-Demerdash E, Khalifa AE, Ghoneim AI, Ayoub NA, Abdel-Naim AB. Rubus sanctus protects against carbon tetrachloride-induced toxicity in rat isolated hepatocytes: isolation and characterization of its galloylated flavonoids. The Journal of pharmacy and pharmacology. 2009;61(11):1511-20.

Baek S-H, Park M, Suh J-H, Choi H-S. Protective effects of an extract of young radish (Raphanus sativus L) cultivated with sulfur (sulfur-radish extract) and of sulforaphane on carbon tetrachloride-induced hepatotoxicity. Bioscience, biotechnology, and biochemistry. 2008;72(5):1176-82.

Baggenstoss AH. Carbon tetrachloride intoxication treated by peritoneal lavage; pathologic aspects. Proceedings of the staff meetings Mayo Clinic. 1947;22(16):321-6.

Balakina AS, Trusov NV, Aksenov IV, Guseva GV, Kravchenko LV, Tutelyan VA. The effect of rutin and hesperidin on the expression of Nrf2- and AhR-regulated genes and CYP3A1 gene in rats intoxicated with carbon tetrachloride. Voprosy pitaniia. 2016;85(5):28-35.

Balakrishnan A, Al-Assaf AH. Corosolic acid suppresses the expression of inflammatory marker genes in CCL4-induced-hepatotoxic rats. Pakistan journal of pharmaceutical sciences. 2016;29(4):1133-8.

Balapure AK, Rastogi AK, Saleem M, Sahib MK. Effect of carbon tetrachloride induced toxicity on 125(I)-insulin receptor interaction and U-14(C)glucose/U-14(C)galactose homeostasis in isolated rat hepatocytes. Indian journal of experimental biology. 1984;22(2):88-90.

Balbis E, Patriarca S, Furfaro AL, Millanta S, Sukkar SG, Marinari UM, et al. Whey proteins influence hepatic glutathione after CCl4 intoxication. Toxicology and industrial health. 2009;25(4-5):325-8.

Balderas-Renteria I, Camacho-Corona MDR, Carranza-Rosales P, Lozano-Garza HG, Castillo-Nava D, Alvarez-Mendoza FJ, et al. Hepatoprotective effect of Leucophyllum frutescens on Wistar albino rats intoxicated with carbon tetrachloride. Annals of hepatology. 2007;6(4):251-4.

Baligar NS, Aladakatti RH, Ahmed M, Hiremath MB. Hepatoprotective activity of the neem-based constituent azadirachtin-A in carbon tetrachloride intoxicated Wistar rats. Canadian journal of physiology and pharmacology. 2014;92(4):267-77.

Ball WL, Kay K. Serum esterase response in rats exposed to carbon tetrachloride vapor. AMA archives of industrial health. 1956;14(5):450-7.

Banasik M, Stedeford T, Strosznajder RP, Takehashi M, Tanaka S, Ueda K. Inhibition of poly(ADP-ribose) polymerase-1 attenuates the toxicity of carbon tetrachloride. Journal of enzyme inhibition and medicinal chemistry. 2011;26(6):883-9.

Banni S, Casu M, Corongiu FP, Dessi MA, Lai A, Meloni C. NMR spin-lattice relaxation times of intracellular Na-23 on rat livers and related lipid peroxidation following CCl4 intoxication. Chemico-biological interactions. 1987;63(3):207-14.

Barone C, Cittadini A, Galeotti T, Terranova T. The effect of intoxication induced in rat liver by carbon tetrachloride, ethionine and white phosphorus on the level of microsomal cytochromes b5 and P-450. Experientia. 1973;29(1):73-4.

Bartsokas SC, Papadimitriou DG, Papacharalampous NX, Varonos D. The effect of mild hypothermia in CCl4 toxic hepatitis (histologic and functional study). Acta hepato-gastroenterologica. 1973;20(4):275-82.

Basov AA, Bykov IM, Dzhimak SS, Shashkov DI, Malyshko VV, Moiseev AV, et al. Influence of linseed oil and deiterium depleted water on isotopic D/H composition and functional antioxidant defense of the hepatobiliary system in rabbits with carbon tetrachloride intoxication. Voprosy pitaniia. 2016;85(6):30-8.

Bastide P, Rigal MT, Bastide J, Turchini JP, Dastugue G. GLUTAMIC OXALOACETIC TRANSAMINASE (GOT) AND GLUTAMIC PYRUVIC TRANSAMINASE (GPT) ACTIVITIES IN

MOUSE LIVER AND KIDNEY DURING EXPERIMENTAL POISONING WITH URANYL NITRATE AND CARBON TETRACHLORIDE. Journal de physiologie. 1965;57:219-20.

Batakov EA. Effect of Silybum marianum oil and legalon on lipid peroxidation and liver antioxidant systems in rats intoxicated with carbon tetrachloride. Eksperimental'naia i klinicheskaia farmakologiia. 2001;64(4):53-5.

Beddowes EJ, Faux SP, Chipman JK. Chloroform, carbon tetrachloride and glutathione depletion induce secondary genotoxicity in liver cells via oxidative stress. Toxicology. 2003;187(2-3):101-15.

Bel A, Levrat R, Nesmoz J, Lemontey A, Delorme G. Comparative evolution of serum ornithine carbamyltransferase (O.C.T.) and transaminases after acute poisoning with carbon tetrachloride in the rat. Revue internationale d'hepatologie. 1968;18(5):651-61.

Beliaeva NN, Bonashevskaia TI, Nekrasova GI. Polyploidization of hepatocytes under different regimens of rat liver exposed to CCl4. Biulleten' eksperimental'noi biologii i meditsiny. 1980;89(1):57-9.

Bell AN, Mehendale HM. The effect of dietary exposure to a mirex plus chlordecone combination on CCl4 hepatotoxicity. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1985;5(4):679-87.

Bell AN, Mehendale HM. Comparative changes in hepatic DNA, RNA, protein, lipid, and glycogen induced by a subtoxic dose of CCl4 in chlordecone, mirex, and phenobarbital pretreated rats. Toxicology letters. 1987;35(2-3):191-200.

Bell AN, Young RA, Lockard VG, Mehendale HM. Protection of chlordecone-potentiated carbon tetrachloride hepatotoxicity and lethality by partial hepatectomy. Archives of toxicology. 1988;61(5):392-405.

Ben Hsouna A, Gargouri M, Dhifi W, Saibi W. Antioxidant and hepato-preventive effect of Citrus aurantium extract against carbon tetrachloride-induced hepatotoxicity in rats and characterisation of its bioactive compounds by HPLC-MS. Archives of physiology and biochemistry. 2018:1-12.

Benedetti A, Casini A, Ferrali M, Comporti M. Characterization of the early molecular alterations of liver microsomal lipids following CCl4 intoxication. Panminerva medica. 1976;18(11-12):433-40.

Berger ML, Bhatt H, Combes B, Estabrook RW. CCl4-induced toxicity in isolated hepatocytes: the importance of direct solvent injury. Hepatology (Baltimore, Md). 1986;6(1):36-45.

Berman E, House DE, Allis JW, Simmons JE. Hepatotoxic interactions of ethanol with allyl alcohol or carbon tetrachloride in rats. Journal of toxicology and environmental health. 1992;37(1):161-76.

Bertelli A, Giovannini L, Bertelli AA, Maltinti G, Scalori V, Romano MR. Tissue concentrations of coenzyme Q in liver of rats intoxicated by carbon tetrachloride. International journal of tissue reactions. 1986;8(4):343-6.

Best DH, Coleman WB. Liver regeneration by small hepatocyte-like progenitor cells after necrotic injury by carbon tetrachloride in retrorsine-exposed rats. Experimental and molecular pathology. 2010;89(2):92-8.

Bhadauria M. Propolis prevents hepatorenal injury induced by chronic exposure to carbon tetrachloride. Evidence-based complementary and alternative medicine : eCAM. 2012;2012:235358.

Bhadauria M, Jadon A, Sharma A, Shukla S. Effect of propriety herbal formulation against chronic carbon tetrachloride induced hepatotoxicity. Indian journal of experimental biology. 2002;40(11):1254-9.

Bhandarkar MR, Khan A. Antihepatotoxic effect of Nymphaea stellata willd., against carbon tetrachloride-induced hepatic damage in albino rats. Journal of ethnopharmacology. 2004;91(1):61-4.

Bhaskar VH, Balakrishnan N. Protective effects of Pergularia daemia roots against paracetamol and carbon tetrachloride-induced hepatotoxicity in rats. Pharmaceutical biology. 2010;48(11):1265-72.

Bhattacharjee R, Sil PC. Protein Isolate from the Herb Phyllanthus niruri Modulates Carbon Tetrachloride-Induced Cytotoxicity in Hepatocytes. Toxicology mechanisms and methods. 2007;17(1):41-7.

Bioulac P, Despuyoos L, Bedin C, Iron A, Saric J, Balabaud C. Decreased acute hepatotoxicity of carbon tetrachloride and bromobenzene by cholestyramine in the rat. Gastroenterology. 1981;81(3):520-6.

Bioulac-Sage P, Lapostolle V, More N, Balabaud C. Acute hepatotoxicity of carbon tetrachloride. Different liver lobes response in rats with portal branch ligation. Experimental pathology. 1984;26(1):33-40.

Biron P, Meyer P. Hepatic extraction of angiotensin after carbon tetrachloride intoxication. Revue canadienne de biologie. 1968;27(3):277-9.

Bishayee A, Mandal A, Chatterjee M. Prevention of alcohol-carbon tetrachloride-induced signs of early hepatotoxicity in mice by Trianthema portulacastrum L. Phytomedicine : international journal of phytotherapy and phytopharmacology. 1996;3(2):155-61.

Bishayee A, Sarkar A, Chatterjee M. Hepatoprotective activity of carrot (Daucus carota L.) against carbon tetrachloride intoxication in mouse liver. Journal of ethnopharmacology. 1995;47(2):69-74.

Bishayi B, Roychowdhury S, Ghosh S, Sengupta M. Hepatoprotective and immunomodulatory properties of Tinospora cordifolia in CCl4 intoxicated mature albino rats. The Journal of toxicological sciences. 2002;27(3):139-46.

Biswas NM, Deb C. Ascorbic acid and delta-5-3-beta-hydroxysteroid dehydrogenase in toad testis after carbon tetrachloride intoxication. Anatomischer Anzeiger. 1971;128(1):101-4.

Biswas NM, Mukherji M. Histochemical changes in the kidney of toad (Bufo melanostictus) after carbon tetrachloride intoxication. Anatomischer Anzeiger. 1968;123(1):100-4.

Bizin IP, Gorban GM, Pilipiuk ZI. Comparative study of the effect on the body of animals of the continuous and intermittent exposure to carbon tetrachloride. Gigiena i sanitariia. 1977(3):27-9.

Bjerre A. Mathematical modelling in the hazard assessment of substances forming toxic decomposition products. The example of carbon tetrachloride. The Annals of occupational hygiene. 1981;24(2):175-83.

Blain RB, Reeves R, Ewald KA, Leonard D, Calabrese EJ. Susceptibility to chlordecone-carbon tetrachloride induced hepatotoxicity and lethality is both age and sex dependent. Toxicological sciences : an official journal of the Society of Toxicology. 1999;50(2):280-6.

Blair PC, Thompson MB, Wilson RE, Esber HH, Maronpot RR. Correlation of changes in serum analytes and hepatic histopathology in rats exposed to carbon tetrachloride. Toxicology letters. 1991;55(2):149-59.

Bogers M, Appelman LM, Feron VJ, Beems RB, Notten WR. Effects of the exposure profile on the inhalation toxicity of carbon tetrachloride in male rats. Journal of applied toxicology : JAT. 1987;7(3):185-91.

Boll M, Weber LW, Becker E, Stampfl A. Mechanism of carbon tetrachloride-induced hepatotoxicity. Hepatocellular damage by reactive carbon tetrachloride metabolites. Zeitschrift fur Naturforschung C, Journal of biosciences. 2001;56(7-8):649-59.

Bonashevakaia TI, Beliaeva NN, Bulochnikova EK, Grigorevskaia ZP, Nekrasova GI. Influence of different regimens of intermittent carbon tetrachloride action of the development of the hepatotoxic effect. Gigiena i sanitariia. 1979(11):68-70.

Bonashevskaia TI, Pinigin MA, Tarasova KI, Nekrasova GI. Role of the time factor in the development of morphohistochemical changes to carbon tetrachloride inhalatory exposure. Gigiena i sanitariia. 1977(12):27-31.

Boron P, Musiatowicz B, Prokopowicz D, Strugacz J. The effect of hydrocortisone and 6-mercaptopurine on liver tissue in the course of experimental intoxication of rabbits with CCl4. Zeitschrift fur mikroskopisch-anatomische Forschung. 1974;88(3):576-80.

Botsoglou N, Taitzoglou I, Zervos I, Botsoglou E, Tsantarliotou M, Chatzopoulou PS. Potential of long-term dietary administration of rosemary in improving the antioxidant status of rat tissues following carbon tetrachloride intoxication. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2010;48(3):944-50.

Bottiglioni E, Sturani PL. Liver and balneotherapy of Porretta. III. Cytologic aspects of the liver in guinea pigs intoxicated with carbon tetrachloride and treated with sulfuric crenotherapy. Giornale di clinica medica. 1954;35(6):745-53.

Bowkiewicz-Surma E, Krawczynski J. Determination of guanase activity in serum and tissues of normal rats and of rats intoxicated with carbon tetrachloride. Clinica chimica acta; international journal of clinical chemistry. 1967;16(1):29-31.

Boyd MR, Statham CN, Longo NS. The pulmonary clara cell as a target for toxic chemicals requiring metabolic activation; studies with carbon tetrachloride. The Journal of pharmacology and experimental therapeutics. 1980;212(1):109-14.

Boyer JB, Bastide P, Tronche P, Dastugue G. Protective action of some phenothiazines against the cytotoxicity of carbon tetrachloride in vitro. Comptes rendus des seances de la Societe de biologie et de ses filiales. 1967;161(5):1089-91.

Brabec MJ, Gray RH, Bernstein IA. Restoration of hepatic mitochondria during recovery from carbon tetrachloride intoxication. Biochemical pharmacology. 1974;23(23):3227-38.

Brabec MJ, Owens JB, Kenel M, Sorscher D, Cornish HH. Modification of methanol potentiation of CCl4 toxicity in rats by chloramphenicol and salicylate. Drug and chemical toxicology. 1982;5(2):143-54.

Brattin WJ, Glende EA, Jr., Recknagel RO. Pathological mechanisms in carbon tetrachloride hepatotoxicity. Journal of free radicals in biology & medicine. 1985;1(1):27-38.

Breikaa RM, Algandaby MM, El-Demerdash E, Abdel-Naim AB. Biochanin A protects against acute carbon tetrachloride-induced hepatotoxicity in rats. Bioscience, biotechnology, and biochemistry. 2013;77(5):909-16.

Britton RS, Dolak JA, Glende EA, Jr., Recknagel RO. Potentiation of carbon tetrachloride hepatotoxicity by chlordecone: dose-response relationships and increased covalent binding in vivo. Journal of biochemical toxicology. 1987;2:43-55.

Brogan WC, 3rd, Colby HD. Carbon tetrachloride (CCl4) toxicity in the guinea pig adrenal cortex. The West Virginia medical journal. 1983;79(12):274.

Bruckner JV, MacKenzie WF, Muralidhara S, Luthra R, Kyle GM, Acosta D. Oral toxicity of carbon tetrachloride: acute, subacute, and subchronic studies in rats. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1986;6(1):16-34.

Bruckner JV, Ramanathan R, Lee KM, Muralidhara S. Mechanisms of circadian rhythmicity of carbon tetrachloride hepatotoxicity. The Journal of pharmacology and experimental therapeutics. 2002;300(1):273-81.

Brugnone F, Apostoli P, Perbellini L, Silvestri R, Cocheo V. Monitoring of occupational exposure to low concentration of carbon tetrachloride. Developments in toxicology and environmental science. 1983;11:575-8.

Bryzgina TM, Alekseeva IN. Effect of small doses of antihepatocytotoxic serum on hepatocyte nucleus size in the presence of carbon tetrachloride lesions of the liver. Fiziologicheskii zhurnal. 1981;27(6):746-52.

Budhiraja RD, Garg KN, Sudhir S, Arora B. Protective effect of 3-beta-hydroxy-2,3-dihydrowithanolide F against CCl4-induced hepatotoxicity. Planta medica. 1986(1):28-9.

Bulbena O, Culat J, Bravo ML. Cytoprotective activity in the gastric mucosa of rats exposed to carbon tetrachloride-induced liver injury. Inflammation. 1997;21(5):475-88.

Burdino E, Crispino A, Di Carlo R, Genazzani E, Pagliarani M, Reboani C, et al. Carbon tetrachloride toxicity in the rat after administration of hypolipidemic agents. Panminerva medica. 1976;18(11-12):410-4.

Burdino E, Gravela E, Ugazio G. Initiation of free radical reactions and hepatotoxicity in rats poisoned with carbon tetrachloride or bromotrichloromethane. Agents and actions. 1973;3(4):244-53.

Burk RF, Reiter R, Lane JM. Hyperbaric oxygen protection against carbon tetrachloride hepatotoxicity in the rat. Association with altered metabolism. Gastroenterology. 1986;90(4):812-8.

Cacanyiova S, Pechanova O, Babal P, Cerna A, Janega P, Andriantsitohaina R. Red wine polyphenols correct vascular function injured by chronic carbon tetrachloride intoxication. General physiology and biophysics. 2011;30(2):207-13.

Cagen SZ, Klaasen CD. Carbon tetrachloride-induced hepatotoxicity: studies in developing rats and protection by zinc. Federation proceedings. 1980;39(13):3124-8.

Cagen SZ, Klaassen CD. Hepatotoxicity of carbon tetrachloride in developing rats. Toxicology and applied pharmacology. 1979;50(2):347-54.

Cagen SZ, Klaassen CD. Protection of carbon tetrachloride-induced hepatotoxicity by zinc: role of metallothionein. Toxicology and applied pharmacology. 1979;51(1):107-16.

Cai ZW, Mehendale HM. Protection from CCl4 toxicity by prestimulation of hepatocellular regeneration in partially hepatectomized gerbils. Biochemical pharmacology. 1991;42(3):633-44.

Cai Z, Mehendale HM. Resiliency to amplification of carbon tetrachloride hepatotoxicity by chlordecone during postnatal development in rats. Pediatric research. 1993;33(3):225-32.

Calabrese EJ, Baldwin LA, Mehendale HM. G2 subpopulation in rat liver induced into mitosis by low-level exposure to carbon tetrachloride: an adaptive response. Toxicology and applied pharmacology. 1993;121(1):1-7.

Calabrese EJ, Leonard DA, Baldwin LA. Tissue repair: a critical determinant in CCl4 hepatotoxicity. Ecotoxicology and environmental safety. 1994;27(1):105-6.

Calvert DN, Brody TM. Role of the sympathetic nervous system in carbon tetrachloride hepatotoxicity. The American journal of physiology. 1960;198:669-76.

Calvert DN, Brody TM. The effects of thyroid function upon carbon tetrachloride hepatotoxicity. The Journal of pharmacology and experimental therapeutics. 1961;134:304-10.

Camacho J, Rubalcava B. Lipid composition of liver plasma membranes from rats intoxicated with carbon tetrachloride. Biochimica et biophysica acta. 1984;776(1):97-104.

Campos G, Schmidt-Heck W, Ghallab A, Rochlitz K, Putter L, Medinas DB, et al. The transcription factor CHOP, a central component of the transcriptional regulatory network induced upon CCl4 intoxication in mouse liver, is not a critical mediator of hepatotoxicity. Archives of toxicology. 2014;88(6):1267-80.

Cantilena LR, Jr., Cagen SZ, Klaassen CD. Methanol potentiation of carbon tetrachloride-induced hepatotoxicity. Proceedings of the Society for Experimental Biology and Medicine Society for Experimental Biology and Medicine (New York, NY). 1979;162(1):90-5.

Carafoli E, Tiozzo R. A study of energy-linked calcium transport in liver mitochondria during CCl4 intoxication. Experimental and molecular pathology. 1968;9(1):131-40.

Carlson GP. Potentiation of carbon tetrachloride hepatotoxicity in rats by pretreatment with polychlorinated biphenyls. Toxicology. 1975;5(1):69-77.

Carlson GP. Protection against carbon tetrachloride-induced hepatotoxicity by pretreatment with methylmercury hydroxide. Toxicology. 1975;4(1):83-9.

Carlson GP, Fuller GC, Fausto N. Effects of spironolactone on carbon tetrachloride hepatotoxicity. Proceedings of the Society for Experimental Biology and Medicine Society for Experimental Biology and Medicine (New York, NY). 1974;145(1):182-5.

Cartier P, Leroux JP. INFLUENCE OF INOSINIC ACID, ALONE OR COMBINED WITH OROTIC ACID, ON THE FREE NUCLEOTIDES IN THE RAT LIVER DURING CARBON TETRACHLORIDE POISONING. Comptes rendus des seances de la Societe de biologie et de ses filiales. 1964;158:1837-41.

Casas E, Martinez Ara J, Valencia ME, Mostaza JM, Miguel JL, Sanchez Sicilia L. Carbon tetrachloride poisoning: a report of 3 cases. Anales de medicina interna (Madrid, Spain : 1984). 1989;6(9):486-8.

Casillas E, Ames W. Hepatotoxic effects of CCl4 on English sole (Parophrys vetulus): possible indicators of liver dysfunction. Comparative biochemistry and physiology C, Comparative pharmacology and toxicology. 1986;84(2):397-400.

Castro JA, Ferreyra EC, de Castro CR, de Fenos OM, Diaz Gomez MI, Gram TE, et al. Studies on the role of protein syntheis in cell injury by toxic agents: I. Effect of cycloheximide administration on several factors modulating carbon tetrachloride-induced liver necrosis. Toxicology and applied pharmacology. 1977;41(2):305-20.

Casu M, Corongiu FP, Dessi MA, Frau M, Lai A. Na-23 NMR spin-lattice relaxation times in rat tissues, and related modifications following CCl4 intoxication. Biochemical and biophysical research communications. 1986;134(3):1079-85.

Caulet T, Adnet JJ, Diebold J. Histoenzymology of the liver in experimental carbon tetrachloride poisoning of the rat. Pathologia Europaea. 1972;7(1):29-42.

Cawthorne MA, Bunyan J, Sennitt MV, Green J, Grasso P. Vitamin E and hepatotoxic agents. 3. Vitamin E, synthetic antioxidants and carbon tetrachloride toxicity in the rat. The British journal of nutrition. 1970;24(2):357-84.

Cebovic T, Maksimovic Z. Hepatoprotective effect of Filipendula hexapetala Gilib. (Rosaceae) in carbon tetrachloride-induced hepatotoxicity in rats. Phytotherapy research : PTR. 2012;26(7):1088-91.

Cemek M, Aymelek F, Buyukokuroglu ME, Karaca T, Buyukben A, Yilmaz F. Protective potential of Royal Jelly against carbon tetrachloride induced-toxicity and changes in the serum sialic acid levels. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2010;48(10):2827-32.

Cemek M, Yilmaz F, Buyukokuroglu ME, Buyukben A, Aymelek F, Ayaz A. Serum and liver tissue bio-element levels, and antioxidant enzyme activities in carbon tetrachloride-induced hepatotoxicity: protective effects of royal jelly. Journal of medicinal food. 2012;15(8):747-52.

Cenacchi GC, Randi V, Fuccella LM, Rosa L. Preliminary observations on the histamine content of the skin of normal and carbon tetrachloride-intoxicated rats. Bollettino della Societa italiana di biologia sperimentale. 1961;37:1099-102.

Cengiz N, Kavak S, Guzel A, Ozbek H, Bektas H, Him A, et al. Investigation of the hepatoprotective effects of Sesame (Sesamum indicum L.) in carbon tetrachloride-induced liver toxicity. The Journal of membrane biology. 2013;246(1):1-6.

Cha J-Y, Ahn HY, Moon H-I, Jeong Y-K, Cho Y-S. Effect of fermented Angelicae gigantis Radix on carbon tetrachloride-induced hepatotoxicity and oxidative stress in rats. Immunopharmacology and immunotoxicology. 2012;34(2):265-74.

Chagoya de Sanchez V, Hernandez-Munoz R, Yanez L, Vidrio S, Diaz-Munoz M. Possible mechanism of adenosine protection in carbon tetrachloride acute hepatotoxicity. Role of adenosine by-products and glutathione peroxidase. Journal of biochemical toxicology. 1995;10(1):41-50.

Chakravarty B, Deb C. CARBOHYDRATE METABOLISM IN CARBON TETRACHLORIDE INTOXICATION, A HISTOCHEMICAL AND BIOCHEMICAL STUDY. Journal of experimental medical sciences. 1964;8:59-64.

Chamulitrat W, Jordan SJ, Mason RP. Nitric oxide production during endotoxic shock in carbon tetrachloride-treated rats. Molecular pharmacology. 1994;46(2):391-7.

Chandan BK, Saxena AK, Shukla S, Sharma N, Gupta DK, Singh K, et al. Hepatoprotective activity of Woodfordia fruticosa Kurz flowers against carbon tetrachloride induced hepatotoxicity. Journal of ethnopharmacology. 2008;119(2):218-24.

Chandan BK, Saxena AK, Shukla S, Sharma N, Gupta DK, Suri KA, et al. Hepatoprotective potential of Aloe barbadensis Mill. against carbon tetrachloride induced hepatotoxicity. Journal of ethnopharmacology. 2007;111(3):560-6.

Chandler AC, Chopra RN. The Toxicity of Carbon Tetrachloride to Cats. A Warning. The Indian medical gazette. 1925;60(9):406-7.

Chang J-B, Wu M-F, Yang Y-Y, Leu S-J, Chen Y-L, Yu C-S, et al. Carbon tetrachloride-induced hepatotoxicity and its amelioration by Agaricus blazei Murrill extract in a mouse model. In vivo (Athens, Greece). 2011;25(6):971-6.

Chapman KM, Prabhudesai M, Erdman JW, Jr. Effects of acute ethanol doses or dietary phenobarbitol with carbon tetrachloride exposure on vitamin A status of rats. Alcoholism, clinical and experimental research. 1993;17(3):637-42.

Charbonneau M, Iijima M, Cote MG, Plaa GL. Temporal analysis of rat liver injury following potentiation of carbon tetrachloride hepatotoxicity with ketonic or ketogenic compounds. Toxicology. 1985;35(2):95-112.

Charbonneau M, Perreault F, Greselin E, Brodeur J, Plaa GL. Assessment of the minimal effective dose of acetone for potentiation of the hepatotoxicity induced by trichloroethylene-carbon tetrachloride mixtures. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1988;10(3):431-8.

Charpentier D, Tuchweber B. Increased hepatotoxicity of carbon tetrachloride by the hypolipidemic drug nafenopin in rats. Research communications in chemical pathology and pharmacology. 1982;36(3):449-61.

Chatterjee A. Testicular degeneration in rats by carbon tetrachloride intoxication. Experientia. 1966;22(6):395-6.

Chaudhury S, Mehendale HM. Amplification of CCl4 toxicity by chlordecone: destruction of rat hepatic microsomal cytochrome P-450 subpopulation. Journal of toxicology and environmental health. 1991;32(3):277-94.

Chaung S-S, Lin C-C, Lin J, Yu K-H, Hsu Y-F, Yen M-H. The hepatoprotective effects of Limonium sinense against carbon tetrachloride and beta-D-galactosamine intoxication in rats. Phytotherapy research : PTR. 2003;17(7):784-91.

Chen A-S, Taguchi T, Sakai K, Matahira Y, Wang M-W, Miwa I. Effect of chitobiose and chitotriose on carbon tetrachloride-induced acute hepatotoxicity in rats. Biological & pharmaceutical bulletin. 2005;28(10):1971-3.

Chen JYP, Abreu BE. Effect of carbon tetrachloride poisoning on the toxicity of beta-diethylaminoethyl phenyl-alpha-thienylacetate and benadryl. Federation proceedings. 1947;6(1):316.

Chen P, Li C, Pang W, Zhao Y, Dong W, Wang S, et al. The protective role of Per2 against carbon tetrachloride-induced hepatotoxicity. The American journal of pathology. 2009;174(1):63-70.

Chen S, Morimoto S, Tamatani M, Fukuo K, Nakahashi T, Nishibe A, et al. Calcitonin prevents CCl4-induced hydroperoxide generation and cytotoxicity possibly through C1b receptor in rat hepatocytes. Biochemical and biophysical research communications. 1996;218(3):865-71.

Chen W, Kennedy DO, Kojima A, Matsui-Yuasa I. Polyamines and thiols in the cytoprotective effect of L-cysteine and L-methionine on carbon tetrachloride-induced hepatotoxicity. Amino acids. 2000;18(4):319-27.

Chenery R, George M, Krishna G. The effect of ionophore A23187 and calcium on carbon tetrachloride-induced toxicity in cultured rat hepatocytes. Toxicology and applied pharmacology. 1981;60(2):241-52.

Cheshchevik VT, Lapshina EA, Dremza IK, Zabrodskaya SV, Reiter RJ, Prokopchik NI, et al. Rat liver mitochondrial damage under acute or chronic carbon tetrachloride-induced intoxication: protection by melatonin and cranberry flavonoids. Toxicology and applied pharmacology. 2012;261(3):271-9.

Chidambara Murthy KN, Rajesha J, Vanitha A, Swamy MM, Ravishankar GA. Protective effect of Dunaliella salina-A marine micro alga, against carbon tetrachloride-induced hepatotoxicity in rats. Hepatology research : the official journal of the Japan Society of Hepatology. 2005;33(4):313-9.

Chiesara E, Ferri S, Scamazzo T. ON SOME ASPECTS OF THE TOXIC EFFECT OF CARBON TETRACHLORIDE AT THE HEPATIC LEVEL. Atti della Accademia medica lombarda. 1964;19:517-21.

Chitra M, Nithyanandhi K. Radical scavenging activity of Trianthema triquetra in male albino rats intoxicated with CCl4. Journal of environmental biology. 2007;28(2):283-5.

Chiu PY, Leung HY, Siu AHL, Poon MKT, Ko KM. Schisandrin B decreases the sensitivity of mitochondria to calcium ion-induced permeability transition and protects against carbon tetrachloride toxicity in mouse livers. Biological & pharmaceutical bulletin. 2007;30(6):1108-12.

Chobert M-N, Couchie D, Fourcot A, Zafrani E-S, Laperche Y, Mavier P, et al. Liver precursor cells increase hepatic fibrosis induced by chronic carbon tetrachloride intoxication in rats. Laboratory investigation; a journal of technical methods and pathology. 2012;92(1):135-50.

Choi D, Kim SJ, Kwon DY, Lee SY, Kim YC. Taurine depletion by beta-alanine inhibits induction of hepatotoxicity in mice treated acutely with carbon tetrachloride. Advances in experimental medicine and biology. 2009;643:305-11.

Chopra P, Roy S, Ramalingaswami V, Nayak NC. Mechanism of carbon tetrachloride hepatotoxicity. An in vivo study of its molecular basis in rats and monkeys. Laboratory investigation; a journal of technical methods and pathology. 1972;26(6):716-27.

Christie GS. Some aspects of carbon tetrachloride hepatotoxicity. The New Zealand medical journal. 1968;67(426):Suppl:80-7.

Chrungoo VJ, Singh K, Singh J. Differential biochemical response of freshly isolated rat hepatocytes to paracetamol, carbon tetrachloride and D-galactosamine toxicity. Indian journal of experimental biology. 1997;35(6):603-10.

Chrungoo VJ, Singh K, Singh J. Silymarin mediated differential modulation of toxicity induced by carbon tetrachloride, paracetamol and D-galactosamine in freshly isolated rat hepatocytes. Indian journal of experimental biology. 1997;35(6):611-7.

Chunhua M, Hongyan L. Protective effect of pilose antler peptide on carbon tetrachloride-induced hepatotoxicity in mice. International journal of biological macromolecules. 2017;99:648-54.

Cignoli EV, Castro JA. Effect of inhibitors of drug metabolizing enzymes on carbon tetrachloride hepatotoxicity. Toxicology and applied pharmacology. 1971;18(3):625-37.

Citoler P, De Leon F. Autoradiographic study of RNA synthesis of the liver during CCl4 intoxication. Verhandlungen der Deutschen Gesellschaft fur Pathologie. 1969;53:341-3.

Clarke H, Egan DA, Heffernan M, Doyle S, Byrne C, Kilty C, et al. Alpha-glutathione s-transferase (alpha-GST) release, an early indicator of carbon tetrachloride hepatotoxicity in the rat. Human & experimental toxicology. 1997;16(3):154-7.

Clarke IS, Lui EM. Interaction of metallothionein and carbon tetrachloride on the protective effect of zinc on hepatotoxicity. Canadian journal of physiology and pharmacology. 1986;64(8):1104-10.

Clawson GA. Mechanisms of carbon tetrachloride hepatotoxicity. Pathology and immunopathology research. 1989;8(2):104-12.

Clinton M, Jr. Renal injury following exposure to carbon tetrachloride; report of a case. The New England journal of medicine. 1947;237(6):183-5.

Cohen MM. Central nervous system in carbon tetrachloride intoxication. Neurology. 1957;7(4):238-44.

Coleman FS, Ripps I. Carbon tetrachloride intoxication; report of two cases. The Harlem Hospital bulletin. 1949;2(1):42-5.

Comporti M, Landucci G, Raja F. Changes in microsomal lipids of rat liver after chronic carbon tetrachloride intoxication. Experientia. 1971;27(10):1155-6.

Comstock CC, Oberst FW. Comparative inhalation toxicities of four halogenated hydrocarbons to rats and mice in the presence of gasoline fires; carbon tetrachloride, monochloromonobromomethane, difluorodibromomethane, and trifluoromonobromomethane. AMA archives of industrial hygiene and occupational medicine. 1953;7(2):157-67.

Condie LW, Laurie RD, Mills T, Robinson M, Bercz JP. Effect of gavage vehicle on hepatotoxicity of carbon tetrachloride in CD-1 mice: corn oil versus Tween-60 aqueous emulsion. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1986;7(2):199-206.

Coppola A, Diblasi S, Scorsone A, Morreale S. THROMBOELASTOGRAPHIC MODIFICATIONS IN SUBACUTE EXPERIMENTAL INTOXICATION WITH CARBON TETRACHLORIDE. Folia medica Folia medica (Naples, Italy). 1963;46:864-7.

Cornish HH. A study of carbon tetrachloride. IV. Esterase distribution in liver and sera of rats exposed to CC 14 vapors. Toxicology and applied pharmacology. 1962;4:468-74.

Cornish HH, Adefuin J. Potentiation of carbon tetrachloride toxicity by aliphatic alcohols. Archives of environmental health. 1967;14(3):447-9.

Corongiu FP, Lai M, Milia A. Carbon tetrachloride, bromotrichloromethane and ethanol acute intoxication. New chemical evidence for lipid peroxidation in rat tissue microsomes. The Biochemical journal. 1983;212(3):625-31.

Costa AK, Trudell JR. Interaction of hypoxia and carbon tetrachloride toxicity in hepatocyte monolayers. Experimental and molecular pathology. 1989;50(2):183-92.

Cristol P, Macabies J, Ayavou T. A COMPARATIVE STUDY OF CERTAIN ENZYME ACTIVITIES OF THE DOG BLOOD BEFORE AND AFTER CARBON TETRACHLORIDE POISONING. Comptes rendus des seances de la Societe de biologie et de ses filiales. 1964;158:1703-4.

Curtis LR, Mehendale HM. Specificity of chlordecone-induced potentiation of carbon tetrachloride hepatotoxicity. Drug metabolism and disposition: the biological fate of chemicals. 1980;8(1):23-7.

Curtis LR, Thureson-Klein AK, Mehendale HM. Ultrastructural and biochemical correlates of the specificity of chlordecone-potentiated carbon tetrachloride hepatotoxicity. Journal of toxicology and environmental health. 1981;7(3-4):499-517.

Curtis LR, Williams WL, Mehendale HM. Biliary excretory dysfunction following exposure to photomirex and photomirex/carbon tetrachloride combination. Toxicology. 1979;13(2):77-90.

Curtis LR, Williams WL, Mehendale HM. Potentiation of the hepatotoxicity of carbon tetrachloride following preexposure to chlordecone (kepone) in the male rat. Toxicology and applied pharmacology. 1979;51(2):283-93.

Curtis SJ, Moritz M, Snodgrass PJ. Serum enzymes derived from liver cell fractions. I. The response to carbon tetrachloride intoxication in rats. Gastroenterology. 1972;62(1):84-92.

Curzio M, Flaccavento C, Tesio A, Primon A, Torrielli MV. Influence of pretreatment with carbon tetrachloride on paracetamol-induced hepatotoxicity. Bollettino della Societa italiana di biologia sperimentale. 1980;56(24):2546-52.

Czarnecki J. Experimental studies on drug interactions and enzymatic induction of the liver in healthy rats chronically exposed to carbon tetrachloride poisoning. Polski tygodnik lekarski (Warsaw, Poland : 1960). 1978;33(15):605-7.

Czarnecki J, Pokora J, Chibowski D, Radwan P, Celinski K, Siezieniewska Z, et al. The influence of enzymatic induction on the content of hydroxyproline in perfusion fluid of isolated liver in healthy rats and in rats after chronic intoxication with CCl4. Annales Universitatis Mariae Curie-Sklodowska Sectio D: Medicina. 1985;40:53-9.

D'Aquino B. Some cases of acute intoxication due to fumigant parasiticides (carbon tetrachloride and dichloroethane) in agricultural workers. Folia medica Folia medica (Naples, Italy). 1966;49(4):288-98.

Dalu A, Mehendale HM. Efficient tissue repair underlies the resiliency of postnatally developing rats to chlordecone + CCl4 hepatotoxicity. Toxicology. 1996;111(1-3):29-42.

Dalu A, Rao PS, Mehendale HM. Colchicine antimitosis abolishes resiliency of postnatally developing rats to chlordecone-amplified carbon tetrachloride hepatotoxicity and lethality. Environmental health perspectives. 1998;106(9):597-606.

Dalu A, Warbritton A, Bucci TJ, Mehendale HM. Age-related susceptibility to chlordecone-potentiated carbon tetrachloride hepatotoxicity and lethality is due to hepatic quiescence. Pediatric research. 1995;38(2):140-8.

Daniluk J, Chibowski D, Szuster-Ciesielska A, Kandefer-Szerszen M. Effect of carbon tetrachloride intoxication and ethanol ingestion on interferon production in mice. Archivum immunologiae et therapiae experimentalis. 1994;42(4):325-30.

Das RK, Das S, Bhattacharya S. Protective effect of diphenylmethyl selenocyanate against carbon tetrachloride-induced hepatotoxicity in vivo. Journal of environmental pathology, toxicology and oncology : official organ of the International Society for Environmental Toxicology and Cancer. 2004;23(4):287-96.

Dassarma B, Nandi DK, Gangopadhyay S, Samanta S. Hepatoprotective effect of food preservatives (butylated hydroxyanisole, butylated hydroxytoluene) on carbon tetrachloride-induced hepatotoxicity in rat. Toxicology reports. 2018;5:31-7.

Datta S, Basu K, Sinha S, Bhattacharyya P. Hepatoprotective effect of a protein isolated from Cajanus indicus (Spreng) on carbon tetrachloride induced hepatotoxicity in mice. Indian journal of experimental biology. 1998;36(2):175-81.

David A, Frantik E, Holusa R, Novakova O. Role of time and concentration on carbon tetrachloride toxicity in rats. International archives of occupational and environmental health. 1981;48(1):49-60.

Davis ME, Mehendale HM. Functional and biochemical correlates of chlordecone exposure and its enhancement of CCl4 hepatotoxicity. Toxicology. 1980;15(2):91-103.

Davis SR, Samuelson DA, Cousins RJ. Metallothionein expression protects against carbon tetrachloride-induced hepatotoxicity, but overexpression and dietary zinc supplementation provide no further protection in metallothionein transgenic and knockout mice. The Journal of nutrition. 2001;131(2):215-22.

Day BJ, Carlson GP, DeNicola DB. Potentiation of carbon tetrachloride-induced hepatotoxicity and pneumotoxicity by pyridine. Journal of biochemical toxicology. 1993;8(1):11-8.

Day WW, Weiner M. Inhibition of hepatic drug metabolism and carbon tetrachloride toxicity in Fischer-344 rats by exercise. Biochemical pharmacology. 1991;42(1):181-4.

de Bleser PJ, Jannes P, van Buul-Offers SC, Hoogerbrugge CM, van Schravendijk CF, Niki T, et al. Insulinlike growth factor-II/mannose 6-phosphate receptor is expressed on CCl4-exposed rat fat-storing cells and facilitates activation of latent transforming growth factor-beta in cocultures with sinusoidal endothelial cells. Hepatology (Baltimore, Md). 1995;21(5):1429-37.

De Bleser PJ, Scott CD, Niki T, Xu G, Wisse E, Geerts A. Insulin-like growth factor II/mannose 6-phosphate-receptor expression in liver and serum during acute CCl4 intoxication in the rat. Hepatology (Baltimore, Md). 1996;23(6):1530-7.

De Ferreyra EC, Castro JA, Diaz Gomez MI, D'Acosta N, De Castro CR, De Fenos OM. Prevention and treatment of carbon tetrachloride hepatotoxicity by cysteine: studies about its mechanism. Toxicology and applied pharmacology. 1974;27(3):558-68.

de Ferreyra EC, Castro JA, Diaz Gomez MI, D'Acosta N, de Castro CR, de Fenos OM. Diverse effects of antioxidants on carbon tetrachloride hepatotoxicity. Toxicology and applied pharmacology. 1975;32(3):504-12.

de Ferreyra EC, de Toranzo EG, de Fenos OM, Castro JA. Studies on the mechanism of enhancement of carbon tetrachloride hepatotoxicity by Triton WR 1339. British journal of experimental pathology. 1981;62(5):512-8.

de Oliveira Fernandes T, de Avila RI, de Moura SS, de Almeida Ribeiro G, Naves MMV, Valadares MC. Campomanesia adamantium (Myrtaceae) fruits protect HEPG2 cells against carbon tetrachloride-induced toxicity. Toxicology reports. 2015;2:184-93.

De Ruiz ML, Muskus AJ. Hepatotoxicity mechanism of carbon tetrachloride. Acta cientifica venezolana. 1967;18:44.

de Saint-Blanquat G, Derache R. Experimental inflammation during hepatic carbon tetrachloride poisoning. Comptes rendus hebdomadaires des seances de l'Academie des sciences Serie D: Sciences naturelles. 1965;261(17):3471-3.

De Wit RH, Brabec MJ. Protein synthesis by hepatic mitochondria isolated from carbon tetrachloride-exposed rats. Biochimica et biophysica acta. 1985;824(3):256-61.

Deb C, Chakravarty B. Histochemistry of the rat's kidney after carbon tetrachloride intoxication. Acta anatomica. 1962;50:158-62.

Deb C, Chakravarty B. Effect of carbon tetrachloride intoxication on the liver of toad (Bufo melanosticus). Experientia. 1964;20(10):548-9.

Debessai WT, Huan J, Cheeke PR. Interactions in sheep between tall fescue ergot alkaloids and hepatotoxic carbon tetrachloride and Senecio pyrrolizidine alkaloids. Veterinary and human toxicology. 1999;41(3):129-33.

Dedieu P, Gaillard F, Gibon M, Perrin D, Miniconi P. Hepatic toxicity induced by carbon tetrachloride in the rat: protective role of laparotomies. Gastroenterologie clinique et biologique. 1981;5(8-9):815-7.

Deepa V, Sridhar R, Goparaju A, Reddy PN, Murthy PB. Nanoemulsified ethanolic extract of Pyllanthus amarus Schum & Thonn ameliorates CCl4 induced hepatotoxicity in Wistar rats. Indian journal of experimental biology. 2012;50(11):785-94.

Deer HM, McJilton CE, Harein PK. Respiratory exposure of grain inspection workers to carbon tetrachloride fumigant. American Industrial Hygiene Association journal. 1987;48(6):586-93.

Delaney B, Kaminski NE. Induction of serum borne immunomodulatory factors in B6C3F1 mice by carbon tetrachloride. Exposure to carbon tetrachloride produces an increase in B-cell number and function. Toxicology. 1994;88(1-3):201-12.

Delmas-Marsalet P, Verdeau J, Loiseau. Neuropsychic forms of carbon tetrachloride poisoning; a case of poisoning by a fire extinguisher. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1954;15(1):21-5.

Delrat P, Dupin S, Galtier P, Alvinerie M, Voigt JJ, Tufenkji AE, et al. Assessment of hepatic insufficiency model in the rabbit using carbon tetrachloride intoxication. Journal of pharmaceutical sciences. 1994;83(11):1637-42.

Deng J-S, Chang Y-C, Wen C-L, Liao J-C, Hou W-C, Amagaya S, et al. Hepatoprotective effect of the ethanol extract of Vitis thunbergii on carbon tetrachloride-induced acute hepatotoxicity in rats through anti-oxidative activities. Journal of ethnopharmacology. 2012;142(3):795-803.

Derobert L, Bertrand I, Fournier E. Encephalic lesions during acute poisoning by carbon tetrachloride. Annales de medecine legale, criminologie, police scientifique et toxicologie. 1958;38(3):166-8.

Derobert L, Picard R, Moreau J, Hadengue A, Le Breton R, Kerneis, et al. Mass poisoning by carbon tetrachloride; three fatal cases. Annales de medecine legale, criminologie, police scientifique et toxicologie. 1950;30(6):341-50.

Derot M, Mazalton A, Kahn J. Six cases anuric renal disease after carbon tetrachloride poisoning. La semaine des hopitaux : organe fonde par l'Association d'enseignement medical des hopitaux de Paris. 1954;30(36):2292-6.

Deshpande KT, Liu S, McCracken JM, Jiang L, Gaw TE, Kaydo LN, et al. Moderate (2%, v/v) Ethanol Feeding Alters Hepatic Wound Healing after Acute Carbon Tetrachloride Exposure in Mice. Biomolecules. 2016;6(1):5.

Desoille H, Derobert L, Hadengue A. Poisoning by carbon tetrachloride. Bruxelles medical. 1950;30(48):2445-60.

Dhanasekaran M, Ignacimuthu S, Agastian P. Potential hepatoprotective activity of ononitol monohydrate isolated from Cassia tora L. on carbon tetrachloride induced hepatotoxicity in wistar rats. Phytomedicine : international journal of phytotherapy and phytopharmacology. 2009;16(9):891-5.

Dhawan D, Goel A. Hepatoprotective effects of Liv-52 and its indirect influence on the regulation of thyroid hormones in rat liver toxicity induced by carbon tetrachloride. Research in experimental medicine Zeitschrift fur die gesamte experimentelle Medizin einschliesslich experimenteller Chirurgie. 1994;194(3):203-15.

Di Porto A, Maymone S. Methyl metabolism in experimental intoxication with carbon tetrachloride; effect of lipotropic action of vitamins B12 and B1 on urinary trimethylamine. Il Policlinico Sezione medica. 1953;60(1):59-68.

Di Simplicio P. Glutathione and glutathione S-transferases in rat liver and in plasma after carbon tetrachloride and thioacetamide intoxication. Pharmacological research communications. 1982;14(9):909-20.

Di Simplicio P, Mannervik B. Enzymes involved in glutathione metabolism in rat liver and blood after carbon tetrachloride intoxication. Toxicology letters. 1983;18(3):285-9.

Di Simplicio P, Pierini A, Segre G. Ligandin release from liver into blood in rats intoxicated by carbon tetrachloride. Pharmacological research communications. 1977;9(9):799-813.

Diab KA, Fahmy MA, Hassan ZM, Hassan EM, Salama AB, Omara EA. Genotoxicity of carbon tetrachloride and the protective role of essential oil of Salvia officinalis L. in mice using chromosomal aberration, micronuclei formation, and comet assay. Environmental science and pollution research international. 2018;25(2):1621-36.

Diaz Gomez MI, de Castro CR, D'Acosta N, de Fenos OM, de Ferreyra EC, Castro JA. Species differences in carbon tetrachloride-induced hepatotoxicity: the role of CCl4 activation and of lipid peroxidation. Toxicology and applied pharmacology. 1975;34(1):102-14.

Diaz-Rubio M, Diaz-Rubio M, Jr., Martin-Santos J. Investigations on glucuronized fractions of bilirubin. 2. Its behavior after the threshold with free bilirubin in acutely intoxicated rats with CCl4. Revista clinica espanola. 1967;104(3):221-30.

Dietz FK, Traiger GJ. Potentiation of CCl4 hepatotoxicity in rats by a metabolite of 2-butanone: 2,3-butanediol. Toxicology. 1979;14(3):209-15.

Dikshit P, Tyagi MK, Shukla K, Sharma S, Gambhir JK, Shukla R. Hepatoprotective effect of stem of Musa sapientum Linn in rats intoxicated with carbon tetrachloride. Annals of hepatology. 2011;10(3):333-9.

Ding WG, Tooyama I, Kimura H, Kuriyama K, Ochi J. Distribution of taurine-like immunoreactivity in the mouse liver during ontogeny and after carbon tetrachloride or phenobarbital intoxication. The Histochemical journal. 1993;25(5):376-83.

Dinman BD, Bernstein IA. Acute carbon tetrachloride hepatotoxicity. IV. Liver and serum enzyme activity during the acute damage phase. Archives of environmental health. 1968;16(6):770-6.

Dinman BD, Bernstein IA. Acute carbon tetrachloride hepatotoxicity. V. Enzymatic activity and structural concomitants during the regenerative phase. Archives of environmental health. 1968;16(6):777-84.

DiSilvestro RA, Carlson GP. Effects of moderate copper deficiency on carbon tetrachloride-induced hepatotoxicity in rats. Proceedings of the Society for Experimental Biology and Medicine Society for Experimental Biology and Medicine (New York, NY). 1991;197(1):32-5.

DiSilvestro RA, Carlson GP. Inflammation, an inducer of metallothionein, inhibits carbon-tetrachloride-induced hepatotoxicity in rats. Toxicology letters. 1992;60(2):175-81.

DiSilvestro RA, Carlson GP. Effects of mild zinc deficiency, plus or minus acute phase response, on CCl4 hepatotoxicity. Free radical biology & medicine. 1994;16(1):57-61.

DiSilvestro RA, Medeiros DM. Low and marginal copper intake by postweanling rats: effects on copper status and resistance to carbon tetrachloride hepatotoxicity. Metabolism: clinical and experimental. 1992;41(10):1122-4.

Dogukan A, Akpolat N, Celiker H, Ilhan N, Halil Bahcecioglu I, Gunal AI. Protective effect of interferon-alpha on carbon tetrachloride-induced nephrotoxicity. Journal of nephrology. 2003;16(1):81-4.

Dolci ED, Brabec MJ. Antagonism by chloramphenicol of carbon tetrachloride hepatotoxicity. Examination of microsomal cytochrome P-450 and lipid peroxidation. Experimental and molecular pathology. 1978;28(1):96-106.

Domitrovic R, Jakovac H. Antifibrotic activity of anthocyanidin delphinidin in carbon tetrachloride-induced hepatotoxicity in mice. Toxicology. 2010;272(1-3):1-10.

Domitrovic R, Jakovac H, Grebic D, Milin C, Radosevic-Stasic B. Dose- and time-dependent effects of luteolin on liver metallothioneins and metals in carbon tetrachloride-induced hepatotoxicity in mice. Biological trace element research. 2008;126(1-3):176-85.

Domitrovic R, Jakovac H, Milin C, Radosevic-Stasic B. Dose- and time-dependent effects of luteolin on carbon tetrachloride-induced hepatotoxicity in mice. Experimental and toxicologic pathology : official journal of the Gesellschaft fur Toxikologische Pathologie. 2009;61(6):581-9.

Domitrovic R, Rashed K, Cvijanovic O, Vladimir-Knezevic S, Skoda M, Visnic A. Myricitrin exhibits antioxidant, anti-inflammatory and antifibrotic activity in carbon tetrachloride-intoxicated mice. Chemico-biological interactions. 2015;230:21-9.

Domitrovic R, Skoda M, Vasiljev Marchesi V, Cvijanovic O, Pernjak Pugel E, Stefan MB. Rosmarinic acid ameliorates acute liver damage and fibrogenesis in carbon tetrachloride-intoxicated mice. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2013;51:370-8.

Domnisoru L, Chiriac E. Acute carbon tetrachloride poisoning. Revista medico-chirurgicala a Societatii de Medici si Naturalisti din Iasi. 1987;91(3):563-4.

Domnisoru L, Chiriac E. Acute carbon tetrachloride poisoning. Revista medico-chirurgicala a Societatii de Medici si Naturalisti din Iasi. 1989;93(2):389-90.

Donthamsetty S, Bhave VS, Mitra MS, Latendresse JR, Mehendale HM. Nonalcoholic fatty liver sensitizes rats to carbon tetrachloride hepatotoxicity. Hepatology (Baltimore, Md). 2007;45(2):391-403.

Doolittle DJ, Muller G, Scribner HE. Relationship between hepatotoxicity and induction of replicative DNA synthesis following single or multiple doses of carbon tetrachloride. Journal of toxicology and environmental health. 1987;22(1):63-78.

Dorhout EJ, van Zoeren M. Carbon tetrachloride poisoning. Nederlands militair geneeskundig tijdschrift. 1965;18(7):207-12.

Douglas BH, Clower BR. Hepatotoxic effect of carbon tetrachloride during pregnancy. American journal of obstetrics and gynecology. 1968;102(2):236-9.

Dubin M, Groszmann RJ, Kravetz D, Costa JA, Cantor D. Effect of silymarin on carbon-tetrachloride-induced hepatotoxicity in rats. Medicina. 1976;36(5):437-42.

Dupont P, Bernis P, Paduart P, Vereerstraeten P. 45 cases of carbon tetrachloride poisoning. Acta clinica Belgica. 1975;30(6):485-93.

Dwivedi S, Sharma R, Sharma A, Zimniak P, Ceci JD, Awasthi YC, et al. The course of CCl4 induced hepatotoxicity is altered in mGSTA4-4 null (-/-) mice. Toxicology. 2006;218(1):58-66.

Dziadecki J. Toxic effect of carbon tetrachloride on the myocardium. I. Clinical aspects. Medycyna pracy. 1984;35(3):191-4.

Dziadecki J. Toxic effect of carbon tetrachloride on the myocardium. II. Experimental part. A. Histochemical analysis of the rat myocardium in acute carbon tetrachloride poisoning. Medycyna pracy. 1984;35(4):257-62.

Dziadecki J. Toxic effect of carbon tetrachloride on the myocardium. II. Experimental part. B. Ultrastructure of the myocardium of rats in acute carbon tetrachloride poisoning. Medycyna pracy. 1984;35(5):317-22.

Eastmond DA. Evaluating genotoxicity data to identify a mode of action and its application in estimating cancer risk at low doses: A case study involving carbon tetrachloride. Environmental and molecular mutagenesis. 2008;49(2):132-41.

Ebeid HM, Gibriel AAY, Al-Sayed HMA, Elbehairy SA, Motawe EH. Hepatoprotective and antioxidant effects of wheat, carrot, and mango as nutraceutical agents against CCl4-induced hepatocellular toxicity. Journal of the American College of Nutrition. 2015;34(3):228-31.

Ebel RE. Pyrazole treatment of rats potentiates CCL4-but not CHCL3-hepatotoxicity. Biochemical and biophysical research communications. 1989;161(2):615-8.

Ebel RE, McGrath EA. CCl4-hepatotoxicity in the Mongolian gerbil: influence of monooxygenase system induction. Toxicology letters. 1984;22(2):205-10.

Eden E, Harrison DD. Studies in carbon tetrachloride poisoning. III. The possible role of sulphur amino acids in detoxication. The Australian journal of experimental biology and medical science. 1955;33(1):85-9.

Edwards MJ, Keller BJ, Kauffman FC, Thurman RG. The involvement of Kupffer cells in carbon tetrachloride toxicity. Toxicology and applied pharmacology. 1993;119(2):275-9.

Eidi A, Eidi M, Al-Ebrahim M, Rohani AH, Mortazavi P. Protective effects of sodium molybdate on carbon tetrachloride-induced hepatotoxicity in rats. Journal of trace elements in medicine and biology : organ of the Society for Minerals and Trace Elements (GMS). 2011;25(1):67-71.

Eidi A, Mortazavi P, Tehrani ME, Rohani AH, Safi S. Hepatoprotective effects of pantothenic acid on carbon tetrachloride-induced toxicity in rats. EXCLI journal. 2012;11:748-59.

Eipel C, Eisold M, Schuett H, Vollmar B. Inhibition of heme oxygenase-1 protects against tissue injury in carbon tetrachloride exposed livers. The Journal of surgical research. 2007;139(1):113-20.

Ekor M, Odewabi AO, Kale OE, Adesanoye OA, Bamidele TO. Celecoxib, a selective cyclooxygenase-2 inhibitor, lowers plasma cholesterol and attenuates hepatic lipid peroxidation during carbon-tetrachloride-associated hepatotoxicity in rats. Drug and chemical toxicology. 2013;36(1):1-8.

Ekor M, Odewabi AO, Kale OE, Oritogun KS, Adesanoye OA, Bamidele TO. Pharmacologic inhibition of the renin-angiotensin system did not attenuate hepatic toxicity induced by carbon tetrachloride in rats. Human & experimental toxicology. 2011;30(11):1840-8.

El Denshary ES, Al-Gahazali MA, Mannaa FA, Salem HA, Hassan NS, Abdel-Wahhab MA. Dietary honey and ginseng protect against carbon tetrachloride-induced hepatonephrotoxicity in rats. Experimental and toxicologic pathology : official journal of the Gesellschaft fur Toxikologische Pathologie. 2012;64(7-8):753-60.

El Naggar EMB, Chalupova M, Prazanova G, Parak T, Svajdlenka E, Zemlicka M, et al. Hepatoprotective and proapoptotic effect of Ecballium elaterium on CCl4-induced hepatotoxicity in rats. Asian Pacific journal of tropical medicine. 2015;8(7):526-31.

El BKM, Hashimoto Y, Muzandu K, Ikenaka Y, Ibrahim ZS, Kazusaka A, et al. Protective effect of Pleurotus cornucopiae mushroom extract on carbon tetrachloride-induced hepatotoxicity. The Japanese journal of veterinary research. 2009;57(2):109-18.

El-Dessoukey EA, Awadallah R, El-Attar S. Biochemical changes under the effect of carbon tetrachloride intoxication. Zeitschrift fur Ernahrungswissenschaft. 1977;16(4):217-22.

el-Dessoukey EA, Tahani HM, Awadallah R, Zinat HA, Kotb NA. Effect of phenobarbitone and propionyl-promazine on serum enzymes in carbon-tetrachloride hepatotoxicity. Zeitschrift fur Ernahrungswissenschaft. 1978;17(3):159-68.

El-Faras AA, Sadek IA, Ali YE, Khalil M, Mussa EB. Protective effects of Vitamin E on CCl4-induced testicular toxicity in male rats. Physiology international. 2016;103(2):157-68.

El-Gazayerly ON, Makhlouf AIA, Soelm AMA, Mohmoud MA. Antioxidant and hepatoprotective effects of silymarin phytosomes compared to milk thistle extract in CCl4 induced hepatotoxicity in rats. Journal of microencapsulation. 2014;31(1):23-30.

El-Hadary AE, Ramadan Hassanien MF. Hepatoprotective effect of cold-pressed Syzygium aromaticum oil against carbon tetrachloride (CCl4)-induced hepatotoxicity in rats. Pharmaceutical biology. 2016;54(8):1364-72.

el-Kateb H, Soliman A, Elwi AM, Kamel SH. The prophylactic effect of vitamin E against hepatotoxicity induced by carbon tetrachloride. The Journal of the Egyptian Medical Association. 1965;48(7):491-501.

el-Masri HA, Thomas RS, Sabados GR, Phillips JK, Constan AA, Benjamin SA, et al. Physiologically based pharmacokinetic/pharmacodynamic modeling of the toxicologic interaction between carbon tetrachloride and Kepone. Archives of toxicology. 1996;70(11):704-13.

El-Sayed WM. Upregulation of chemoprotective enzymes and glutathione by Nigella sativa (black seed) and thymoquinone in CCl4-intoxicated rats. International journal of toxicology. 2011;30(6):707-14.

El-Sayed YS, Lebda MA, Hassinin M, Neoman SA. Chicory (Cichorium intybus L.) root extract regulates the oxidative status and antioxidant gene transcripts in CCl4-induced hepatotoxicity. PloS one. 2015;10(3):e0121549.

El-Sayed YS, Lebda MA, Hassinin M, Noeman SA. Retraction: Chicory (Cichorium intybus L.) Root Extract Regulates the Oxidative Status and Antioxidant Gene Transcripts in CCl4-Induced Hepatotoxicity. PloS one. 2017;12(3):e0173587.

Elberry AA, Harraz FM, Ghareib SA, Nagy AA, Gabr SA, Suliaman MI, et al. Antihepatotoxic effect of marrubium vulgare and withania somnifera extracts on carbon tetrachloride-induced hepatotoxicity in rats. Journal of basic and clinical pharmacy. 2010;1(4):247-54.

Eliakis C, Eliakis E, Coutselinis A, Kiaris H. Contribution to the study of carbon tetrachloride toxicity. The Annals of occupational hygiene. 1968;11(1):27-31.

Eliakis C, Eliakis E, Coutselinis A, Kiaris H. Urinary excretion of steroids during carbon tetrachloride intoxication in rats. The Annals of occupational hygiene. 1968;11(1):33-5.

Ellinger C, Seffner W, Schiller F. Investigations on the sensitivity of several biochemical and histological methods after liver intoxication induced by pentachlorophenol and carbon tetrachloride. Archives of toxicology Supplement = Archiv fur Toxikologie Supplement. 1991;14:63-7.

Elmubarak S, Ozsoy N. Histoprotective effect of vitamin D against carbon tetrachloride nephrotoxicity in rats. Human & experimental toxicology. 2016;35(7):713-23.

elSisi AE, Earnest DL, Sipes IG. Vitamin A potentiation of carbon tetrachloride hepatotoxicity: enhanced lipid peroxidation without enhanced biotransformation. Toxicology and applied pharmacology. 1993;119(2):289-94.

elSisi AE, Earnest DL, Sipes IG. Vitamin A potentiation of carbon tetrachloride hepatotoxicity: role of liver macrophages and active oxygen species. Toxicology and applied pharmacology. 1993;119(2):295-301.

Elwi AM, Kamel SH, el-Kateb H, Soliman MA. Pathological study of the hepatotoxicity of carbon tetrachloride. Deutsche zahnarztliche Zeitschrift. 1966;21(3):583-96.

Erdemli ME, Gul M, Altinoz E, Aksungur Z, Gul S, Bag HG. Can crocin play a preventive role in Wistar rats with carbon tetrachloride-induced nephrotoxicity? Iranian journal of basic medical sciences. 2018;21(4):382-7.

Erman F, Balkan J, Cevikbas U, Kocak-Toker N, Uysal M. Betaine or taurine administration prevents fibrosis and lipid peroxidation induced by rat liver by ethanol plus carbon tetrachloride intoxication. Amino acids. 2004;27(2):199-205.

Es Haghi M, Dehghan G, Banihabib N, Zare S, Mikaili P, Panahi F. Protective effects of Cornus mas fruit extract on carbon tetrachloride induced nephrotoxicity in rats. Indian journal of nephrology. 2014;24(5):291-6.

Essawy AE, Abdel-Wahab WM, Sadek IA, Khamis OM. Dual protective effect of ginger and rosemary extracts against CCl4-induced hepatotoxicity in rats. Environmental science and pollution research international. 2018.

Etim OE, Akpan EJ, Usoh IF. Hepatotoxicity of carbon tetrachloride: protective effect of Gongronema latifolium. Pakistan journal of pharmaceutical sciences. 2008;21(3):268-74.

Eum H-A, Lee J-H, Yang M-C, Shim KS, Lee J-H, Ma JY. Protective effect of Ssanghwa-tang fermented by Lactobacillus fermentum against carbon tetrachloride-induced acute hepatotoxicity in rats. African journal of traditional, complementary, and alternative medicines : AJTCAM. 2011;8(3):312-21.

Evans MV, Simmons JE. Physiologically based pharmacokinetic estimated metabolic constants and hepatotoxicity of carbon tetrachloride after methanol pretreatment in rats. Toxicology and applied pharmacology. 1996;140(2):245-53.

Evers WD, Hook JB, Bond JT. Lack of effect of a purified diet on carbon tetrachloride or oxygen toxicity. Drug-nutrient interactions. 1982;1(4):329-33.

Fabre R, Truhaut E, Laham S. Toxicology of carbon tetrachloride. I. Establishment of a method of determination applicable to atmosphere and biological media. Annales pharmaceutiques francaises. 1951;9(4):251-66.

Fahmy NM, Al-Sayed E, Abdel-Daim MM, Karonen M, Singab AN. Protective effect of Terminalia muelleri against carbon tetrachloride-induced hepato and nephro-toxicity in mice and characterization of its bioactive constituents. Pharmaceutical biology. 2016;54(2):303-13.

Faktor VM, Uryvaeva IV. Polyploidization of mouse hepatocytes following repeated exposure to carbon tetrachloride. Biulleten' eksperimental'noi biologii i meditsiny. 1980;90(11):614-6.

Faktor VM, Uryvaeva IV, Kagan VE. Heterogeneity in the distribution of cytochrome P-450 in the liver lobule revealed on exposure to carbon tetrachloride. Biulleten' eksperimental'noi biologii i meditsiny. 1979;87(4):364-6.

Fang R. Effect of d-catechin on carbon tetrachloride- and d-galactosamine-induced cytotoxicity in primary cultured rat hepatocytes. Zhongguo yi xue ke xue yuan xue bao Acta Academiae Medicinae Sinicae. 1992;14(3):194-200.

Farghali H, Buchar E, Machkova Z, Kamenikova L, Masek K. Muramyl dipeptide and carbon tetrachloride hepatotoxicity in rats: involvement of plasma membrane and calcium homeostasis in protective effect. Methods and findings in experimental and clinical pharmacology. 1986;8(8):469-77.

Farida T, Salawu OA, Tijani AY, Ejiofor JI. Pharmacological evaluation of Ipomoea asarifolia (Desr.) against carbon tetrachloride-induced hepatotoxicity in rats. Journal of ethnopharmacology. 2012;142(3):642-6.

Fariss MW, Bryson KF, Hylton EE, Lippman HR, Stubin CH, Zhao XG. Protection against carbon tetrachloride-induced hepatotoxicity by pretreating rats with the hemisuccinate esters of tocopherol and cholesterol. Environmental health perspectives. 1993;101(6):528-36.

Fariss MW, Lippman HR, Mumaw VR, Ray SD. Cholesteryl hemisuccinate treatment protects rodents from the toxic effects of acetaminophen, adriamycin, carbon tetrachloride, chloroform and galactosamine. Toxicology letters. 1997;90(2-3):133-44.

Farooq S, Ahmad I, Pathak GK. In vivo protective role of Koflet (an ayurvedic preparation) against cellular toxicity caused by CCl4 and flyash. Journal of ethnopharmacology. 1997;58(2):109-16.

Faus MJ, Lupianez A, Vargas A, Sanchez-Medina F. Induction of rat kidney gluconeogenesis during acute liver intoxication by carbon tetrachloride. The Biochemical journal. 1978;174(2):461-7.

Favari L, Mourelle M, Amezcua JL. Aspirin disposition in rats acutely intoxicated with CCl4. Journal of applied toxicology : JAT. 1987;7(6):361-5.

Feng Y, Siu K-Y, Ye X, Wang N, Yuen M-F, Leung C-H, et al. Hepatoprotective effects of berberine on carbon tetrachloride-induced acute hepatotoxicity in rats. Chinese medicine. 2010;5:33.

Feng Y, Wang N, Ye X, Li H, Feng Y, Cheung F, et al. Hepatoprotective effect and its possible mechanism of Coptidis rhizoma aqueous extract on carbon tetrachloride-induced chronic liver hepatotoxicity in rats. Journal of ethnopharmacology. 2011;138(3):683-90.

Fernandez G, Villarruel MC, de Ferreyra EC, de Fenos OM, Castro JA. Imipramine prevention of carbon tetrachloride-induced liver necrosis at late states of the intoxication process. Journal of applied toxicology : JAT. 1986;6(6):413-8.

Filip C, Ungureanu D, Nechifor C, Matei V, Chelarescu D, Caruntu I-D, et al. The role of some prostaglandin analogues in experimental intoxication produced by carbon tetrachloride in rats. Revista medico-chirurgicala a Societatii de Medici si Naturalisti din Iasi. 2003;107(2):388-92.

Finzel M. Liver and kidney injuries after a single exposure to carbon tetrachloride. Zentralblatt fur Arbeitsmedizin und Arbeitsschutz. 1960;10:235-8.

Firdous AP, Sindhu ER, Kuttan R. Hepato-protective potential of carotenoid meso-zeaxanthin against paracetamol, CCl4 and ethanol induced toxicity. Indian journal of experimental biology. 2011;49(1):44-9.

Flaks B, Nicoll JW. Modification of toxic liver injury in the rat. I. Effect of inhibition of protein synthesis on the action of 2-acetylaminofluorene, carbon tetrachloride, 3'-methyl-4-dimethylaminoazobenzene and diethylnitrosamine. Chemico-biological interactions. 1974;8(3):135-50.

Flampouri E, Sotiropoulou N-SD, Mavrikou S, Mouzaki-Paxinou A-C, Tarantilis PA, Kintzios S. Conductive polymer-based bioelectrochemical assembly for in vitro cytotoxicity evaluation:

Renoprotective assessment of Salvia officinalis against carbon tetrachloride induced nephrotoxicity. Biochimica et biophysica acta. 2017;1861(9):2304-14.

Fodor O, Szantay I, Cotul S, Szabo P. The action of aspartate on the hepatic and renal fixation of Co58-labeled vitamin B 12 in experimental chronic carbon tetrachloride poisoning. Studii si cercetari de medicina interna. 1969;10(3):263-6.

Fodor O, Szantay I, Tamas S, Szabo P, Cotul S. A study of 14CO2 elimination in experimental intoxication with carbon tetrachloride following d,l-aspartic acid-(4)-14C administration under aspartate protection. Nuclear-Medizin. 1970;9(1):95-7.

Fodor O, Tapalaga D, Barbarino F. Protective action of the aspartic acid on liver steroid dehydrogenases in experimental chronic intoxication with carbon tetrachloride. Acta gastro-enterologica Belgica. 1971;34(6):447-54.

Folland DS, Schaffner W, Ginn HE, Crofford OB, McMurray DR. Carbon tetrachloride toxicity potentiated by isopropyl alcohol. Investigation of an industrial outbreak. Jama. 1976;236(16):1853-6.

Fomenko SE, Kushnerova NF, Sprygin VG, Momot TV. Hepatorotective activity of honeysuckle fruit extract in carbon tetrachloride intoxicated rats. Eksperimental'naia i klinicheskaia farmakologiia. 2014;77(10):26-30.

Fowler JS. Toxicity of carbon tetrachloride and other fasciocidal drugs in sheep and chickens. The British veterinary journal. 1971;127(7):304-12.

Fracasso ME, Leone R, Berti T. Biochemical changes in isolated perfused livers from rats intoxicated with CCl4 or fed with steatogenous diet. Pharmacological research communications. 1980;12(4):295-306.

Frantik E, Benes V. Central nervous effect and blood level regressions on exposure time paralleled in solvents (toluene, carbon tetrachloride and chloroform). Activitas nervosa superior. 1984;26(2):131-3.

Frenzel H, Heidenreich T, Gellert J, Teschke R. Protective effect of CO2-induced hyperventilation on the hepatotoxicity elicited by carbon tetrachloride. Liver. 1982;2(4):376-84.

Freston JW, Bouchier IA. Potentiation of carbon tetrachloride toxicity by dimethyl sulphoxide. Nature. 1967;214(5089):734-5.

Frey HH, Geipel M. Ototoxicity of carbon tetrachloride. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1975;21(3):196-9.

Friedman MA, Eaton LR, Bailey W. Influence of acetaldehyde, dietary protein, carbon tetrachloride and butylatedhydroxytoluene on the toxicity of methylmercury in rats. Bulletin of environmental contamination and toxicology. 1978;20(1):102-10.

Fry WA, Smith JM, Suker JR. Acute carbon tetrachloride intoxication. Report of a case of inhalation intoxication with severe liver damage followed by complete recovery. Quarterly bulletin Northwestern University (Evanston, Ill) Medical School. 1959;33:346-51.

Fukaya S, Yoshioka H, Okano T, Nagatsu A, Miura N, Nonogaki T, et al. Non-toxic Level of Acetaminophen Potentiates Carbon Tetrachloride-Induced Hepatotoxicity in Mice. Biological & pharmaceutical bulletin. 2017;40(9):1590-4.

Fukuyama T, Yamaoka K, Tabata K, Nakagawa T. Influence of laparotomy on disposition kinetics of diclofenac in CCl4-intoxicated rats. Biological & pharmaceutical bulletin. 1995;18(2):251-5.

Furukawa T. The role of the hormonal glands and sympathetic nerve in the fatty infiltration of liver resulting from carbon tetrachloride toxicity. Wakayama medical reports. 1965;9(4):203-10.

Gadgil SD, Bhate VN, Sadre NL, Tiwari NM. Effect of pretreatment with barbiturates on carbon tetrachloride-induced hepato-toxicity in rats. Indian journal of medical sciences. 1971;25(6):384-6.

Galenko TI, Aref'eva LV. Action of carbon tetrachloride and antihepatocytotoxic serum on the immune response of rats. Fiziologicheskii zhurnal. 1984;30(4):459-63.

Galluzzo F, Frumento F, Secchi-Siervo L. BEHAVIOR OF SOME ENZYMATIC ACTIVITIES IN THE SALIVARY GLAND IN ANIMALS SUBJECTED TO CHRONIC INTOXICATION WITH CARBON TETRACHLORIDE. Rassegna trimestrale di odontoiatria. 1965;46:57-62.

Garbin L, Plebani M, Terribile PM. Effect of ACP (pyridoxine-2-oxoglutarate) on CCl4 intoxication and in streptozotocin-induced ketosis in rat. Acta vitaminologica et enzymologica. 1977;31(6):175-8.

Garkavi PG. Disorders of the acetylation capacity in dogs intoxicated with carbon tetrachloride, tetrachloropropene, tetrachloropentane and tetrachloroheptane. Farmakologiia i toksikologiia. 1961;24:599-604.

Garkavi PG. On some problems concerning the mechanism of toxic action of carbon tetrachloride and its homologues (review). Farmakologiia i toksikologiia. 1966;29(1):118-24.

Garner RC. Toxicity of carbon tetrachloride. British medical journal. 1969;1(5646):777.

Geier A, Kim SK, Gerloff T, Dietrich CG, Lammert F, Karpen SJ, et al. Hepatobiliary organic anion transporters are differentially regulated in acute toxic liver injury induced by carbon tetrachloride. Journal of hepatology. 2002;37(2):198-205.

Gergely J, Kulcsar A, Harsfalvi J. Changes in fat metabolism in acute carbon tetrachloride intoxication of rats. Acta pharmaceutica Hungarica. 1995;65(1):3-4.

Gerhard H, Schultze B, Maurer W. Autoradiographic study of the disorder of protein synthesis in the mouse liver following CCL4 intoxication. Dose-effect graphs for reversible and irreversible damages. Virchows Archiv B, Cell pathology. 1970;6(1):38-56.

Gerhard H, Schultze B, Maurer W. Cytological and morphometric investigation of mouse liver regeneration after CCl4 intoxication (author's transl). Virchows Archiv B, Cell pathology. 1973;14(4):345-59.

Ghoshal AK. Antioxidant role of vitamin E and carbon tetrachloride hepatotoxicity. Experimental and molecular pathology. 1976;25(2):202-7.

Gibb JW, Brody TM. The protective effect of nicotinamide on carbon tetrachloride-induced hepatotoxicity. Biochemical pharmacology. 1967;16(10):2047-9.

Gilani AH, Janbaz KH. Preventive and curative effects of Artemisia absinthium on acetaminophen and CCl4-induced hepatotoxicity. General pharmacology. 1995;26(2):309-15.

Gilani AU, Janbaz KH. Studies on protective effect of Cyperus scariosus extract on acetaminophen and CCl4-induced hepatotoxicity. General pharmacology. 1995;26(3):627-31.

Girish C, Koner BC, Jayanthi S, Rao KR, Rajesh B, Pradhan SC. Hepatoprotective activity of six polyherbal formulations in CCl4-induced liver toxicity in mice. Indian journal of experimental biology. 2009;47(4):257-63.

Girish C, Pradhan SC. Hepatoprotective activities of picroliv, curcumin, and ellagic acid compared to silymarin on carbon-tetrachloride-induced liver toxicity in mice. Journal of pharmacology & pharmacotherapeutics. 2012;3(2):149-55.

Glende EA, Jr. Carbon tetrachloride-induced protection against carbon tetrachloride toxicity. The role of the liver microsomal drug-metabolizing system. Biochemical pharmacology. 1972;21(12):1697-702.

Glende EA, Jr. On the mechanism of carbon tetrachloride toxicity--coincidence of loss of drug-metabolizing activity with peroxidation of microsomal lipid. Biochemical pharmacology. 1972;21(15):2131-8.

Glende EA, Jr., Recknagel RO. Phospholipase A2 activation and cell injury in isolated rat hepatocytes exposed to bromotrichloromethane, chloroform, and 1,1-dichloroethylene as compared to effects of carbon tetrachloride. Toxicology and applied pharmacology. 1992;113(1):159-62.

Gnanaraj C, Shah MD, Haque ATME, Makki JS, Iqbal M. Hepatoprotective and Immunosuppressive Effect of Synedrella nodiflora L. on Carbon Tetrachloride (CCl4)-Intoxicated Rats. Journal of environmental pathology, toxicology and oncology : official organ of the International Society for Environmental Toxicology and Cancer. 2016;35(1):29-42.

Gokhale SD, Kelkar VV, Gulati OD. SOME OBSERVATIONS ON THE POSSIBLE MEDIATION OF CARBON TETRACHLORIDE HEPATOTOXICITY THROUGH THE CENTRAL NERVOUS SYSTEM. Archives internationales de pharmacodynamie et de therapie. 1963;144:423-31.

Goldermann L, Gellert J, Teschke R. Quantitative assessment of carbon tetrachloride levels in human blood by head-space gas chromatography: application in a case of suicidal carbon tetrachloride intoxication. Intensive care medicine. 1983;9(3):131-5.

Gomes A, Alam MA, Datta P, Bhattacharya S, Gomes A. Hepatoprotective activity of the edible snail (Bellamia bengalensis) flesh extract in carbon tetrachloride induced hepatotoxicity in rats. Journal of ethnopharmacology. 2011;138(1):228-32.

Gomez MI, de Castro CR, de Ferreyra EC, Acosta ND, de Fenos OM, Castro JA. Mechanistic studies on carbon tetrachloride hepatoxicity in fasted and fed rats. Toxicology and applied pharmacology. 1975;32(1):101-8.

Gould VE, Smuckler EA. Alveolar injury in acute carbon tetrachloride intoxication. Archives of internal medicine. 1971;128(1):109-17.

Green J, Bunyan J, Cawthorne MA, Diplock AT. Vitamin E and hepatotoxic agents. 1. Carbon tetrachloride and lipid peroxidation in the rat. The British journal of nutrition. 1969;23(2):297-307.

Gregory NL. Carbon tetrachloride toxicity and electron capture. Nature. 1966;212(5069):1460-1.

Grivas PC, Tanaka S, Ueda K, Johnson G, Harbison RD. 6,(5H)-phenanthridinone protects against carbon tetrachloride-induced cytotoxicity in human HepG2 cells. Research communications in molecular pathology and pharmacology. 2007;120-121(1-6):117-26.

Gualandi G. Genotoxicity of the free-radical producers CCl4 and lipoperoxide in Aspergillus nidulans. Mutation research. 1984;136(2):109-14.

Guido JJ, Guido MG, Sased M, Rodrigo GS. NIALAMIDE IN EXPERIMENTAL CARBON TETRACHLORIDE POISONING. Revista de investigacion. 1964;4:105-13.

Guild WR, Young JV, Merrill JP. Anuria due to carbon tetrachloride intoxication. Annals of internal medicine. 1958;48(6):1221-7.

Gulati OD, Gokhale SD, Sayed BA, Joseph AD. Role of sympathetic discharge in the hepatotoxic action of carbon tetrachloride. Archives internationales de pharmacodynamie et de therapie. 1962;138:412-9.

Gulfraz M, Ahamd D, Ahmad MS, Qureshi R, Mahmood RT, Jabeen N, et al. Effect of leaf extracts of Taraxacum officinale on CCl4 induced hepatotoxicity in rats, in vivo study. Pakistan journal of pharmaceutical sciences. 2014;27(4):825-9.

Guo T-t, Xu H-l, Zhang L-x, Zhang J-p, Guo Y-f, Gu J-w, et al. In vivo protective effect of Porphyra yezoensis polysaccharide against carbon tetrachloride induced hepatotoxicity in mice. Regulatory toxicology and pharmacology : RTP. 2007;49(2):101-6.

Gupta G, More AS, Kumari RR, Lingaraju MC, Kumar D, Kumar D, et al. Protective effect of alcoholic extract of Entada pursaetha DC. against CCl4-induced hepatotoxicity in rats. Indian journal of experimental biology. 2014;52(3):207-14.

Gupta RK, Hussain T, Panigrahi G, Das A, Singh GN, Sweety K, et al. Hepatoprotective effect of Solanum xanthocarpum fruit extract against CCl4 induced acute liver toxicity in experimental animals. Asian Pacific journal of tropical medicine. 2011;4(12):964-8.

Gururaja MP, Joshi AB, Joshi H, Sathyanarayana D, Subrahmanyam EVS, Chandrashekhar KS. Attenuation of carbon tetrachloride-induced hepatotoxicity by cow urine distillate in rats. Biomedical and environmental sciences : BES. 2009;22(4):345-7.

Gutewort R, Ponsold W. Increased toxicity of carbon tetrachloride induced by nicotinic acid. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1981;27(6):433-5.

Gyorgy P, Seifter J. Influence of dietary factors and sex on the toxicity of carbon tetrachloride in rats. The Journal of experimental medicine. 1946;83:449-62.

Gyorgy P, Seifter J, Tomarelli RM, Goldblatt H. INFLUENCE OF DIETARY FACTORS AND SEX ON THE TOXICITY OF CARBON TETRACHLORIDE IN RATS. The Journal of experimental medicine. 1946;83(6):449-62.

Ha BJ, Lee JY. The effect of chondroitin sulfate against CCl4-induced hepatotoxicity. Biological & pharmaceutical bulletin. 2003;26(5):622-6.

Ha K-T, Yoon S-J, Choi D-Y, Kim D-W, Kim J-K, Kim C-H. Protective effect of Lycium chinense fruit on carbon tetrachloride-induced hepatotoxicity. Journal of ethnopharmacology. 2005;96(3):529-35.

Haba K, Seno S. An electron microscope study of liver cell in carbon tetrachloride intoxication, significance of "opaque area". Acta medicinae Okayama. 1961;15:375-89.

Hafez MM, Al-Harbi NO, Al-Hoshani AR, Al-Hosaini KA, Al Shrari SD, Al Rejaie SS, et al. Hepato-protective effect of rutin via IL-6/STAT3 pathway in CCl4-induced hepatotoxicity in rats. Biological research. 2015;48:30.

Hafez MM, Al-Shabanah OA, Al-Harbi NO, Al-Harbi MM, Al-Rejaie SS, Alsurayea SM, et al. Association between paraoxonases gene expression and oxidative stress in hepatotoxicity induced by CCl4. Oxidative medicine and cellular longevity. 2014;2014:893212.

Halenko TI. Changes in serum cholinesterase activity in rats exposed to carbon tetrachloride and several cytotoxic sera. Fiziolohichnyi zhurnal. 1974;20(5):616-20.

Hals E, Bjorlin G, Jacobsen K. Histopathological changes in rat incisors in experimental carbon tetrachloride intoxication. Odontologisk revy. 1973;24(1):5-26.

Hamburger J, Richet G, Cournot L, Laham S, Roques S. Grave intoxications by inhalation of hair lotion products with carbon tetrachloride base. Bulletins et memoires de la Societe medicale des hopitaux de Paris. 1951;67(11-12):385-91.

Hamed H, Bellassoued K, Brahmi N, Gargouri A, Ghannoudi Z, El Feki A. Modulatory Effects of Rosemary Leaves Aqueous Extraction against oxidative stress and related damages in experimental model of CCl4-induced cardiac toxicity in mice. Applied physiology, nutrition, and metabolism = Physiologie appliquee, nutrition et metabolisme. 2018.

Hamed H, Chaari F, Ghannoudi Z, ElFeki A, Ellouz SC, Gargouri A. Beneficial effects of fermented camel milk by lactococcus lactis subsp cremoris on cardiotoxicity induced by carbon tetrachloride in mice. Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie. 2018;97:107-14.

Hamed SS, Al-Yhya NA, El-Khadragy MF, Al-Olayan EM, Alajmi RA, Hassan ZK, et al. The Protective Properties of the Strawberry (Fragaria ananassa) against Carbon Tetrachloride-Induced Hepatotoxicity in Rats Mediated by Anti-Apoptotic and Upregulation of Antioxidant Genes Expression Effects. Frontiers in physiology. 2016;7:325.

Han J, Wang D, Li D, Chen X, Wang B, Wang F, et al. Licochalcone E protects against carbon tetrachlorideâ€˜induced liver toxicity by activating peroxisome proliferator-activated receptor gamma. Molecular medicine reports. 2017;16(4):5269-76.

Hanasono GK, Cote MG, Plaa GL. Potentiation of carbon tetrachloride-induced hepatotoxicity in alloxan- or strepto- zotocin-diabetic rats. The Journal of pharmacology and experimental therapeutics. 1975;192(3):592-604.

Hanna PM, Kadiiska MB, Jordan SJ, Mason RP. Role of metallothionein in zinc(II) and chromium(III) mediated tolerance to carbon tetrachloride hepatotoxicity: evidence against a trichloromethyl radical-scavenging mechanism. Chemical research in toxicology. 1993;6(5):711-7.

Harper DT, Jr., Robinson FR. Comparative pathology of animals exposed to carbon tetrachloride at ambient air vs. 5 psia 100 per cent oxygen atmosphere. AMRL-TR-66-120. AMRL-TR Aerospace Medical Research Laboratories (US). 1966:265-78.

Harper DT, Jr., Robinson FR. Comparative pathology of animals exposed to carbon tetrachloride in oxygen at 258 mm. Hg and in ambient air. Aerospace medicine. 1967;38(8):784-8.

Harris RN, Anders MW. Effect of fasting, diethyl maleate, and alcohols on carbon tetrachloride-induced hepatotoxicity. Toxicology and applied pharmacology. 1980;56(2):191-8.

Harris RN, Anders MW. 2-Propanol treatment induces selectively the metabolism of carbon tetrachloride to phosgene. Implications for carbon tetrachloride hepatotoxicity. Drug metabolism and disposition: the biological fate of chemicals. 1981;9(6):551-6.

Harris RN, Anders MW. Phosgene: a possible role in the potentiation of carbon tetrachloride hepatotoxicity by 2-propanol. Life sciences. 1981;29(5):503-7.

Harris RN, Ratnayake JH, Garry VF, Anders MW. Interactive hepatotoxicity of chloroform and carbon tetrachloride. Toxicology and applied pharmacology. 1982;63(2):281-91.

Harvey MJ, Klaassen CD. Interaction of metals and carbon tetrachloride on lipid peroxidation and hepatotoxicity. Toxicology and applied pharmacology. 1983;71(3):316-22.

Hasegawa T, Hirai Y, Koga N, Tomokuni K. Hepatic mitochondrial and microsomal recovery of rats intoxicated with CCl4. Industrial health. 1983;21(4):231-4.

Hasegawa T, Tomokuni K. Fatty acid synthesis in the hepatic soluble fraction of rat recovered from CCl4 intoxication. Biochemical pharmacology. 1983;32(15):2367-70.

Hashimoto T, Goto M, Sakakibara H, Oi N, Okamoto M, Kanazawa K. Yellow tea is more potent than other types of tea in suppressing liver toxicity induced by carbon tetrachloride in rats. Phytotherapy research : PTR. 2007;21(7):668-70.

Hassan MH, Bahashawan SA, Abdelghany TM, Abd-Allah GM, Ghobara MM. Crocin Abrogates Carbon Tetrachloride-Induced Renal Toxicity in Rats via Modulation of Metabolizing Enzymes and Diminution of Oxidative Stress, Apoptosis, and Inflammatory Cytokines. Journal of biochemical and molecular toxicology. 2015;29(7):330-9.

Hassan MH, Edfawy M, Mansour A, Hamed A-A. Antioxidant and antiapoptotic effects of capsaicin against carbon tetrachloride-induced hepatotoxicity in rats. Toxicology and industrial health. 2012;28(5):428-38.

Hasumura Y, Teschke R, Lieber CS. Increased carbon tetrachloride hepatotoxicity, and its mechanism, after chronic ethanol consumption. Gastroenterology. 1974;66(3):415-22.

Hathway DE. Chemical, biochemical and toxicological differences between carbon tetrachloride and chloroform. A critical review of recent investigations of these compounds in mammals. Arzneimittel-Forschung. 1974;24(2):173-6.

Hatta S. Involvement of alpha 1- and beta 2-adrenergic stimulation in the induction of hepatic DNA synthesis in carbon tetrachloride-intoxicated rats. Japanese journal of pharmacology. 1984;36(4):540-3.

Hatta S. Relationship between glucagon-induced cyclic AMP accumulation and DNA synthesis in carbon tetrachloride-intoxicated rat liver. Japanese journal of pharmacology. 1984;36(2):258-61.

Hatta S. Influence of plasma hormone levels on various stimulant-induced hepatic DNA synthesis in carbon tetrachloride-intoxicated rats. Japanese journal of pharmacology. 1985;37(1):77-84.

Hayes JR, Condie LM, Jr., Borzelleca JF. Acute, 14-day repeated dosing, and 90-day subchronic toxicity studies of carbon tetrachloride in CD-1 mice. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1986;7(3):454-63.

Hazem SH, Shaker ME, Ashamallah SA, Ibrahim TM. The novel Janus kinase inhibitor ruxolitinib confers protection against carbon tetrachloride-induced hepatotoxicity via multiple mechanisms. Chemico-biological interactions. 2014;220:116-27.

Hazle JD, Narayana PA, Dunsford HA. Chronic carbon tetrachloride and phospholipase D hepatotoxicity in rat: in vivo 1H magnetic resonance, total lipid analysis, and histology. Magnetic resonance in medicine. 1990;15(2):211-28.

Hazle JD, Narayana PA, Dunsford HA. In vivo NMR, biochemical, and histologic evaluation of alcohol-induced fatty liver in rat and a comparison with CCl4 hepatotoxicity. Magnetic resonance in medicine. 1991;19(1):124-35.

Head B, Moody DE, Woo CH, Smuckler EA. Alterations of specific forms of cytochrome P-450 in rat liver during acute carbon tetrachloride intoxication. Toxicology and applied pharmacology. 1981;61(2):286-95.

Heimberg M, Watkins ML, Tooker R. CARBON TETRACHLORIDE HEPATOTOXICITY: THE DIRECT ACTION OF CCL4 ON THE LIVER. The Journal of pharmacology and experimental therapeutics. 1964;145:92-101.

Hemmings SJ, Pulga VB, Tran ST, Uwiera RRE. Differential inhibitory effects of carbon tetrachloride on the hepatic plasma membrane, mitochondrial and endoplasmic reticular calcium transport systems: implications to hepatotoxicity. Cell biochemistry and function. 2002;20(1):47-59.

Henkel W, Wagner G. Output study on combined noise and carbon tetrachloride exposure in rats. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1978;24(7):519-22.

Hermenean A, Ardelean A, Stan M, Hadaruga N, Mihali C-V, Costache M, et al. Antioxidant and hepatoprotective effects of naringenin and its beta-cyclodextrin formulation in mice intoxicated with carbon tetrachloride: a comparative study. Journal of medicinal food. 2014;17(6):670-7.

Hermenean A, Ardelean A, Stan M, Herman H, Mihali C-V, Costache M, et al. Protective effects of naringenin on carbon tetrachloride-induced acute nephrotoxicity in mouse kidney. Chemico-biological interactions. 2013;205(2):138-47.

Hermenean A, Popescu C, Ardelean A, Stan M, Hadaruga N, Mihali C-V, et al. Hepatoprotective effects of Berberis vulgaris L. extract/beta cyclodextrin on carbon tetrachloride-induced acute toxicity in mice. International journal of molecular sciences. 2012;13(7):9014-34.

Heully F, Larcan A, Rauber G, Huriet C, Vaillant G, Aug MC. ANURIA CAUSED BY CARBON TETRACHLORIDE POISONING. APROPOS OF 5 CASES. Annales medicales de Nancy. 1963;2:1184-95.

Hewawasam RP, Jayatilaka KAPW, Pathirana C, Mudduwa LKB. Hepatoprotective effect of Epaltes divaricata extract on carbon tetrachloride induced hepatotoxicity in mice. The Indian journal of medical research. 2004;120(1):30-4.

Hewitt WR, Miyajima H, Cote MG, Hewitt LA, Cianflone DJ, Plaa GL. Dose-response relationships in 1,3-butanediol-induced potentiation of carbon tetrachloride toxicity. Toxicology and applied pharmacology. 1982;64(3):529-40.

Hewitt WR, Plaa GL. Potentiation of carbon tetrachloride-induced hepatotoxicity by 1,3-butanediol. Toxicology and applied pharmacology. 1979;47(1):177-80.

Highman B, Cyr WH, Streett RP, Jr. Effect of x-irradiation and fasting on hepatotoxicity of carbon tetrachloride in rats. Radiation research. 1973;54(3):444-52.

Hino M, Fuyamada H, Nagatsu T, Kurokawa S, Okuyama S. Glycylprolyl beta-naphthylamidase activities in serum, liver and kidney of rats in chronic carbon tetrachloride intoxication. Clinica chimica acta; international journal of clinical chemistry. 1976;67(1):103-5.

Hira K, Sultana V, Ara J, Haque SE. Protective role of Sargassum species in liver and kidney dysfunctions and associated disorders in rats intoxicated with carbon tetrachloride and acetaminophen. Pakistan journal of pharmaceutical sciences. 2017;30(3):721-8.

Hirschfeld I, Kovacs A, Laszlo A, Geangalau V. Protein metabolism in experimental carbon tetrachloride and chloroform poisoning. 3. Uptake of methionine-S35 in different organs during acute intoxications. Fiziologia normala si patologica. 1969;15(1):77-83.

Hirschfeld I, Kovacs A, Laszlo A, Jazigian A. Protein metabolism in experimental poisoning with carbon tetrachloride and chloroform. IV. Incorporation of methionine-S35 in different organs during chronic poisoning. Fiziologia normala si patologica. 1969;15(2):157-62.

Hismiogullari AA, Hismiogullari SE, Karaca O, Sunay FB, Paksoy S, Can M, et al. The protective effect of curcumin administration on carbon tetrachloride (CCl4)-induced nephrotoxicity in rats. Pharmacological reports : PR. 2015;67(3):410-6.

Hoenig V, Hoenigova J. SOME SEROLOGICAL PECULIARITIES IN RATS INTOXICATED BY CARBON TETRACHLORIDE. Tijdschrift voor gastro-enterologie. 1964;7:277-81.

Holden PR, James NH, Brooks AN, Roberts RA, Kimber I, Pennie WD. Identification of a possible association between carbon tetrachloride-induced hepatotoxicity and interleukin-8 expression. Journal of biochemical and molecular toxicology. 2000;14(5):283-90.

Honma T, Suda M. Changes in plasma lipoproteins as toxicity markers for carbon tetrachloride, chloroform, and dichloromethane. Industrial health. 1997;35(4):519-31.

Horiuchi T, Ohtsubo K, Saito M. Development of resistance to hepatotoxic effect of furylfuramide by pretreatment with its subnecrotic doses and carbon tetrachloride. The Japanese journal of experimental medicine. 1978;48(1):27-33.

Hortelano P, Faus MJ, Morata P, Sanchez-Medina F. Evolution of liver and kidney gluconeogenesis during acute liver intoxication by carbon tetrachloride (author's transl). Revista espanola de fisiologia. 1979;35(3):341-6.

Hortelano P, Faus MJ, Munoz-Clares R, Sanchez-Medina F. Influence of dietary manipulations on rat kidney gluconeogenesis during acute intoxication with carbon tetrachloride. General pharmacology. 1980;11(6):503-6.

Hortelano P, Faus MJ, Pita ML, Sanchez-Medina F. Involvement of glucocorticoids in the stimulation of rat kidney phosphoenolpyruvate carboxykinase activity after liver intoxication by carbon tetrachloride. Toxicology letters. 1980;6(1):5-10.

Hove EL, Hardin JO. Effect of vitamins E, B12 and folacin on CCL4 toxicity and protein utilization in rats. Proceedings of the Society for Experimental Biology and Medicine Society for Experimental Biology and Medicine (New York, NY). 1951;77(3):502-5.

Hsiao G, Lin YH, Lin CH, Chou DS, Lin WC, Sheu JR. The protective effects of PMC against chronic carbon tetrachloride-induced hepatotoxicity in vivo. Biological & pharmaceutical bulletin. 2001;24(11):1271-6.

Hsieh P-C, Ho Y-L, Huang G-J, Huang M-H, Chiang Y-C, Huang S-S, et al. Hepatoprotective effect of the aqueous extract of Flemingia macrophylla on carbon tetrachloride-induced acute hepatotoxicity in rats through anti-oxidative activities. The American journal of Chinese medicine. 2011;39(2):349-65.

Hsu Y-W, Tsai C-F, Chang W-H, Ho Y-C, Chen W-K, Lu F-J. Protective effects of Dunaliella salina--a carotenoids-rich alga, against carbon tetrachloride-induced hepatotoxicity in mice. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2008;46(10):3311-7.

Hsu Y-W, Tsai C-F, Chen W-K, Lu F-J. Protective effects of seabuckthorn (Hippophae rhamnoides L.) seed oil against carbon tetrachloride-induced hepatotoxicity in mice. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2009;47(9):2281-8.

Hsu Y-W, Tsai C-F, Chuang W-C, Chen W-K, Ho Y-C, Lu F-J. Protective effects of silica hydride against carbon tetrachloride-induced hepatotoxicity in mice. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2010;48(6):1644-53.

Huang TL, Villalobos SA, Hammock BD. Effect of hepatotoxic doses of paracetamol and carbon tetrachloride on the serum and hepatic carboxylesterase activity in mice. The Journal of pharmacy and pharmacology. 1993;45(5):458-65.

Huang WY, Liu GT. Mechanism of the protective action of kopsinine against hepatotoxicity of carbon tetrachloride. Zhongguo yao li xue bao = Acta pharmacologica Sinica. 1989;10(5):461-4.

Hughes JP. Toxicity of carbon tetrachloride. British medical journal. 1969;3(5666):360.

Hummler H. The antitoxic effects of beta-pyridyl carbinol and nicotinic acid in the rat liver damaged by CCl4. Arzneimittel-Forschung. 1971;21(3):360-2.

Hunt ER. Hepatotoxicity of carbon tetrachloride in sheep. 1. The influence of diet. Australian veterinary journal. 1971;47(6):272-4.

Hunt ER. Hepatotoxicity of carbon tetrachloride in sheep. 2. Influence of ingestion of Heliotropium europaeum. Australian veterinary journal. 1972;48(2):57-61.

Hussain F, Malik A, Ayyaz U, Shafique H, Rana Z, Hussain Z. Efficient hepatoprotective activity of cranberry extract against CCl4-induced hepatotoxicity in Wistar albino rat model: Down-regulation of liver enzymes and strong antioxidant activity. Asian Pacific journal of tropical medicine. 2017;10(11):1054-8.

Hwang YP, Choi CY, Chung YC, Jeon SS, Jeong HG. Protective effects of puerarin on carbon tetrachloride-induced hepatotoxicity. Archives of pharmacal research. 2007;30(10):1309-17.

Hwang YP, Choi JH, Jeong HG. Protective effect of the Aralia continentalis root extract against carbon tetrachloride-induced hepatotoxicity in mice. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2009;47(1):75-81.

Ibrahim ZS, Nassan MA, Soliman MM. Ameliorative effects of pomegranate on carbon tetrachloride hepatotoxicity in rats: A molecular and histopathological study. Molecular medicine reports. 2016;13(4):3653-60.

Ichi I, Kamikawa C, Nakagawa T, Kobayashi K, Kataoka R, Nagata E, et al. Neutral sphingomyelinase-induced ceramide accumulation by oxidative stress during carbon tetrachloride intoxication. Toxicology. 2009;261(1-2):33-40.

Ichi I, Nakahara K, Fujii K, Iida C, Miyashita Y, Kojo S. Increase of ceramide in the liver and plasma after carbon tetrachloride intoxication in the rat. Journal of nutritional science and vitaminology. 2007;53(1):53-6.

Icho T, Kojima S, Yoshikawa K, Yoshimura T, Shirota M, Kajiwara Y, et al. Inhibition of carbon tetrachloride-induced hepatotoxicity by neopterins. Biological & pharmaceutical bulletin. 1994;17(7):914-6.

Iga T, Sugiyama Y, Yokota M, Tomono Y, Awazu S, Hanano M. Pharmacokinetic aspects of sulfobromophthalein transport in chronically carbon tetrachloride-intoxicated rats. Biochemical pharmacology. 1977;26(20):1867-75.

Iga T, Yokota M, Sugiyama Y, Awazu S, Hanano M. Hepatic transport of indocyanine green in rats chronically intoxicated with carbon tetrachloride. Biochemical pharmacology. 1980;29(9):1291-7.

Iida C, Fujii K, Kishioka T, Nagae R, Onishi Y, Ichi I, et al. Activation of mitogen activated protein kinase (MAPK) during carbon tetrachloride intoxication in the rat liver. Archives of toxicology. 2007;81(7):489-93.

Iida C, Fujii K, Koga E, Washino Y, Kitamura Y, Ichi I, et al. Effect of alpha-tocopherol on carbon tetrachloride intoxication in the rat liver. Archives of toxicology. 2009;83(5):477-83.

Ikatsu H, Nakajima T. Hepatotoxic interaction between carbon tetrachloride and chloroform in ethanol treated rats. Archives of toxicology. 1992;66(8):580-6.

Ikatsu H, Okino T, Nakajima T. Ethanol and food deprivation induced enhancement of hepatotoxicity in rats given carbon tetrachloride at low concentration. British journal of industrial medicine. 1991;48(9):636-42.

Ikeda K, Toda M, Tanaka K, Tokumaru S, Kojo S. Increase of lipid hydroperoxides in liver mitochondria and inhibition of cytochrome oxidase by carbon tetrachloride intoxication in rats. Free radical research. 1998;28(4):403-10.

Ikegwuonu FI, Mehendale HM. Biochemical assessment of the genotoxicity of the in vitro interaction between chlordecone and carbon tetrachloride in rat hepatocytes. Journal of applied toxicology : JAT. 1991;11(4):303-10.

Ikewuchi JC, Ikewuchi CC, Igboh NM, Mark-Balm T. Protective effect of aqueous extract of the rhizomes of Sansevieria liberica Gerome and Labroy on carbon tetrachloride induced hepatotoxicity in rats. EXCLI journal. 2011;10:312-21.

Ilavenil S, Kaleeswaran B, Ravikumar S. Protective effects of lycorine against carbon tetrachloride induced hepatotoxicity in Swiss albino mice. Fundamental & clinical pharmacology. 2012;26(3):393-401.

Ince S, Keles H, Erdogan M, Hazman O, Kucukkurt I. Protective effect of boric acid against carbon tetrachloride-induced hepatotoxicity in mice. Drug and chemical toxicology. 2012;35(3):285-92.

Inder RE, Bray BJ, Sipes IG, Rosengren RJ. Role of cytochrome P4502E1 in retinol's attenuation of carbon tetrachloride-induced hepatotoxicity in the Swiss Webster mouse. Toxicological sciences : an official journal of the Society of Toxicology. 1999;52(1):130-9.

Inesi G. Prednisone in the evolution of experimental toxic hepatitis from carbon tetrachloride: histological findings. Archivio italiano di scienze farmacologiche. 1959;9:360-3.

Innerfield I, Rowley GR, Zwell P, Porpora J. The rat plasminogen system, intrahepatic fibrinolysis and carbon tetrachloride hepatotoxicity. Thrombosis et diathesis haemorrhagica. 1967;18(3-4):447-55.

Ip SP, Ko KM. The crucial antioxidant action of schisandrin B in protecting against carbon tetrachloride hepatotoxicity in mice: a comparative study with butylated hydroxytoluene. Biochemical pharmacology. 1996;52(11):1687-93.

Ip SP, Ma CY, Che CT, Ko KM. Methylenedioxy group as determinant of schisandrin in enhancing hepatic mitochondrial glutathione in carbon tetrachloride-intoxicated mice. Biochemical pharmacology. 1997;54(2):317-9.

Ip SP, Poon MK, Che CT, Ng KH, Kong YC, Ko KM. Schisandrin B protects against carbon tetrachloride toxicity by enhancing the mitochondrial glutathione redox status in mouse liver. Free radical biology & medicine. 1996;21(5):709-12.

Ip SP, Poon MK, Wu SS, Che CT, Ng KH, Kong YC, et al. Effect of schisandrin B on hepatic glutathione antioxidant system in mice: protection against carbon tetrachloride toxicity. Planta medica. 1995;61(5):398-401.

Ip SP, Yiu HY, Ko KM. Differential effect of schisandrin B and dimethyl diphenyl bicarboxylate (DDB) on hepatic mitochondrial glutathione redox status in carbon tetrachloride intoxicated mice. Molecular and cellular biochemistry. 2000;205(1-2):111-4.

Irie H, Asano-Hoshino A, Sekino Y, Nogami M, Kitagawa T, Kanda H. Striking LD50 variation associated with fluctuations of CYP2E1-positive cells in hepatic lobule during chronic CCl4 exposure in mice. Virchows Archiv : an international journal of pathology. 2010;456(4):423-31.

Irita K, Okabe H, Koga A, Yamakawa M, Yoshitake J, Takahashi S. The effects of dichloroacetate on liver damage and circulating fuels in rats exposed to carbon tetrachloride. Journal of gastroenterology and hepatology. 1994;9(1):26-9.

Ishidate K, Enosawa S, Nakazawa Y. Actinomycin D-sensitive induction of choline kinase by carbon tetrachloride intoxication in rat liver. Biochemical and biophysical research communications. 1983;111(2):683-9.

Ishiyama H, Sato M, Matsumura K, Sento M, Ogino K, Hobara T. Proliferation of hepatocytes and attenuation from carbon tetrachloride hepatotoxicity by gadolinium chloride in rats. Pharmacology & toxicology. 1995;77(4):293-8.

Ismail NA, Shamsahal-Din NS, Mamat SS, Zabidi Z, Wan Zainulddin W-N, Kamisan FH, et al. Effect of aqueous extract of Dicranopteris linearis leaves against paracetamol and carbon tetrachloride-induced liver toxicity in rats. Pakistan journal of pharmaceutical sciences. 2014;27(4):831-5.

Isozaki M, Masubuchi Y, Horie T. Retinol binding protein in plasma to evaluate the hepatotoxicity of rats treated with CCl4. Research communications in molecular pathology and pharmacology. 2001;110(5-6):303-10.

Itoshima T, Kiyotoshi S, Kawaguchi K, Ito T, Ogawa H, Nagashima H, et al. Scanning electron microscopy of rat degenerated hepatocytes after carbon tetrachloride intoxication. Scanning electron microscopy. 1981(Pt 3):131-6.

Jadhav VB, Thakare VN, Suralkar AA, Deshpande AD, Naik SR. Hepatoprotective activity of Luffa acutangula against CCl4 and rifampicin induced liver toxicity in rats: a biochemical and histopathological evaluation. Indian journal of experimental biology. 2010;48(8):822-9.

Jain M, Kapadia R, Jadeja RN, Thounaojam MC, Devkar RV, Mishra SH. Amelioration of carbon tetrachloride induced hepatotoxicity in rats by standardized Feronia limonia. Linn leaf extracts. EXCLI journal. 2012;11:250-9.

Jain M, Kapadia R, Jadeja RN, Thounaojam MC, Devkar RV, Mishra SH. Protective role of standardized Feronia limonia stem bark methanolic extract against carbon tetrachloride induced hepatotoxicity. Annals of hepatology. 2012;11(6):935-43.

Jamila N, Khan N, Khan AA, Khan I, Khan SN, Zakaria ZA, et al. IN VIVO CARBON TETRACHLORIDE-INDUCED HEPATOPROTECTIVE AND IN VITRO CYTOTOXIC ACTIVITIES OF GARCINIA HOMBRONIANA (SEASHORE MANGOSTEEN). African journal of traditional, complementary, and alternative medicines : AJTCAM. 2017;14(2):374-82.

Jamshidzadeh A, Heidari R, Razmjou M, Karimi F, Moein MR, Farshad O, et al. An in vivo and in vitro investigation on hepatoprotective effects of Pimpinella anisum seed essential oil and extracts against carbon tetrachloride-induced toxicity. Iranian journal of basic medical sciences. 2015;18(2):205-11.

Jan S, Khan MR. Protective effects of Monotheca buxifolia fruit on renal toxicity induced by CCl4 in rats. BMC complementary and alternative medicine. 2016;16(1):289.

Janakat S, Al-Merie H. Optimization of the dose and route of injection, and characterisation of the time course of carbon tetrachloride-induced hepatotoxicity in the rat. Journal of pharmacological and toxicological methods. 2002;48(1):41-4.

Janbaz KH, Gilani AH. Potentiation of paracetamol and carbon tetrachloride-induced hepatotoxicity in rodents by the food additive vanillin. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 1999;37(6):603-7.

Janbaz KH, Saeed SA, Gilani AH. Protective effect of rutin on paracetamol- and CCl4-induced hepatotoxicity in rodents. Fitoterapia. 2002;73(7-8):557-63.

Jeong HG, Park HY. The prevention of carbon tetrachloride-induced hepatotoxicity in mice by alpha-hederin: inhibiton of cytochrome P450 2E1 expression. Biochemistry and molecular biology international. 1998;45(1):163-70.

Jeong TC, Kim HJ, Park JI, Ha CS, Park JD, Kim SI, et al. Protective effects of red ginseng saponins against carbon tetrachloride-induced hepatotoxicity in Sprague Dawley rats. Planta medica. 1997;63(2):136-40.

Jirova D, Sperlingova I, Halaskova M, Bendova H, Dabrowska L. Immunotoxic effects of carbon tetrachloride--the effect on morphology and function of the immune system in mice. Central European journal of public health. 1996;4(1):16-20.

Joglekar GV, Chitale GK, Balwani JH. PROTECTION BY INDIGENOUS DRUGS AGAINST HEPATOTOXIC EFFECTS OF CARBON TETRACHLORIDE IN MICE. Acta pharmacologica et toxicologica. 1963;20:73-9.

Johnston DE, Kroening C. Mechanism of early carbon tetrachloride toxicity in cultured rat hepatocytes. Pharmacology & toxicology. 1998;83(6):231-9.

Johnston GW, Williams AO. Cerebral changes in monkeys with carbon tetrachloride intoxication. Irish journal of medical science. 1966;6(481):23-8.

Jones DH, Kim HL. Toxicity of hymenoxon in Swiss white mice following pretreatment with microsomal enzyme inducers, inhibitors and carbon tetrachloride. Research communications in chemical pathology and pharmacology. 1981;33(2):361-4.

Jouanneteau J, Zwingelstein G. The metabolism of vitamin A during the development of different types of agressions. II. Effects of carbon tetrachloride poisoning on liver vitamin A esterase. Comptes rendus des seances de la Societe de biologie et de ses filiales. 1969;162(7):1359-62.

Junnila M, Rahko T, Sukura A, Lindberg LA. Reduction of carbon tetrachloride-induced hepatotoxic effects by oral administration of betaine in male Han-Wistar rats: a morphometric histological study. Veterinary pathology. 2000;37(3):231-8.

Kalf GF, Post GB, Snyder R. Solvent toxicology: recent advances in the toxicology of benzene, the glycol ethers, and carbon tetrachloride. Annual review of pharmacology and toxicology. 1987;27:399-427.

Kamal MM, Omran OM. The role of heat shock protein 70 induced by geranylgeranylacetone in carbon tetrachloride-exposed adult rat testes. Pathophysiology : the official journal of the International Society for Pathophysiology. 2013;20(2):139-46.

Kamalakkannan N, Rukkumani R, Varma PS, Viswanathan P, Rajasekharan KN, Menon VP. Comparative effects of curcumin and an analogue of curcumin in carbon tetrachloride-induced hepatotoxicity in rats. Basic & clinical pharmacology & toxicology. 2005;97(1):15-21.

Kamel SH, Elwi AM, el-Kateb H, Soliman MA. The preventive effects of nicotinic acid against experimental hepatotoxicity produced by carbon tetrachloride. The Journal of the Egyptian Medical Association. 1965;48(10):671-9.

Kamiyama T, Sato C, Liu J, Tajiri K, Miyakawa H, Marumo F. Role of lipid peroxidation in acetaminophen-induced hepatotoxicity: comparison with carbon tetrachloride. Toxicology letters. 1993;66(1):7-12.

Kaneko M, Nagamine T, Nakazato K, Mori M. The anti-apoptotic effect of fucoxanthin on carbon tetrachloride-induced hepatotoxicity. The Journal of toxicological sciences. 2013;38(1):115-26.

Kang JO, Kim SJ, Kim H. Effect of astaxanthin on the hepatotoxicity, lipid peroxidation and antioxidative enzymes in the liver of CCl4-treated rats. Methods and findings in experimental and clinical pharmacology. 2001;23(2):79-84.

Kang KY, Kim JN, Chang IY, Park SH, Yoon SP. Calretinin immunoreactivity in normal and carbon tetrachloride-induced nephrotoxic rats. Acta histochemica. 2011;113(7):712-6.

Kapuscinski J, Kuroszczyk J, Liniecki J, Bienkiewicz M, Tuszyner K. Experimental toxic liver damage and hepatic plasma clearance of 99mTc-mebrofenin (iminodiacetate derivative). III. Chronic CCl4-induced liver damage with eventual cirrhosis in rabbits. International journal of occupational medicine and environmental health. 1995;8(3):255-65.

Kapuscinski J, Kuroszczyk J, Liniecki J, Bienkiewicz M, Zielinski K, Tuszyner K. Experimental toxic liver damage and hepatic plasma clearance of 99mTc-mebrofenin (iminodiacetate derivative). I. Early, acute CCl4-induced liver damage in rabbits. Polish journal of occupational medicine and environmental health. 1993;6(2):169-83.

Kapuscinski J, Kuroszczyk J, Liniecki J, Bienkiewicz M, Zielinski K, Tuszyner K. Experimental toxic liver damage and hepatic plasma clearance of 99mTc-mebrofenin (iminodiacetate derivative). II. Recovery from the acute, CCl4-induced liver damage. Polish journal of occupational medicine and environmental health. 1993;6(4):399-408.

Karan M, Vasisht K, Handa SS. Antihepatotoxic activity of Swertia chirata on carbon tetrachloride induced hepatotoxicity in rats. Phytotherapy research : PTR. 1999;13(1):24-30.

Karandikar SM, Joglekar GV, Chitale GK, Balwani JH. PROTECTION BY INDIGENOUS DRUGS AGAINST HEPATOTOXIC EFFECTS OF CARBON TETRACHLORIDE - A LONG TERM STUDY. Acta pharmacologica et toxicologica. 1963;20:274-80.

Karkampouna S, Goumans M-J, Ten Dijke P, Dooley S, Kruithof-de Julio M. Inhibition of TGFbeta type I receptor activity facilitates liver regeneration upon acute CCl4 intoxication in mice. Archives of toxicology. 2016;90(2):347-57.

Kast A, Nishikawa J, Yabe T. Decrease of carbon tetrachloride liver toxicity in rats given dipyridamole. Experimental pathology. 1982;21(2):123-33.

Kaszewska-Jablonska I. The effect of acute and chronic carbon tetrachloride intoxication on subcellural iron distribution in rat liver (author's transl). Acta biologica et medica. 1971;15(4):369-426.

Kato H, Nakazawa Y. Carbon tetrachloride and trichloroethylene toxicities to rat hepatocytes in primary monolayer culture: its relationship to the level of cytochrome P-450. Toxicology letters. 1986;34(1):55-66.

Katz A, Chebath J, Friedman J, Revel M. Increased sensitivity of IL-6-deficient mice to carbon tetrachloride hepatotoxicity and protection with an IL-6 receptor-IL-6 chimera. Cytokines, cellular & molecular therapy. 1998;4(4):221-7.

Kaufman SN, Larson RE. The effect of hypothermia on biochemical and morphological aspects of carbon tetrachloride hepatotoxicity. Research communications in chemical pathology and pharmacology. 1981;31(3):463-74.

Kawakami T, Takahashi T, Shimizu H, Nakahira K, Takeuchi M, Katayama H, et al. Highly liver-specific heme oxygenase-1 induction by interleukin-11 prevents carbon tetrachloride-induced hepatotoxicity. International journal of molecular medicine. 2006;18(4):537-46.

Kawashima R, Mochida S, Matsui A, YouLuTuZ Y, Ishikawa K, Toshima K, et al. Expression of osteopontin in Kupffer cells and hepatic macrophages and Stellate cells in rat liver after carbon tetrachloride intoxication: a possible factor for macrophage migration into hepatic necrotic areas. Biochemical and biophysical research communications. 1999;256(3):527-31.

Kefalas V, Stacey NH. Potentiation of carbon tetrachloride-induced lipid peroxidation by trichloroethylene in isolated rat hepatocytes: no role in enhanced toxicity. Toxicology and applied pharmacology. 1989;101(1):158-69.

Kefalas V, Stacey NH. Potentiating effects of chlorinated hydrocarbons on carbon tetrachloride toxicity in isolated rat hepatocytes and plasma membranes. Toxicology and applied pharmacology. 1991;109(1):171-9.

Kefalas V, Stacey NH. Use of primary cultures of rat hepatocytes to study interactive toxicity: Carbon tetrachloride and trichloroethylene. Toxicology in vitro : an international journal published in association with BIBRA. 1993;7(3):235-40.

Kehoe EL, Overholt EL. Lower nephron nephrosis following exposure to carbon tetrachloride inhalation. Medical bulletin of the U S Army, Europe United States Army, Europe Medical Division. 1955;12(9):213-8.

Kemelo MK, Pierzynova A, Kutinova Canova N, Kucera T, Farghali H. The involvement of sirtuin 1 and heme oxygenase 1 in the hepatoprotective effects of quercetin against carbon tetrachloride-induced sub-chronic liver toxicity in rats. Chemico-biological interactions. 2017;269:1-8.

Kenel MF, Kulkarni AP. Ethanol potentiation of carbon tetrachloride hepatotoxicity: possible role for the in vivo inhibition of aldehyde dehydrogenase. General pharmacology. 1985;16(4):355-60.

Kepekci RA, Polat S, Celik A, Bayat N, Saygideger SD. Protective effect of Spirulina platensis enriched in phenolic compounds against hepatotoxicity induced by CCl4. Food chemistry. 2013;141(3):1972-9.

Khadeer Ahamed MB, Krishna V, Dandin CJ. In vitro antioxidant and in vivo prophylactic effects of two gamma-lactones isolated from Grewia tiliaefolia against hepatotoxicity in carbon tetrachloride intoxicated rats. European journal of pharmacology. 2010;631(1-3):42-52.

Khan MA, Gupta A, Sastry JLN, Ahmad S. Hepatoprotective potential of kumaryasava and its concentrate against CCl4-induced hepatic toxicity in Wistar rats. Journal of pharmacy & bioallied sciences. 2015;7(4):297-9.

Khan MR, Rizvi W, Khan GN, Khan RA, Shaheen S. Carbon tetrachloride-induced nephrotoxicity in rats: protective role of Digera muricata. Journal of ethnopharmacology. 2009;122(1):91-9.

Khan RA, Khan MR, Sahreen S. CCl4-induced hepatotoxicity: protective effect of rutin on p53, CYP2E1 and the antioxidative status in rat. BMC complementary and alternative medicine. 2012;12:178.

Khan RA, Khan MR, Sahreen S, Bokhari J. Prevention of CCl4-induced nephrotoxicity with Sonchus asper in rat. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2010;48(8-9):2469-76.

Khan RA, Khan MR, Shah NA, Sahreen S, Siddiq P. Modulation of carbon tetrachloride-induced nephrotoxicity in rats by n-hexane extract of Sonchus asper. Toxicology and industrial health. 2015;31(10):955-9.

Kim HJ, Odend'hal S, Bruckner JV. Effect of oral dosing vehicles on the acute hepatotoxicity of carbon tetrachloride in rats. Toxicology and applied pharmacology. 1990;102(1):34-49.

Kim HS, Lim HK, Chung MW, Kim YC. Antihepatotoxic activity of bergenin, the major constituent of Mallotus japonicus, on carbon tetrachloride-intoxicated hepatocytes. Journal of ethnopharmacology. 2000;69(1):79-83.

Kim N-Y, Lee M-K, Park M-J, Kim S-J, Park H-J, Choi J-W, et al. Momordin Ic and oleanolic acid from Kochiae Fructus reduce carbon tetrachloride-induced hepatotoxicity in rats. Journal of medicinal food. 2005;8(2):177-83.

Kim RS, LaBella FS. Criteria for determination of lipid peroxidation in tissues: estimation in liver of mice intoxicated with carbon tetrachloride. Canadian journal of physiology and pharmacology. 1987;65(7):1503-6.

Kim SG, Chung HC, Cho JY. Molecular mechanism for alkyl sulfide-modulated carbon tetrachloride-induced hepatotoxicity: the role of cytochrome P450 2E1, P450 2B and glutathione S-transferase expression. The Journal of pharmacology and experimental therapeutics. 1996;277(2):1058-66.

Kim SH, Jang YP, Sung SH, Kim CJ, Kim JW, Kim YC. Hepatoprotective dibenzylbutyrolactone lignans of Torreya nucifera against CCl4-induced toxicity in primary cultured rat hepatocytes. Biological & pharmaceutical bulletin. 2003;26(8):1202-5.

Kim S, Na J-Y, Song K, Kwon J. In vivo protective effect of phosphatidylcholine on carbon tetrachloride induced nephrotoxicity. Experimental and toxicologic pathology : official journal of the Gesellschaft fur Toxikologische Pathologie. 2016;68(10):553-8.

Kim SJ, Jung YS, Yoon MY, Kim YC. Comparative effects of dimethylsulfoxide on metabolism and toxicity of carbon tetrachloride and dichloromethane. Journal of applied toxicology : JAT. 2007;27(1):25-31.

Kim S-H, Cheon HJ, Yun N, Oh S-T, Shin E, Shim KS, et al. Protective effect of a mixture of Aloe vera and Silybum marianum against carbon tetrachloride-induced acute hepatotoxicity and liver fibrosis. Journal of pharmacological sciences. 2009;109(1):119-27.

Kim TH, Kim YW, Shin SM, Kim CW, Yu IJ, Kim SG. Synergistic hepatotoxicity of N,N-dimethylformamide with carbon tetrachloride in association with endoplasmic reticulum stress. Chemico-biological interactions. 2010;184(3):492-501.

Kim T-W, Lee D-R, Choi B-K, Kang H-K, Jung J-Y, Lim S-W, et al. Hepatoprotective effects of polymethoxyflavones against acute and chronic carbon tetrachloride intoxication. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2016;91:91-9.

Kim YC. Dichloromethane potentiation of carbon tetrachloride hepatotoxicity in rats. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1997;35(1):138-41.

Kim Y, DiSilvestro R, Clinton S. Effects of lycopene-beadlet or tomato-powder feeding on carbon tetrachloride-induced hepatotoxicty in rats. Phytomedicine : international journal of phytotherapy and phytopharmacology. 2004;11(2-3):152-6.

Kishi T, Takahashi T, Okamoto T. Cytosolic NADPH-UQ reductase-linked recycling of cellular ubiquinol: its protective effect against carbon tetrachloride hepatotoxicity in rat. Molecular aspects of medicine. 1997;18 Suppl:S71-7.

Kiso K, Ueno S, Fukuda M, Ichi I, Kobayashi K, Sakai T, et al. The role of Kupffer cells in carbon tetrachloride intoxication in mice. Biological & pharmaceutical bulletin. 2012;35(6):980-3.

Kiso Y, Tohkin M, Hikino H. Assay method for antihepatotoxic activity using carbon tetrachloride induced cytotoxicity in primary cultured hepatocytes. Planta medica. 1983;49(4):222-5.

Kiyotoshi S. Kupffer cell hyperplasia in rats intoxicated by carbon tetrachloride as demonstrated by scanning electron microscopy. Gastroenterologia Japonica. 1982;17(5):422-9.

Klingensmith JS, Lockard V, Mehendale HM. Acute hepatotoxicity and lethality of CCl4 in chlordecone-pretreated rats. Experimental and molecular pathology. 1983;39(1):1-10.

Klinger W. Toxicity, narcotic effect, blood level after awakening, elimination from the blood and biotransformation of hexobarbital in rats of different ages after induction with barbital and carbon tetrachloride poisoning. Archives internationales de pharmacodynamie et de therapie. 1970;184(1):5-18.

Kluwe WM, Hook JB, Bernstein J. Synergistic toxicity of carbon tetrachloride and several aromatic organohalide compounds. Toxicology. 1982;23(4):321-36.

Kniepert E, Siegemund A, Gorisch V. Influence of ethanol pretreatment of differing duration on toxic effects of carbon tetrachloride in rats. Biomedica biochimica acta. 1990;49(10):1097-102.

Kniepert E, Siegemund A, Rosenkranz M, Gorisch V. Toxic effects of carbon tetrachloride during short and long term ethanol intake in rats. Archives of toxicology Supplement = Archiv fur Toxikologie Supplement. 1991;14:263-5.

Ko H-J, Chen J-H, Ng LT. Hepatoprotection of Gentiana scabra extract and polyphenols in liver of carbon tetrachloride-intoxicated mice. Journal of environmental pathology, toxicology and oncology : official organ of the International Society for Environmental Toxicology and Cancer. 2011;30(3):179-87.

Ko KM, Ip SP, Poon MK, Wu SS, Che CT, Ng KH, et al. Effect of a lignan-enriched fructus schisandrae extract on hepatic glutathione status in rats: protection against carbon tetrachloride toxicity. Planta medica. 1995;61(2):134-7.

Koc Y, Sokmen M, Unsal A, Cigerli S, Ozagari A, Basturk T, et al. Effects of human Umbilical Cord Stem Cells and Granulocyte Colony- Stimulating Factor (G-CSF) on Carbon Tetrachloride-Induced Nephrotoxicity. Nephro-urology monthly. 2012;4(3):545-50.

Kodavanti PR, Joshi UM, Mehendale HM, Lockard VG. Chlordecone (Kepone)-potentiated carbon tetrachloride hepatotoxicity in partially hepatectomized rats--a histomorphometric study. Journal of applied toxicology : JAT. 1989;9(6):367-75.

Kodavanti PR, Joshi UM, Young RA, Bell AN, Mehendale HM. Role of hepatocellular regeneration in chlordecone potentiated hepatotoxicity of carbon tetrachloride. Archives of toxicology. 1989;63(5):367-75.

Kodavanti PR, Joshi UM, Young RA, Meydrech EF, Mehendale HM. Protection of hepatotoxic and lethal effects of CCl4 by partial hepatectomy. Toxicologic pathology. 1989;17(3):494-505.

Kodavanti PR, Kodavanti UP, Faroon OM, Mehendale HM. Pivotal role of hepatocellular regeneration in the ultimate hepatotoxicity of CCl4 in chlordecone-, mirex-, or phenobarbital-pretreated rats. Toxicologic pathology. 1992;20(4):556-69.

Kodavanti PR, Kodavanti UP, Mehendale HM. Altered hepatic energy status in chlordecone (Kepone)-potentiated CCl4 hepatotoxicity. Biochemical pharmacology. 1990;40(4):859-66.

Kodavanti PR, Rao VC, Mehendale HM. Loss of calcium homeostasis leads to progressive phase of chlordecone-potentiated carbon tetrachloride hepatotoxicity. Toxicology and applied pharmacology. 1993;122(1):77-87.

Koecher Z, Habermannova S, Cerhova M, Suva J. THE INFLUENCE OF OROTIC ACID ON LIVER PARENCHYMA. IV. CHANGES IN SERUM AND LIVER LIPIDS DUE TO CHRONIC CARBON TETRACHLORIDE INTOXICATION. Acta vitaminologica. 1964;18:269-75.

Koh PH, Mokhtar RAM, Iqbal M. Andrographis paniculata ameliorates carbon tetrachloride (CCl(4))-dependent hepatic damage and toxicity: diminution of oxidative stress. Redox report : communications in free radical research. 2011;16(3):134-43.

Koh PH, Mokhtar RAM, Iqbal M. Antioxidant potential of Cymbopogon citratus extract: alleviation of carbon tetrachloride-induced hepatic oxidative stress and toxicity. Human & experimental toxicology. 2012;31(1):81-91.

Kojima-Yuasa A, Kamatani K, Tabuchi M, Akahoshi Y, Kennedy DO, Matsui-Yuasa I. Zinc deficiency enhances sensitivity to carbon tetrachloride-induced hepatotoxicity in rats. Journal of trace elements in medicine and biology : organ of the Society for Minerals and Trace Elements (GMS). 2011;25(2):103-8.

Kolomiitseva MG, Skoropostizhnaia AS, Osipov GK, Kolomiitsev AK. Desintoxicating properties of copper and iodine under the action of carbon tetrachloride in animals. Gigiena i sanitariia. 1966;31(4):38-40.

Koporec KP, Kim HJ, MacKenzie WF, Bruckner JV. Effect of oral dosing vehicles on the subchronic hepatotoxicity of carbon tetrachloride in the rat. Journal of toxicology and environmental health. 1995;44(1):13-27.

Korol SA, Rodionov GA. Histomorphological studies on the liver in rats of various ages under combined effects of carbon tetrachloride and hepato-cytoxic mitochondrial sera. Patologicheskaia fiziologiia i eksperimental'naia terapiia. 1965;9(2):54-9.

Kostiuk VA, Potapovich AI, Maslova GT. Status of the antioxidant protective system of rat liver exposed to carbon tetrachloride. Ukrainskii biokhimicheskii zhurnal (1978). 1992;64(3):111-5.

Krishnakumar NM, Latha PG, Suja SR, Shine VJ, Shyamal S, Anuja GI, et al. Hepatoprotective effect of Hibiscus hispidissimus Griffith, ethanolic extract in paracetamol and CCl4 induced hepatotoxicity in Wistar rats. Indian journal of experimental biology. 2008;46(9):653-9.

Krishnan N, Stenger RJ. Effects of starvation on the hepatotoxicity of carbon tetrachloride. A light and electron microscopic study. The American journal of pathology. 1966;49(2):239-55.

Krishnappa P, Venkatarangaiah K, Venkatesh, Shivamogga Rajanna SK, Kashi Prakash Gupta R. Antioxidant and prophylactic effects of Delonix elata L., stem bark extracts, and flavonoid isolated quercetin against carbon tetrachloride-induced hepatotoxicity in rats. BioMed research international. 2014;2014:507851.

Krithika R, Verma RJ, Shrivastav PS. Antioxidative and cytoprotective effects of andrographolide against CCl4-induced hepatotoxicity in HepG2 cells. Human & experimental toxicology. 2013;32(5):530-43.

Krithika R, Jyothilakshmi V, Prashantha K, Verma RJ. Mechanism of protective effect of phyllanthin against carbon tetrachloride-induced hepatotoxicity and experimental liver fibrosis in mice. Toxicology mechanisms and methods. 2015;25(9):708-17.

Krithika R, Mohankumar R, Verma RJ, Shrivastav PS, Mohamad IL, Gunasekaran P, et al. Isolation, characterization and antioxidative effect of phyllanthin against CCl4-induced toxicity in HepG2 cell line. Chemico-biological interactions. 2009;181(3):351-8.

Krithika R, Verma RJ. Ameliorative potential of Phyllanthus amarus against carbon tetrachloride-induced hepatotoxicity. Acta poloniae pharmaceutica. 2009;66(5):579-83.

Kroker R, Frimmer M. Decrease of binding sites for phalloidin on the surface of liver cells during carbon tetrachloride intoxication. Naunyn-Schmiedeberg's archives of pharmacology. 1974;282(1):109-11.

Kudlaenko KI. The effect of salt-alkaline mineral water on the antitoxic function of the liver in animals with carbon tetrachloride poisoning. Patologicheskaia fiziologiia i eksperimental'naia terapiia. 1967;11(2):71-2.

Kumar BS, Chung BC, Kwon O-S, Jung BH. Discovery of common urinary biomarkers for hepatotoxicity induced by carbon tetrachloride, acetaminophen and methotrexate by mass spectrometry-based metabolomics. Journal of applied toxicology : JAT. 2012;32(7):505-20.

Kumar P, Ranawade AV, Kumar NG. Potential probiotic Escherichia coli 16 harboring the Vitreoscilla hemoglobin gene improves gastrointestinal tract colonization and ameliorates carbon tetrachloride induced hepatotoxicity in rats. BioMed research international. 2014;2014:213574.

Kumaravelu P, Dakshinamoorthy DP, Subramaniam S, Devaraj H, Devaraj NS. Effect of eugenol on drug-metabolizing enzymes of carbon tetrachloride-intoxicated rat liver. Biochemical pharmacology. 1995;49(11):1703-7.

Kumate J. Experimental hepatic lesion. Metabolism of the enzymatic escape of arginase, catalase and esterases in intoxication by carbon tetrachloride and by ionizing radiations in different animals. Gaceta medica de Mexico. 1959;89:769-90.

Kuriakose GC, Kurup GM. Antioxidant activity of Aulosira fertilisima on CCl4 induced hepatotoxicity in rats. Indian journal of experimental biology. 2008;46(1):52-9.

Kuriakose GC, Kurup MG. Antioxidant and antihepatotoxic effect of Spirulina laxissima against carbon tetrachloride induced hepatotoxicity in rats. Food & function. 2011;2(3-4):190-6.

Kuriakose J, Lal Raisa H, A V, Eldhose B, M S L. Terminalia bellirica (Gaertn.) Roxb. fruit mitigates CCl4 induced oxidative stress and hepatotoxicity in rats. Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie. 2017;93:327-33.

Kus I, Colakoglu N, Pekmez H, Seckin D, Ogeturk M, Sarsilmaz M. Protective effects of caffeic acid phenethyl ester (CAPE) on carbon tetrachloride-induced hepatotoxicity in rats. Acta histochemica. 2004;106(4):289-97.

Kus I, Ogeturk M, Oner H, Sahin S, Yekeler H, Sarsilmaz M. Protective effects of melatonin against carbon tetrachloride-induced hepatotoxicity in rats: a light microscopic and biochemical study. Cell biochemistry and function. 2005;23(3):169-74.

Labbe G, Descatoire V, Letteron P, Degott C, Tinel M, Larrey D, et al. The drug methoxsalen, a suicide substrate for cytochrome P-450, decreases the metabolic activation, and prevents the hepatotoxicity, of carbon tetrachloride in mice. Biochemical pharmacology. 1987;36(6):907-14.

Lahl R. Pathohistological findings in the peripheral nervous system (nn. ischiadici) after experimental carbon tetrachloride intoxication in bastard rabbits. European neurology. 1973;10(2):97-116.

Lahl R. Pathomorphology of the central nervous system in carbon tetrachloride intoxication. 1. Review of literature on human and animal experiment intoxications. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1973;19(11):781-5.

Lal AAS, Murthy PB, Pillai KS. Screening of hepatoprotective effect of a herbal mixture against CCl4 induced hepatotoxicity in Swiss albino mice. Journal of environmental biology. 2007;28(2):201-7.

Lamb RG, Borzelleca JF, Condie LW, Gennings C. Toxic interactions between carbon tetrachloride and chloroform in cultured rat hepatocytes. Toxicology and applied pharmacology. 1989;101(1):106-13.

Lamb RG, Schwertz DW. The effects of bromobenzene and carbon tetrachloride exposure in vitro on the phospholipase C activity of rat liver cells. Toxicology and applied pharmacology. 1982;63(2):216-29.

Lange P, Jung F. Reduction of liver toxicity of carbon tetrachloride by diethyl thiocarbamate and 3-(O-tolyl)-4-(nitro)-syndnon. Acta biologica et medica Germanica. 1971;27(2):425-34.

Lange P, Kastner D, Jung F. Influence of diethyldithiocarbamate on the CCl4-liver toxicity and the inhibition of the microsomal metabolism. Acta biologica et medica Germanica. 1970;24(4):K 29-33.

Langeron L, Dereux J, Giard P, Liefooghe J, Vincent G, Jr., Routier G. Case of carbon tetrachloride poisoning. Journal des sciences medicales de Lille. 1957;75(8-9):450-5.

Lapostolle V, Bioulac-Sage P, Balabaud C. Carbon tetrachloride hepatotoxicity in the rat; influence of vascularization. Gastroenterologie clinique et biologique. 1983;7(6-7):642-3.

Laqueur W, Nashat F. Dietary protein and carbon tetrachloride intoxication; histological changes in the rats liver in acute poisoning. Archives internationales de pharmacodynamie et de therapie. 1948;77(4):449-55.

Larcan A, Laprevote-Heully MC, Lambert H, Guine JM, Galoisy P. Intoxication by ingestion of a massive dose of carbon tetrachloride. Recovery in probable relation to early hyperbaric oxygen therapy. European journal of toxicology and hygiene of environment. 1973;6(6):286-9.

Larson RE, Plaa GL, Crews LM. THE EFFECT OF SPINAL CORD TRANSECTION ON CARBON TETRACHLORIDE HEPATOTOXICITY. Therapie der Gegenwart. 1964;103:154-62.

Le Bars H, de Laistre Banting A. Diminution of carbon tetrachloride toxicity by the simultaneous administration of NN' diphenyl-p-phenylene diamine. Comptes rendus hebdomadaires des seances de l'Academie des sciences Serie D: Sciences naturelles. 1975;280(21):2499-502.

Le Page RN, Cheeseman KH, Osman N, Slater TF. Lipid peroxidation in purified plasma membrane fractions of rat liver in relation to the hepatoxicity of carbon tetrachloride. Cell biochemistry and function. 1988;6(2):87-99.

Le Provost E, Weber A, Schapira F, Boisnard-Rissel M, Guillouzo A. Immunolocalization of fetal aldolase isoenzymes in rat regenerating liver after carbon tetrachloride intoxication. Oncodevelopmental biology and medicine : the journal of the International Society for Oncodevelopmental Biology and Medicine. 1980;1(4-5):263-72.

Leal LK, Fonseca FN, Pereira FA, Canuto KM, Felipe CF, Fontenele JB, et al. Protective effects of amburoside A, a phenol glucoside from Amburana cearensis, against CCl4-induced hepatotoxicity in rats. Planta medica. 2008;74(5):497-502.

Lee H-S, Li L, Kim H-K, Bilehal D, Li W, Lee D-S, et al. The protective effects of Curcuma longa Linn. extract on carbon tetrachloride-induced hepatotoxicity in rats via upregulation of Nrf2. Journal of microbiology and biotechnology. 2010;20(9):1331-8.

Lee I-C, Kim S-H, Baek H-S, Moon C, Kim S-H, Kim Y-B, et al. Protective effects of diallyl disulfide on carbon tetrachloride-induced hepatotoxicity through activation of Nrf2. Environmental toxicology. 2015;30(5):538-48.

Lee KS, Shin TS, Choi KD. Effect of sodium selenite on the hepatotoxicity induced with carbon tetrachloride. Yonsei medical journal. 1973;14:53-62.

Lee KJ, Choi JH, Khanal T, Hwang YP, Chung YC, Jeong HG. Protective effect of caffeic acid phenethyl ester against carbon tetrachloride-induced hepatotoxicity in mice. Toxicology. 2008;248(1):18-24.

Lee KJ, Choi JH, Kim HG, Han EH, Hwang YP, Lee YC, et al. Protective effect of saponins derived from the roots of Platycodon grandiflorum against carbon tetrachloride induced hepatotoxicity in mice. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2008;46(5):1778-85.

Lee KJ, Jeong HG. Protective effect of Platycodi radix on carbon tetrachloride-induced hepatotoxicity. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2002;40(4):517-25.

Lee KJ, Woo E-R, Choi CY, Shin DW, Lee DG, You HJ, et al. Protective effect of acteoside on carbon tetrachloride-induced hepatotoxicity. Life sciences. 2004;74(8):1051-64.

Lee MK, Yeo H, Kim J, Kim YC. Protection of rat hepatocytes exposed to CCl4 in-vitro by cynandione A, a biacetophenone from Cynanchum wilfordii. The Journal of pharmacy and pharmacology. 2000;52(3):341-5.

Lee SY, Kim YC. Effect of beta-alanine administration on carbon tetrachloride-induced acute hepatotoxicity. Amino acids. 2007;33(3):543-6.

Lee T-Y, Mai L-M, Wang G-J, Chiu J-H, Lin Y-L, Lin H-C. Protective mechanism of salvia miltiorrhiza on carbon tetrachloride-induced acute hepatotoxicity in rats. Journal of pharmacological sciences. 2003;91(3):202-10.

Lee YW, Wiebe LI. Amphetamine metabolism in mice exposed chronically to phenobarbital and to phenobarbital with carbon tetrachloride. Clinical biochemistry. 1979;12(2):56-8.

Leevy CM, Hollister RM, Schmid R, Macdonald RA, Davidson CS. Liver regeneration in experimental carbon tetrachloride intoxication. Proceedings of the Society for Experimental Biology and Medicine Society for Experimental Biology and Medicine (New York, NY). 1959;102:672-5.

Lemonnier FJ, Scotto JM, Thuong-Trieu C. Distrubances in tryptophan metabolism after a single dose of aflatoxin B1 and chronic intoxication with carbon tetrachloride. Journal of the National Cancer Institute. 1974;53(3):745-9.

Leong PK, Chen N, Chiu PY, Leung HY, Ma CW, Tang QT, et al. Long-term treatment with shengmai san-derived herbal supplement (Wei Kang Su) enhances antioxidant response in various tissues of rats with protection against carbon tetrachloride hepatotoxicity. Journal of medicinal food. 2010;13(2):427-38.

Letteron P, Labbe G, Degott C, Berson A, Fromenty B, Delaforge M, et al. Mechanism for the protective effects of silymarin against carbon tetrachloride-induced lipid peroxidation and hepatotoxicity in mice. Evidence that silymarin acts both as an inhibitor of metabolic activation and as a chain-breaking antioxidant. Biochemical pharmacology. 1990;39(12):2027-34.

Lewis CE. The toxicology of carbon tetrachloride. Journal of occupational medicine : official publication of the Industrial Medical Association. 1961;3:82-6.

Li C, Nakayama S, Kurosaki Y, Nakayama T, Kimura T. Pharmacokinetics of cefpiramide in rats acutely intoxicated with carbon tetrachloride. Journal of pharmacobio-dynamics. 1990;13(3):186-94.

Li C, Yi L-T, Geng D, Han Y-Y, Weng L-J. Hepatoprotective effect of ethanol extract from Berchemia lineate against CCl4-induced acute hepatotoxicity in mice. Pharmaceutical biology. 2015;53(5):767-72.

Li W, Zhang M, Zheng Y-N, Li J, Wang Y-P, Wang Y-J, et al. Snailase preparation of ginsenoside M1 from protopanaxadiol-type ginsenoside and their protective effects against CCl4-induced chronic hepatotoxicity in mice. Molecules (Basel, Switzerland). 2011;16(12):10093-103.

Liang Y-H, Tang C-L, Lu S-Y, Cheng B, Wu F, Chen Z-N, et al. Serum metabonomics study of the hepatoprotective effect of Corydalis saxicola Bunting on carbon tetrachloride-induced acute hepatotoxicity in rats by (1)H NMR analysis. Journal of pharmaceutical and biomedical analysis. 2016;129:70-9.

Lim HK, Kim HS, Choi HS, Oh S, Choi J. Hepatoprotective effects of bergenin, a major constituent of Mallotus japonicus, on carbon tetrachloride-intoxicated rats. Journal of ethnopharmacology. 2000;72(3):469-74.

Lim HK, Kim HS, Kim SH, Chang MJ, Rhee GS, Choi J. Protective effects of acetylbergenin against carbon tetrachloride-induced hepatotoxicity in rats. Archives of pharmacal research. 2001;24(2):114-8.

Lin C-J, Lee S-L, Lee H-S, Dong C-Y. In vivo multiphoton kinetic imaging of the toxic effect of carbon tetrachloride on hepatobiliary metabolism. Journal of biomedical optics. 2018;23(9):1-6.

Lin J-C, Peng Y-J, Wang S-Y, Young T-H, Salter DM, Lee H-S. Role of the sympathetic nervous system in carbon tetrachloride-induced hepatotoxicity and systemic inflammation. PloS one. 2015;10(3):e0121365.

Lin KJ, Chen JC, Tsauer W, Lin CC, Lin JG, Tsai CC. Prophylactic effect of four prescriptions of traditional Chinese medicine on alpha-naphthylisothiocyanate and carbon tetrachloride induced toxicity in rats. Acta pharmacologica Sinica. 2001;22(12):1159-67.

Lindstrom TD, Anders MW. Effect of cycloheximide and actinomycin D on carbon tetrachloride hepatotoxicity. Toxicology and applied pharmacology. 1977;42(1):167-73.

Lindstrom TD, Anders MW. Effect of agents known to alter carbon tetrachloride hepatotoxicity and cytochrome P-450 levels on carbon tetrachloride-stimulated lipid peroxidation and ethane expiration in the intact rat. Biochemical pharmacology. 1978;27(4):563-7.

Lindstrom TD, Anders MW, Remmer H. Effect of phenobarbital and diethyl maleate on carbon tetrachloride toxicity in isolated rat hepatocytes. Experimental and molecular pathology. 1978;28(1):48-57.

Litterst CL, Farber TM, Van Loon EJ. Potentiation of CCl4-induced hepatotoxicity in the dog by chronic exposure to phenobarbital. Toxicology and applied pharmacology. 1973;25(3):354-62.

Liu H, Subramony C, Nowicki M. Posttranslational activation of endothelial nitric oxide synthase attenuates carbon tetrachloride-induced hepatotoxicity in newborn rats. Pediatric research. 2008;63(6):613-9.

Liu J, Sendelbach LE, Parkinson A, Klaassen CD. Endotoxin pretreatment protects against the hepatotoxicity of acetaminophen and carbon tetrachloride: role of cytochrome P450 suppression. Toxicology. 2000;147(3):167-76.

Liu KX, Kato Y, Yamazaki M, Higuchi O, Nakamura T, Sugiyama Y. Decrease in the hepatic clearance of hepatocyte growth factor in carbon tetrachloride-intoxicated rats. Hepatology (Baltimore, Md). 1993;17(4):651-60.

Liu Y, Hartley DP, Liu J. Protection against carbon tetrachloride hepatotoxicity by oleanolic acid is not mediated through metallothionein. Toxicology letters. 1998;95(2):77-85.

Liu Y, Cao L, Du J, Jia R, Wang J, Xu P, et al. Protective effects of Lycium barbarum polysaccharides against carbon tetrachloride-induced hepatotoxicity in precision-cut liver slices in vitro and in vivo in common carp (Cyprinus carpio L.). Comparative biochemistry and physiology Toxicology & pharmacology : CBP. 2015;169:65-72.

Llombart A, Jr. STUDIES ON EXPERIMENTAL HEPATIC PATHOLOGY. I. MORPHOPATHOLOGY OF ACUTE POISONING DUE TO CARBON TETRACHLORIDE IN THE SYRIAN GOLDEN HAMSTER. Medicina espanola. 1964;51:299-315.

Llorens J, Crofton KM. Enhanced neurotoxicity of 3,3'-iminodipropionitrile following carbon tetrachloride pretreatment in the rat. Neurotoxicology. 1991;12(3):583-94.

Lloyd SA, Franklin MR. Modulation of carbon tetrachloride hepatotoxicity and xenobiotic-metabolizing enzymes by corticosterone pretreatment, adrenalectomy and sham surgery. Toxicology letters. 1991;55(1):65-75.

Lockard VG, Mehendale HM, O'Neal RM. Chlordecone-induced potentiation of carbon tetrachloride hepatotoxicity: a light and electron microscopic study. Experimental and molecular pathology. 1983;39(2):230-45.

Lockard VG, Mehendale HM, O'Neal RM. Chlordecone-induced potentiation of carbon tetrachloride hepatotoxicity: a morphometric and biochemical study. Experimental and molecular pathology. 1983;39(2):246-55.

Loeper J. Study of the anterior pituitary during carbon tetrachloride poisoning in the rat. Comptes rendus des seances de la Societe de biologie et de ses filiales. 1951;145(7-8):483-4.

Loeper J. Mercaptopyruvic acid and liver protection in carbon tetrachloride intoxication. Comptes rendus des seances de la Societe de biologie et de ses filiales. 1952;146(1-2):61-2.

Loeper J. The comparative effect of methionine, sodium hyposulphite, and mercaptopyruvic acid in carbon tetrachloride intoxication. Comptes rendus des seances de la Societe de biologie et de ses filiales. 1952;146(7-8):560-1.

Loeper J. The effect of mercaptopyruvic acid on liver glycogen in carbon tetrachloride poisoning. Comptes rendus des seances de la Societe de biologie et de ses filiales. 1952;146(1-2):62-4.

Loeper J, Beurlet J. ACTION OF ADENOSINE MONOPHOSPHORIC ACID ON CARBON TETRACHLORIDE-INDUCED TOXIC HEPATITIS. Comptes rendus des seances de la Societe de biologie et de ses filiales. 1964;158:1247-8.

Long RM, Moore L. Elevated cytosolic calcium in rat hepatocytes exposed to carbon tetrachloride. The Journal of pharmacology and experimental therapeutics. 1986;238(1):186-91.

Long RM, Moore L. Cytosolic calcium after carbon tetrachloride, 1,1-dichloroethylene, and phenylephrine exposure. Studies in rat hepatocytes with phosphorylase a and quin2. Biochemical pharmacology. 1987;36(8):1215-21.

Long RM, Moore L. Biochemical evaluation of rat hepatocyte primary cultures as a model for carbon tetrachloride hepatotoxicity: comparative studies in vivo and in vitro. Toxicology and applied pharmacology. 1988;92(2):295-306.

Longo V, Chirulli V, Gervasi PG, Nencioni S, Pellegrini M. Lisosan G, a powder of grain, does not interfere with the drug metabolizing enzymes and has a protective role on carbon tetrachloride-induced hepatotoxicity. Biotechnology letters. 2007;29(8):1155-9.

Lotti M, La Greca G. A case of industrial intoxication due to carbon tetrachloride. La Medicina del lavoro. 1976;67(1):43-9.

Louria DB, Bogden JD. The dangers from limited exposure to carbon tetrachloride. Critical reviews in toxicology. 1980;7(2):177-88.

Low D, Thomas NW, Fry JR. Lobar variation of carbon tetrachloride hepatotoxicity in the rat. Toxicology letters. 1995;81(1):1-4.

Lukita-Atmadja W, Sato T, Wake K. Granuloma formation in the liver of Balb/c mice intoxicated with carbon tetrachloride. Virchows Archiv B, Cell pathology including molecular pathology. 1993;64(4):247-57.

Luthman J, Jonson G, Holtenius P. The preventive effect of nicotinic acid on carbon tetrachloride toxicity in sheep. Acta veterinaria Scandinavica. 1970;11(2):254-67.

Luton EF. Carbon tetrachloride exposure during anticoagulant therapy. Dangerous enhancement of hypoprothrombinemic effect. Jama. 1965;194(13):1386-7.

Lyachovich VV, Mishin VM, Dolgov AV, Jakobson GS, Panov AV, Tsyrlov IB. Functional and structural changes in liver mitochondria of rats due to CCl4 intoxication. II. Respiratory chain and ion transport. Biochemical pharmacology. 1971;20(7):1443-51.

MacDonald JR, Gandolfi AJ, Sipes IG. Amelioration of carbon tetrachloride-induced hepatic necrosis by post-toxicant treatment with cystamine. Toxicology. 1986;39(2):135-48.

Mafi A, Dehghani F, Moghadam A, Noorafshan A, Vojdani Z, Talaei-Khozani T. Effects of platelet-rich plasma on liver regeneration in CCl4-induced hepatotoxicity model. Platelets. 2016;27(8):771-6.

Magos L, Snowden R, White IN, Butler WH, Tuffery AA. Isotoxic oral and inhalation exposure of carbon tetrachloride in Porton-Wistar and Fischer rats. Journal of applied toxicology : JAT. 1982;2(5):238-40.

Mahesh A, Jeyachandran R, Cindrella L, Thangadurai D, Veerapur VP, Muralidhara Rao D. Hepatocurative potential of sesquiterpene lactones of Taraxacum officinale on carbon tetrachloride induced liver toxicity in mice. Acta biologica Hungarica. 2010;61(2):175-90.

Mahieu P, Geubel A, Rahier J, Scailteur V, Dieryck JP, Lauwerys R. Potentiation of carbon-tetrachloride hepato-nephrotoxicity by phenobarbital in man, a case report. International journal of clinical pharmacology research. 1983;3(6):427-30.

Mahoudeau D, Cahn L. Intoxication by carbon tetrachloride with pulmonary manifestation (subacute edema and hemoptysis). Paris medical. 1951;41(6):77-80.

Mahran LG, el-Khatib AS, Agha AM, Khayyal MT. The protective effect of aqueous propolis extract on isolated rat hepatocytes against carbon tetrachloride toxicity. Drugs under experimental and clinical research. 1996;22(6):309-16.

Mak DH, Ko KM. Alterations in susceptibility to carbon tetrachloride toxicity and hepatic antioxidant/detoxification system in streptozotocin-induced short-term diabetic rats: effects of insulin and Schisandrin B treatment. Molecular and cellular biochemistry. 1997;175(1-2):225-32.

Makni M, Chtourou Y, Garoui EM, Boudawara T, Fetoui H. Carbon tetrachloride-induced nephrotoxicity and DNA damage in rats: protective role of vanillin. Human & experimental toxicology. 2012;31(8):844-52.

Maksimchik YZ, Lapshina EA, Sudnikovich EY, Zabrodskaya SV, Zavodnik IB. Protective effects of N-acetyl-L-cysteine against acute carbon tetrachloride hepatotoxicity in rats. Cell biochemistry and function. 2008;26(1):11-8.

Maling HM, Eichelbaum FM, Saul W, Sipes IG, Brown EA, Gillette JR. Nature of the protection against carbon tetrachloride-induced hepatotoxicity produced by pretreatment with dibenamine (N-(2-chloroethyl)dibenzylamine). Biochemical pharmacology. 1974;23(10):1479-91.

Maling HM, Highman B, Williams MA, Saul W, Butler WM, Jr., Brodie BB. Reduction by pretreatment with dibenamine of hepatotoxicity induced by carbon tetrachloride, thioacetamide or dimethylnitrosamine. Toxicology and applied pharmacology. 1974;27(2):380-94.

Maling HM, Stripp B, Sipes IG, Highman B, Saul W, Williams MA. Enhanced hepatotoxicity of carbon tetrachloride, thioacetamide, and dimethylnitrosamine by pretreatment of rats with ethanol and some comparisons with potentiation by isopropanol. Toxicology and applied pharmacology. 1975;33(2):291-308.

Mallet L, Foliot A, Amat D, Mignot J, Celier C, Petite JP. The degree of hepatic enzyme induction might be related to the amount of hepatic fibrosis in rats chronically intoxicated by CCl4 (author's transl). Gastroenterologie clinique et biologique. 1981;5(5):572-6.

Mancini RE, Kocsis JJ. Dimethylsulfoxide increases the lethality of CCl4 in rats but decreases its hepatotoxicity. Toxicology and applied pharmacology. 1974;27(1):206-9.

Mandal A, Karmakar R, Bandyopadhyay S, Chatterjee M. Antihepatotoxic potential of Trianthema portulacastrum in carbon tetrachloride-induced chronic hepatocellular injury in mice: reflection in haematological, histological and biochemical characteristics. Archives of pharmacal research. 1998;21(3):223-30.

Mandal PK, Bishayee A, Chatterjee M. Stimulation of hepatic protein synthesis in response to Mikania cordata root extract in carbon tetrachloride-induced hepatotoxicity in mice. The Italian journal of biochemistry. 1992;41(6):345-51.

Manjrekar AP, Jisha V, Bag PP, Adhikary B, Pai MM, Hegde A, et al. Effect of Phyllanthus niruri Linn. treatment on liver, kidney and testes in CCl4 induced hepatotoxic rats. Indian journal of experimental biology. 2008;46(7):514-20.

Manno M, Rezzadore M, Grossi M, Sbrana C. Potentiation of occupational carbon tetrachloride toxicity by ethanol abuse. Human & experimental toxicology. 1996;15(4):294-300.

Mansour MA. Protective effects of thymoquinone and desferrioxamine against hepatotoxicity of carbon tetrachloride in mice. Life sciences. 2000;66(26):2583-91.

Mansour MA, Ginawi OT, El-Hadiyah T, El-Khatib AS, Al-Shabanah OA, Al-Sawaf HA. Effects of volatile oil constituents of Nigella sativa on carbon tetrachloride-induced hepatotoxicity in mice: evidence for antioxidant effects of thymoquinone. Research communications in molecular pathology and pharmacology. 2001;110(3-4):239-51.

Mansueto S, Balsano F, Musca A. ANTIBIOTICS AND ACUTE INTOXICATION DUE TO CCL4 IN THE RAT. III. ACTION OF THIOPHENICOL GLYCINATE. Sicilia sanitaria. 1963;16:153-4.

Manu P, Preda N, Muica N, Dumitriu C. Pathogenetic considerations on carbon tetrachloride poisoning. Medicina interna. 1968;20(1):59-64.

Marchand C, McLean S, Plaa GL, Traiger G. Protection by 2-diethylaminoethyl-2,2-diphenylvalerate hydrochloride against carbon tetrachloride hepatotoxicity. A possible mechanism of action. Biochemical pharmacology. 1971;20(4):869-75.

Martinez-Calva I, Campos-Apaez A, Rosales-Vega E, Mourelle M. Vitamin E improves membrane lipid alterations induced by CCl4 intoxication. Journal of applied toxicology : JAT. 1984;4(5):270-2.

Mascitelli-Coriandoli E, Lanzani P. Antitoxic and liver-protective activities of liver extracts in carbon tetrachloride poisoning. Bollettino chimico farmaceutico. 1962;101:698-714.

Mascitelli-Coriandoli E, Lanzani P. EFFECT OF NUCLEOTIDES ON HEPATIC GLUTAMIC-PYRUVIC TRANSAMINASE IN RATS INTOXICATED WITH CARBON TETRACHLORIDE. Bollettino della Societa italiana di biologia sperimentale. 1963;39:1191-3.

Masuda Y, Nakamura Y. Effects of oxygen deficiency and calcium omission on carbon tetrachloride hepatotoxicity in isolated perfused livers from phenobarbital-pretreated rats. Biochemical pharmacology. 1990;40(8):1865-76.

Masuda Y. Learning toxicology from carbon tetrachloride-induced hepatotoxicity. Yakugaku zasshi : Journal of the Pharmaceutical Society of Japan. 2006;126(10):885-99.

Matkovics B, Novak R, Szabo L, Marik M, Zsoldos T. Effect of acute carbon tetrachloride intoxication on the lipid peroxidation and the enzymes of the peroxide metabolism of rat tissues. General pharmacology. 1978;9(5):329-32.

Matsubara T, Mori S, Touchi A, Masuda Y, Takeuchi Y. Carbon tetrachloride-induced hepatotoxicity in rats: evidence for different susceptibilities of rat liver lobes. Japanese journal of pharmacology. 1983;33(2):435-45.

Mazaud R, Mafart Y. Carbon tetrachloride poisoning; aggravating role of visceral disorders and alcoholism. Bulletin mensuel - Societe de medecine militaire francaise. 1954;48(7):174-6.

Mbarki S, Alimi H, Bouzenna H, Elfeki A, Hfaiedh N. Phytochemical study and protective effect of Trigonella foenum graecum (Fenugreek seeds) against carbon tetrachloride-induced toxicity in liver and kidney of male rat. Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie. 2017;88:19-26.

McCollister DD, Beamer WH, Atchison GJ, Spencer HC. The absorption, distribution and elimination of radioactive carbon tetrachloride by monkeys upon exposure to low vapor concentrations. The Journal of pharmacology and experimental therapeutics. 1951;102(2):112-24.

McCollister DD, Hollingsworth RL, Oyen F, Rowe VK. Comparative inhalation toxicity of fumigant mixtures; individual and joint effects of ethylene dichloride, carbon tetrachloride, and ethylene dibromide. AMA archives of industrial health. 1956;13(1):1-7.

McCracken JM, Chalise P, Briley SM, Dennis KL, Jiang L, Duncan FE, et al. C57BL/6 Substrains Exhibit Different Responses to Acute Carbon Tetrachloride Exposure: Implications for Work Involving Transgenic Mice. Gene expression. 2017;17(3):187-205.

Meera R, Devi P, Kameswari B, Madhumitha B, Merlin NJ. Antioxidant and hepatoprotective activities of Ocimum basilicum Linn. and Trigonella foenum-graecum Linn. against H2O2 and CCL4 induced hepatotoxicity in goat liver. Indian journal of experimental biology. 2009;47(7):584-90.

Mehendale HM. Potentiation of halomethane hepatotoxicity: chlordecone and carbon tetrachloride. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1984;4(3 Pt 1):295-308.

Mehendale HM. Mechanism of the lethal interaction of chlordecone and CCl4 at non-toxic doses. Toxicology letters. 1989;49(2-3):215-41.

Mejia-Garcia A, Sanchez-Ocampo EM, Galindo-Gomez S, Shibayama M, Reyes-Hernandez O, Guzman-Leon S, et al. 2,3,7,8-Tetrachlorodibenzo-p-dioxin enhances CCl4-induced hepatotoxicity in an aryl hydrocarbon receptor-dependent manner. Xenobiotica; the fate of foreign compounds in biological systems. 2013;43(2):161-8.

Meldolesi J. Protective effects of alpha-tocopherol on the hepatotoxicty of carbon tetrachloride: an electron microscope study. Experimental and molecular pathology. 1968;9(1):141-7.

Melick WF. Acute toxic nephrosis due to poisoning by carbon tetrachloride; a case report. The Journal of urology. 1946;55:342-7.

Melin AM, Carbonneau MA, Maviel MJ, Perromat A, Clerc M. Free radical inhibitor effect of retinol after carbon tetrachloride intoxication in the rat. Food additives and contaminants. 1990;7 Suppl 1:S182-7.

Melin AM, Perromat A, Deleris G. Pharmacologic application of fourier transform IR spectroscopy: in vivo toxicity of carbon tetrachloride on rat liver. Biopolymers. 2000;57(3):160-8.

Melin AM, Perromat A, Deleris G. The in vivo toxicity of carbon tetrachloride and carrageenan on heart microsomes: analysis by Fourier transform infrared spectroscopy. Canadian journal of physiology and pharmacology. 2001;79(9):799-804.

Meng Q, Chen X, Wang C, Liu Q, Sun H, Sun P, et al. Protective effects of alisol B 23-acetate from edible botanical Rhizoma alismatis against carbon tetrachloride-induced hepatotoxicity in mice. Food & function. 2015;6(4):1241-50.

Meng Z, Wang Y, Wang L, Jin W, Liu N, Pan H, et al. FXR regulates liver repair after CCl4-induced toxic injury. Molecular endocrinology (Baltimore, Md). 2010;24(5):886-97.

Michael UF, Barenberg RL, Levi D, Pardo V, Chavez R, Papper S, et al. Abnormal sodium regulation in rats following chronic intermittent exposure to carbon tetrachloride. Proceedings of the Society for Experimental Biology and Medicine Society for Experimental Biology and Medicine (New York, NY). 1971;138(3):796-9.

Miech G, Myara I, Mangeot M, Lemonnier A. Activity of the two prolidase isoforms in rat liver after chronic CCl4 intoxication. Biomedica biochimica acta. 1988;47(12):1073-5.

Mihara M, Kondo T, Uchiyama M. Alterations of lipid peroxidation and fatty acid composition of liver mitochondria and microsomes from rats in various age groups and carbon tetrachloride-intoxication (author's transl). Eisei Shikenjo hokoku Bulletin of National Institute of Hygienic Sciences. 1980;98:94-6.

Mihara M, Uchiyama M. Evaluation of thiobarbituric acid (TBA) value as an index of lipid peroxidation in CCl4-intoxicated rat liver (author's transl). Yakugaku zasshi : Journal of the Pharmaceutical Society of Japan. 1981;101(3):221-6.

Mihara M, Uchiyama M, Fukuzawa K. Thiobarbituric acid value on fresh homogenate of rat as a parameter of lipid peroxidation in aging, CCl4 intoxication, and vitamin E deficiency. Biochemical medicine. 1980;23(3):302-11.

Mikhail TH, Awadallah R, Dessoukey EA. Effect of AMP on acute carbon-tetrachloride hepatotoxicity. Zeitschrift fur Ernahrungswissenschaft. 1977;16(4):256-61.

Mikhail TH, Awadallah R, El-Dessoukey EA. Effect of AMP on serum minerals in carbon-tetrachloride hepatotoxicity. Zeitschrift fur Ernahrungswissenschaft. 1978;17(1):47-51.

Mikhailov GM, Varykhanov AA, Omarova LA, Verovskii VE, Obraztsov VV. The effect of a fluorocarbon emulsion--an enzyme inducer of the cytochrome P-450-dependent monooxygenase system of the liver--on the acute toxicity of CCl4 and on the efficacy of the prophylactic use of antidotes in organophosphate pesticide poisoning. Farmakologiia i toksikologiia. 1990;53(4):60-2.

Milillo P, Burdino E, Danni O, Mina S, Ugazio G. Mechanism of protection against carbon tetrachloride toxicity. II. Lethality in rats fed a polyunsaturated fatty acid deficient diet. Drug and chemical toxicology. 1982;5(2):125-41.

Mitcheva M, Kondeva M, Vitcheva V, Nedialkov P, Kitanov G. Effect of benzophenones from Hypericum annulatum on carbon tetrachloride-induced toxicity in freshly isolated rat hepatocytes. Redox report : communications in free radical research. 2006;11(1):3-8.

Mitidieri E, Affonso OR. Serum xanthine dehydrogenase of carbon tetrachloride-induced hepatotoxicity in alloxan-diabetic rats. Acta biologica et medica Germanica. 1979;38(8):1131-4.

Mitra AC. Toxic Symptoms Following Administration of Carbon Tetrachloride. The Indian medical gazette. 1928;63(11):637.

Miyao H, Arao T, Udayama M, Kinjo J, Nohara T. Kaikasaponin III and soyasaponin I, major triterpene saponins of Abrus cantoniensis, act on GOT and GPT: influence on transaminase elevation of rat liver cells concomitantly exposed to CCl4 for one hour. Planta medica. 1998;64(1):5-7.

Miyazawa T, Suzuki T, Fujimoto K, Kaneda T. Phospholipid hydroperoxide accumulation in liver of rats intoxicated with carbon tetrachloride and its inhibition by dietary alpha-tocopherol. Journal of biochemistry. 1990;107(5):689-93.

Mochizuki M, Shimizu S, Urasoko Y, Umeshita K, Kamata T, Kitazawa T, et al. Carbon tetrachloride-induced hepatotoxicity in pregnant and lactating rats. The Journal of toxicological sciences. 2009;34(2):175-81.

Moghaddam AP, Eggers JS, Calabrese EJ. Evaluation of sex difference in tissue repair following acute carbon tetrachloride toxicity in male and female Sprague-Dawley rats. Toxicology. 1998;130(2-3):95-105.

Mohamed MR, Emam MA, Hassan NS, Mogadem AI. Umbelliferone and daphnetin ameliorate carbon tetrachloride-induced hepatotoxicity in rats via nuclear factor erythroid 2-related factor 2-mediated heme oxygenase-1 expression. Environmental toxicology and pharmacology. 2014;38(2):531-41.

Mohamed MA, Eldin IMT, Mohammed A-EH, Hassan HM. Effects of Lawsonia inermis L. (Henna) leaves' methanolic extract on carbon tetrachloride-induced hepatotoxicity in rats. Journal of intercultural ethnopharmacology. 2016;5(1):22-6.

Mohammadi M, Yazdanparast R. Methoxy VO-salen complex: in vitro antioxidant activity, cytotoxicity evaluation and protective effect on CCl4-induced oxidative stress in rats. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2009;47(4):716-21.

Molehin OR, Adeyanju AA, Adefegha SA, Aina OO, Afolabi BA, Olowoyeye AO, et al. Sildenafil, a phosphodiesterase-5 inhibitor, offers protection against carbon tetrachloride-induced hepatotoxicity in rat. Journal of basic and clinical physiology and pharmacology. 2018;29(1):29-35.

Mondal S, Ghosh D, Ganapaty S, Chekuboyina SVG, Samal M. Hepatoprotective activity of Macrothelypteris torresiana (Gaudich.) aerial parts against CCl4-induced hepatotoxicity in rodents and analysis of polyphenolic compounds by HPTLC. Journal of pharmaceutical analysis. 2017;7(3):181-9.

Montani S, Perret C. Hyperbaric oxygenation in experimental poisoning with carbon tetrachloride. Revue francaise d'etudes cliniques et biologiques. 1967;12(3):274-8.

Moody DE, Head B, Smuckler EA. Reduction in hepatic microsomal cytochromes P-450 and b5 in rats exposed to 1,2-dibromo-3-chloropropane and carbon tetrachloride: enhancement of effect by pretreatment with phenobarbital. Journal of environmental pathology and toxicology. 1979;3(1-2):177-90.

Moody DE, Taylor LA, Smuckler EA. Immunohistochemical evidence for alterations in specific forms of rat hepatic microsomal cytochrome P-450 during acute carbon tetrachloride intoxication. Drug metabolism and disposition: the biological fate of chemicals. 1986;14(6):709-13.

Mookerjea S. Impairment of plasma glycoprotein synthesis in choline deficiency compared with effects of carbon tetrachloride intoxication. Canadian journal of physiology and pharmacology. 1968;46(3):499-505.

Moore L. Enhanced hepatotoxicity and inhibition of liver endoplasmic reticulum calcium pump by CCl4 in rats fed a thiamine deficient diet. Life sciences. 1983;32(7):741-5.

Morata P, Colmenero JD, Sanchez-Carrillo JJ, Morell M. Serum activity of the key gluconeogenic enzymes in carbon-tetrachloride-induced experimental hepatotoxicity. Enzyme. 1990;43(4):169-74.

Moreira PR, Maioli MA, Medeiros HCD, Guelfi M, Pereira FTV, Mingatto FE. Protective effect of bixin on carbon tetrachloride-induced hepatotoxicity in rats. Biological research. 2014;47:49.

Moresco RN, Sperotto RL, Bernardi AS, Cardoso RF, Gomes P. Effect of the aqueous extract of Syzygium cumini on carbon tetrachloride-induced hepatotoxicity in rats. Phytotherapy research : PTR. 2007;21(8):793-5.

Morikawa S, Inubushi T, Kito K, Amano S. Long-term observation of in vivo 31P NMR spectra in carbon tetrachloride-intoxicated rabbit liver using implanted wireless surface coil. NMR in biomedicine. 1995;8(1):3-8.

Morrow JD, Awad JA, Kato T, Takahashi K, Badr KF, Roberts LJ, 2nd, et al. Formation of novel non-cyclooxygenase-derived prostanoids (F2-isoprostanes) in carbon tetrachloride hepatotoxicity. An animal model of lipid peroxidation. The Journal of clinical investigation. 1992;90(6):2502-7.

Mourelle M, Rubalcava B. Changes in the insulin and glucagon receptors in the regenerating liver following intoxication with carbon tetrachloride. Biochemical and biophysical research communications. 1979;88(1):189-98.

Mourelle M, Rubalcava B. Changes in thyroid hormones following liver intoxication with carbon tetrachloride. Journal of applied toxicology : JAT. 1981;1(3):174-6.

Mucci P, Poggioli R. Hepatoprotective action of 2,4-monofurfurylidene-tetra-O-methyl sorbitol (MSF) in rats. VI. Effect of the synthesis of serum proteins in animals intoxicated with CCl4. Bollettino della Societa italiana di biologia sperimentale. 1969;45(18):1196-7.

Mukherjee PK, Bhakta T, Saha BP, Pal S, Pal M, Das AA. Protective effect of fraction of azadirachta indica leaf extract on carbon tetrachloride induced hepatotoxicity. Ancient science of life. 1994;14(1-2):71-6.

Murakami T, Nagamura Y, Hirano K. The effect of ethanolamine on acute carbon tetrachloride intoxication. Biological & pharmaceutical bulletin. 1998;21(1):84-6.

Murali B, Korrapati MC, Warbritton A, Latendresse JR, Mehendale HM. Tolerance of aged Fischer 344 rats against chlordecone-amplified carbon tetrachloride toxicity. Mechanisms of ageing and development. 2004;125(6):421-35.

Murat Bilgin H, Atmaca M, Deniz Obay B, Ozekinci S, Tasdemir E, Ketani A. Protective effects of coumarin and coumarin derivatives against carbon tetrachloride-induced acute hepatotoxicity in rats. Experimental and toxicologic pathology : official journal of the Gesellschaft fur Toxikologische Pathologie. 2011;63(4):325-30.

Murray M, Farrell GC. Different effects of carbon tetrachloride toxicity and cirrhosis on substrate binding to rat hepatic microsomal cytochrome P-450. Biochemical pharmacology. 1984;33(4):687-9.

Murugesan GS, Sathishkumar M, Jayabalan R, Binupriya AR, Swaminathan K, Yun SE. Hepatoprotective and curative properties of Kombucha tea against carbon tetrachloride-induced toxicity. Journal of microbiology and biotechnology. 2009;19(4):397-402.

Nachtomi E, Alumot E. Comparison of ethylene dibromide and carbon tetrachloride toxicity in rats and chicks: blood and liver levels; lipid peroxidation. Experimental and molecular pathology. 1972;16(1):71-8.

Nada SA, Omara EA, Abdel-Salam OME, Zahran HG. Mushroom insoluble polysaccharides prevent carbon tetrachloride-induced hepatotoxicity in rat. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2010;48(11):3184-8.

Nagababu E, Sesikeran B, Lakshmaiah N. The protective effects of eugenol on carbon tetrachloride induced hepatotoxicity in rats. Free radical research. 1995;23(6):617-27.

Nagano K, Sasaki T, Umeda Y, Nishizawa T, Ikawa N, Ohbayashi H, et al. Inhalation carcinogenicity and chronic toxicity of carbon tetrachloride in rats and mice. Inhalation toxicology. 2007;19(13):1089-103.

Nagano K, Umeda Y, Saito M, Nishizawa T, Ikawa N, Arito H, et al. Thirteen-week inhalation toxicity of carbon tetrachloride in rats and mice. Journal of occupational health. 2007;49(4):249-59.

Nagi MN, Alam K, Badary OA, al-Shabanah OA, al-Sawaf HA, al-Bekairi AM. Thymoquinone protects against carbon tetrachloride hepatotoxicity in mice via an antioxidant mechanism. Biochemistry and molecular biology international. 1999;47(1):153-9.

Nagiel-Ostaszewski I, Lau-Cam CA. Protection by pantethine, pantothenic acid and cystamine against carbon tetrachloride-induced hepatotoxicity in the rat. Research communications in chemical pathology and pharmacology. 1990;67(2):289-92.

Nakahira K, Takahashi T, Shimizu H, Maeshima K, Uehara K, Fujii H, et al. Protective role of heme oxygenase-1 induction in carbon tetrachloride-induced hepatotoxicity. Biochemical pharmacology. 2003;66(6):1091-105.

Nakanishi C, Doi H, Katsura K, Satomi S. Treatment with L-valine ameliorates liver fibrosis and restores thrombopoiesis in rats exposed to carbon tetrachloride. The Tohoku journal of experimental medicine. 2010;221(2):151-9.

Nakashima T, Matsumoto N, Kashima K. Treatment with bovine gallstones exacerbates liver damage, but enhances hepatoprotection by bear gall powder in carbon tetrachloride-intoxicated rats. Japanese journal of pharmacology. 1998;76(3):271-7.

Nakashima T, Takino T, Kuriyama K. Pretreatment with taurine facilitates hepatic lipid peroxide formation associated with carbon tetrachloride intoxication. Japanese journal of pharmacology. 1983;33(3):515-23.

Nakata R, Tsukamoto I, Miyoshi M, Kojo S. Liver regeneration after carbon tetrachloride intoxication in the rat. Biochemical pharmacology. 1985;34(4):586-8.

Nakatsukasa H, Silverman JA, Gant TW, Evarts RP, Thorgeirsson SS. Expression of multidrug resistance genes in rat liver during regeneration and after carbon tetrachloride intoxication. Hepatology (Baltimore, Md). 1993;18(5):1202-7.

Narotsky MG, Pegram RA, Kavlock RJ. Effect of dosing vehicle on the developmental toxicity of bromodichloromethane and carbon tetrachloride in rats. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1997;40(1):30-6.

Nayak NC, Chopra P. Carbon tetrachloride toxicity: failure of promethazine to prevent in vivo liver injury. The Indian journal of medical research. 1980;72:546-53.

Nayak NC, Chopra P, Ramalingaswami V. The role of liver cell endoplasmic reticulum and microsomal enzymes in carbon tetrachloride toxicity: an in vivo study. Life sciences Pt 1: Physiology and pharmacology. 1970;9(24):1431-9.

Nehoda H, Wieser C, Koller J, Konigsrainer A, Battista HJ, Vogel W, et al. Recurrent liver failure with severe rhabdomyolysis after liver transplantation for carbon tetrachloride intoxication. Hepato-gastroenterology. 1998;45(19):191-5.

Nema AK, Agarwal A, Kashaw V. Hepatoprotective activity of Leptadenia reticulata stems against carbon tetrachloride-induced hepatotoxicity in rats. Indian journal of pharmacology. 2011;43(3):254-7.

Neuhaus OW, Balegno HF, Bibeau M. Serum cholesterol in rats intoxicated with carbon tetrachloride. Nature. 1962;196:1001-2.

Nevin KG, Vijayammal PL. Effect of Aerva lanata against hepatotoxicity of carbon tetrachloride in rats. Environmental toxicology and pharmacology. 2005;20(3):471-7.

New PS, Lubash GD, Scherr L, Rubin AL. Acute renal failure associated with carbon tetrachloride intoxication. Jama. 1962;181:903-6.

Nguyen TD, Villard PH, Barlatier A, Elsisi AE, Jouve E, Duc NM, et al. Panax vietnamensis protects mice against carbon tetrachloride-induced hepatotoxicity without any modification of CYP2E1 gene expression. Planta medica. 2000;66(8):714-9.

Nicora E, Schenardi C, Bertieri AL, Gastaldi G. Behavior of serum guanase in experimental jaundice induced by stasis and in acute CCl 4 intoxication in rats. Pathologica. 1968;60(887):317-21.

Nikandrov VN, Naumovich SA, Votiakov VI. Action of streptokinase on the hemostatic indices of rabbits with a toxic lesion of the liver due to carbon tetrachloride. Biulleten' eksperimental'noi biologii i meditsiny. 1987;103(2):159-61.

Nipanikar SU, Chitlange SS, Nagore D. Pharmacological Evaluation of Hepatoprotective Activity of AHPL/AYTAB/0613 Tablet in Carbon Tetrachloride-, Ethanol-, and Paracetamol-Induced Hepatotoxicity Models in Wistar Albino Rats. Pharmacognosy research. 2017;9(Suppl 1):S41-S7.

Nishida K, Ohta Y, Kongo M, Ishiguro I. Response of endogenous reduced glutathione through hepatic glutathione redox cycle to enhancement of hepatic lipid peroxidation with the development of acute liver

injury in mice intoxicated with carbon tetrachloride. Research communications in molecular pathology and pharmacology. 1996;93(2):198-218.

Niu X, Liu F, Li W, Zhi W, Yao Q, Zhao J, et al. Hepatoprotective effect of fraxin against carbon tetrachloride-induced hepatotoxicity in vitro and in vivo through regulating hepatic antioxidant, inflammation response and the MAPK-NF-kappaB signaling pathway. Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie. 2017;95:1091-102.

Nogueira CW, Borges LP, Souza ACG. Oral administration of diphenyl diselenide potentiates hepatotoxicity induced by carbon tetrachloride in rats. Journal of applied toxicology : JAT. 2009;29(2):156-64.

Novelli A, Malagamba G, Zinnari A. Character of the lesions of carbon tetrachloride in some organs after splenectomy practiced in different periods of intoxication. Bollettino della Societa italiana di biologia sperimentale. 1950;26(8):1333-5.

Noweir MH, Pfitzer EA, Hatch TF. The pulmonary response of rats exposed to the decomposition products of carbon tetrachloride vapors at its industrial threshold limit concentration. American Industrial Hygiene Association journal. 1973;34(2):73-7.

Noyan T, Komuroglu U, Bayram I, Sekeroglu MR. Comparison of the effects of melatonin and pentoxifylline on carbon tetrachloride-induced liver toxicity in mice. Cell biology and toxicology. 2006;22(6):381-91.

Nunziante Cesaro A, Bronzetti P, Granata A, Germano D. Toxicity of carbon tetrachloride in embryonal blood cells of Gallus gallus. Bollettino della Societa italiana di biologia sperimentale. 1965;41(5):231-2.

Nussler AK, Wildemann B, Freude T, Litzka C, Soldo P, Friess H, et al. Chronic CCl4 intoxication causes liver and bone damage similar to the human pathology of hepatic osteodystrophy: a mouse model to analyse the liver-bone axis. Archives of toxicology. 2014;88(4):997-1006.

Oberling C, Rouiller C. Effects of acute carbon tetrachloride poisoning on the liver of rats; electron microscope study. Annales d'anatomie pathologique. 1956;1(4):401-27.

Obi FO, Usenu IA, Osayande JO. Prevention of carbon tetrachloride-induced hepatotoxicity in the rat by H. rosasinensis anthocyanin extract administered in ethanol. Toxicology. 1998;131(2-3):93-8.

Ochi Y, Yumori Y, Morioka A, Miura K, Tsukamoto I, Kojo S. Effect of alpha-blockade on liver regeneration after carbon tetrachloride intoxication in the rat. Biochemical pharmacology. 1990;39(12):2065-6.

Ochoa Gomez FJ, Lisa Caton V, Saralegui Reta I, Monzon Marin JL. Carbon tetrachloride poisoning. Anales de medicina interna (Madrid, Spain : 1984). 1996;13(8):393-4.

Ogata M, Watanabe S, Tomokuni K, Ueki S. Changes in P:O ratio, adenosine triphosphate, total lipid and triglycerides in the livers of mice exposed to carbon tetrachloride. Igaku to seibutsugaku Medicine and biology. 1968;76(1):16-22.

Ogawa M, Mori T, Mori Y, Ueda S, Azemoto R, Makino Y, et al. Study on chronic renal injuries induced by carbon tetrachloride: selective inhibition of the nephrotoxicity by irradiation. Nephron. 1992;60(1):68-73.

Ogeturk M, Kus I, Colakoglu N, Zararsiz I, Ilhan N, Sarsilmaz M. Caffeic acid phenethyl ester protects kidneys against carbon tetrachloride toxicity in rats. Journal of ethnopharmacology. 2005;97(2):273-80.

Ogiso T, Kobayashi T, Kato Y. Effect of "drugs for liver disease" on hepatotoxic action of carbon tetrachloride. I. Changes of lysosomal enzyme levels and effect of protoporphyrin on the levels. Japanese journal of pharmacology. 1975;25(4):401-9.

Ogiso T, Kobayashi T, Kuhara K, Kato Y. Effect of "drugs for liver disease" on hepatotoxic action of carbon tetrachloride. II. Effect of protoporphyrin and phosphorylcholine on microsomal drug-metabolizing enzyme activities and the components in injuried liver. Japanese journal of pharmacology. 1975;25(4):411-21.

Ogiso T, Kuhara K, Kobayashi T, Masuda H, Kato Y. Effect of "drugs for liver disease" on hepatotoxic action of carbon tetrachloride. IV. Relationship between fatty acid composition of phospholipids and drug monooxygenation activity in rat liver microsomes and role of phosphorylcholine. Chemical & pharmaceutical bulletin. 1977;25(1):87-95.

Ogiso T, Kuhara K, Noda N, Kato Y. Effect of "drugs for liver disease" on hepatotoxic action of carbon tetrachloride. III. Effect of protoporphyrin and phosphoryl-choline on injured microsomal membrane. Chemical & pharmaceutical bulletin. 1976;24(8):1893-901.

Ohnuma T, Anan E, Hoashi R, Takeda Y, Nishiyama T, Ogura K, et al. Dietary diacetylene falcarindiol induces phase 2 drug-metabolizing enzymes and blocks carbon tetrachloride-induced hepatotoxicity in mice through suppression of lipid peroxidation. Biological & pharmaceutical bulletin. 2011;34(3):371-8.

Ohta Y, Nishida K, Sasaki E, Kongo M, Ishiguro I. Attenuation of disrupted hepatic active oxygen metabolism with the recovery of acute liver injury in rats intoxicated with carbon tetrachloride. Research communications in molecular pathology and pharmacology. 1997;95(2):191-207.

Ohta Y, Imai Y, Matsura T, Kitagawa A, Yamada K. Preventive effect of neutropenia on carbon tetrachloride-induced hepatotoxicity in rats. Journal of applied toxicology : JAT. 2006;26(2):178-86.

Ohta Y, Ohashi K, Matsura T, Tokunaga K, Kitagawa A, Yamada K. Octacosanol attenuates disrupted hepatic reactive oxygen species metabolism associated with acute liver injury progression in rats intoxicated with carbon tetrachloride. Journal of clinical biochemistry and nutrition. 2008;42(2):118-25.

Okita M, Watanabe A, Takei N, Nagashima H, Ubuka T. Effects of branched-chain alpha-keto acids on plasma amino acid concentrations in carbon tetrachloride-intoxicated rats. The Journal of nutrition. 1984;114(7):1235-41.

Okita M, Watanabe A, Tsuji T. Effect of branched-chain amino acid on 15N incorporation into liver and skeletal muscle proteins following 15N -ammonium chloride administration to carbon tetrachloride-intoxicated rats. Journal of nutritional science and vitaminology. 1988;34(1):85-96.

Okuyama S, Kakumu S, Kato Y, Inagaki T, Ito S. Albumin synthesis and effect of betamethasone on albumin synthesis in perfused liver of normal and CCL4-intoxicated rats. Gastroenterologia Japonica. 1975;10(4):271-82.

Oleinik AN, Skakun LN. Effect of sirepar on the functional state of the liver in experimental toxic hepatitis caused by carbon tetrachloride. Vrachebnoe delo. 1975(6):13-4.

Omugba AE, Ajiboye AJ, Oyagbemi AA, Agofure E. Modulatory effects of cod liver oil on the antioxidant status and oxidative stress induced by acute exposure to carbon tetrachloride (CCL4) in experimental animal models. Journal of basic and clinical physiology and pharmacology. 2015;26(3):253-7.

Omura M, Katsumata T, Misawa H, Yamaguchi M. Decrease in protein kinase and phosphatase activities in the liver nuclei of rats exposed to carbon tetrachloride. Toxicology and applied pharmacology. 1999;160(2):192-7.

Onoja SO, Madubuike GK, Ezeja MI. Hepatoprotective and antioxidant activity of hydromethanolic extract of Daniella oliveri leaves in carbon tetrachloride-induced hepatotoxicity in rats. Journal of basic and clinical physiology and pharmacology. 2015;26(5):465-70.

Oshaghi EA, Khodadadi I, Mirzaei F, Khazaei M, Tavilani H, Goodarzi MT. Methanolic Extract of Dill Leaves Inhibits AGEs Formation and Shows Potential Hepatoprotective Effects in CCl4 Induced Liver Toxicity in Rat. Journal of pharmaceutics. 2017;2017:6081374.

Otto H. The significance of toxic porphyrinuria in occupational medicine with special reference to the studies on carbon tetrachloride and phosphorus workers. Zeitschrift fur die gesamte innere Medizin und ihre Grenzgebiete. 1953;8(24):1114-21.

Ottu OJ, Atawodi SE, Onyike E. Antioxidant, hepatoprotective and hypolipidemic effects of methanolic root extract of Cassia singueana in rats following acute and chronic carbon tetrachloride intoxication. Asian Pacific journal of tropical medicine. 2013;6(8):609-15.

Ougier J, Blez F. Carbon tetrachloride poisoning in a diabetic. Bulletin mensuel - Societe de medecine militaire francaise. 1958;52(2):52-4.

Owens JB, Brabec MJ. Effects of methanol and chloramphenicol on CCl4 toxicity. Advances in experimental medicine and biology. 1981;136 Pt A:793-7.

Ozerkan D, Ozsoy N, Yilmaz E. Vitamin D and melatonin protect the cell's viability and ameliorate the CCl4 induced cytotoxicity in HepG2 and Hep3B hepatoma cell lines. Cytotechnology. 2015;67(6):995-1002.

Ozturk F, Ucar M, Ozturk IC, Vardi N, Batcioglu K. Carbon tetrachloride-induced nephrotoxicity and protective effect of betaine in Sprague-Dawley rats. Urology. 2003;62(2):353-6.

Ozturk IC, Ozturk F, Gul M, Ates B, Cetin A. Protective effects of ascorbic acid on hepatotoxicity and oxidative stress caused by carbon tetrachloride in the liver of Wistar rats. Cell biochemistry and function. 2009;27(5):309-15.

Padhy BM, Srivastava A, Kumar VL. Calotropis procera latex affords protection against carbon tetrachloride induced hepatotoxicity in rats. Journal of ethnopharmacology. 2007;113(3):498-502.

Paduraru I, Saramet A, Danila G, Nichifor M, Jerca L, Iacobovici A, et al. Antioxidant action of a new flavonic derivative in acute carbon tetrachloride intoxication. European journal of drug metabolism and pharmacokinetics. 1996;21(1):1-6.

Panahi Kokhdan E, Ahmadi K, Sadeghi H, Sadeghi H, Dadgary F, Danaei N, et al. Hepatoprotective effect of Stachys pilifera ethanol extract in carbon tetrachloride-induce hepatotoxicity in rats. Pharmaceutical biology. 2017;55(1):1389-93.

Pani P, Corongiu FP, Sanna A, Congiu L. Protection by lead nitrate against carbon tetrachloride hepatotoxicity. Drug metabolism and disposition: the biological fate of chemicals. 1975;3(3):148-54.

Pani P, Torrielli MV, Gabriel L, Gravela E. Further observation on the effects of 3-methylcholanthrene and phenobarbital on carbon tetrachloride hepatotoxicity. Experimental and molecular pathology. 1973;19(1):15-22.

Pankow D, Ponsold W. Effect of methemoglobinemia on carbon tetrachloride heaptoxicity. Toxicology and applied pharmacology. 1976;36(1):143-50.

Pappas A, Schwarze G, Veleris-Triandafyllou J. Studies on the antihepatotoxic effect of a liver extract as illustrated in the model of a rat liver damaged by carbon tetrachloride. Die Medizinische Welt. 1974;25(4):150-2.

Pappas NJ, Jr. Source of increased serum aspartate and alanine aminotransferase: cycloheximide effect on carbon tetrachloride hepatotoxicity. Clinica chimica acta; international journal of clinical chemistry. 1986;154(3):181-9.

Pappas NJ, Jr., Wisecarver JL, Becker S. Effect of cycloheximide on increased aspartate aminotransferase in carbon tetrachloride hepatotoxicity. Annals of clinical and laboratory science. 1984;14(1):40-6.

Paquet KJ, Kamphausen U. The carbon-tetrachloride-hepatotoxicity as a model of liver damage. First report: Long-time biochemical changes. Acta hepato-gastroenterologica. 1975;22(2):84-8.

Pareek A, Godavarthi A, Issarani R, Nagori BP. Antioxidant and hepatoprotective activity of Fagonia schweinfurthii (Hadidi) Hadidi extract in carbon tetrachloride induced hepatotoxicity in HepG2 cell line and rats. Journal of ethnopharmacology. 2013;150(3):973-81.

Park D-H, Lee M-S, Kim H-J, Kim H-S, Lee Y-L, Kwon M-S, et al. Chronic hepatotoxicity of carbon tetrachloride in hsp-70 knock out mice. Experimental animals. 2004;53(1):27-30.

Parola M, Albano E, Autelli R, Barrera G, Biocca ME, Paradisi L, et al. Inhibition of the high affinity Ca2(+)-ATPase activity in rat liver plasma membranes following carbon tetrachloride intoxication. Chemico-biological interactions. 1990;73(1):103-19.

Partenheimer RC, Boyer WJ, Citron DS. An unusual case of lower-nephron nephrosis following exposure to carbon tetrachloride. The New England journal of medicine. 1952;246(9):325-8.

Paustenbach DJ, Carlson GP, Christian JE, Born GS. A comparative study of the pharmacokinetics of carbon tetrachloride in the rat following repeated inhalation exposures of 8 and 11.5 hr/day. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1986;6(3):484-97.

Paustenbach DJ, Christian JE, Carlson GP, Born GS. The effect of an 11.5-hr/day exposure schedule on the distribution and toxicity of inhaled carbon tetrachloride in the rat. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1986;6(3):472-83.

Pearson CC. Carbon tetrachloride intoxication with acute hepatic and renal failure treated with peritoneal lavage; report of case. Proceedings of the staff meetings Mayo Clinic. 1947;22(16):314-20.

Pegni U, Befani A. Effect of carbon tetrachloride intoxication on so-called hepatic regeneration secondary to partial hepatectomy. I. Ponderal considerations. Archivio di farmacologia sperimentale e scienze affini. 1952;80(5-6):116-37.

Pelegri A, Reguant M, Bernat A, Vidal C, Carrera M, Bartolome J. Carbon tetrachloride poisoning: a new case. Medicina clinica. 1984;82(16):737-8.

Pencil SD, Brattin WJ, Glende EA, Jr., Recknagel RO. Evidence against a role for disturbed hepatocellular calcium homeostasis in the fatty liver of carbon tetrachloride hepatotoxicity. Toxicologic pathology. 1984;12(1):96-100.

Perassi R, Martin A, Yantorno C. Antigenic components of the serum and serum-like antigenic components in the hepatocytes and urine in carbon tetrachloride poisoned rats. Revue internationale d'hepatologie. 1967;17(6):613-20.

Perazzoli MRA, Perondi CK, Baratto CM, Winter E, Creczynski-Pasa TB, Locatelli C. Gallic Acid and Dodecyl Gallate Prevents Carbon Tetrachloride-Induced Acute and Chronic Hepatotoxicity by Enhancing Hepatic Antioxidant Status and Increasing p53 Expression. Biological & pharmaceutical bulletin. 2017;40(4):425-34.

Perez Gutierrez RM, Anaya Sosa I, Hoyo Vadillo C, Victoria TC. Effect of flavonoids from Prosthechea michuacana on carbon tetrachloride induced acute hepatotoxicity in mice. Pharmaceutical biology. 2011;49(11):1121-7.

Perez-Trueba G, Ramos-Guanche C, Martinez-Sanchez B, Marquez-Hernandez I, Giuliani A, Martinez-Sanchez G. Protective effect of gossypitrin on carbon tetrachloride-induced in vivo hepatotoxicity. Redox report : communications in free radical research. 2003;8(4):215-21.

Perrissoud D, Testa B. Inhibiting or potentiating effects of flavonoids on carbon tetrachloride-induced toxicity in isolated rat hepatocytes. Arzneimittel-Forschung. 1986;36(8):1249-53.

Pessayre D, Cobert B, Descatoire V, Degott C, Babany G, Funck-Brentano C, et al. Hepatotoxicity of trichloroethylene-carbon tetrachloride mixtures in rats. A possible consequence of the potentiation by trichloroethylene of carbon tetrachloride-induced lipid peroxidation and liver lesions. Gastroenterology. 1982;83(4):761-72.

Peters HA, Levine RL, Matthews CG, Sauter S, Chapman L. Synergistic neurotoxicity of carbon tetrachloride/carbon disulfide (80/20 fumigants) and other pesticides in grain storage workers. Acta pharmacologica et toxicologica. 1986;59 Suppl 7:535-46.

Petrelli M, Stenger RJ. The effect of trypan blue on the hepatotoxicity of carbon tetrachloride in the rat. Experimental and molecular pathology. 1969;10(2):115-28.

Pfeifer KF, Weber LJ, Larson RE. Carbon tetrachloride-induced hepatotoxic response in rainbow trout, Salmo gairderni, as influenced by two commercial fish diets. Comparative biochemistry and physiology C: Comparative pharmacology. 1980;67C(2):91-6.

Phillips JC, Topp CE, Mendis D, Walker R, Gangolli SD. The effect of ethoxyquin on the hepatotoxicity of dimethylnitrosamine and carbon tetrachloride in the rat proceedings. Biochemical Society transactions. 1978;6(6):1244-6.

Pierangeli CE, Carmi G, Di Brino M. Neurotoxic action of carbon tetrachloride on the central and peripheral structures of the acoustic and vestibular pathways. Experimental research. La Clinica otorinolaringoiatrica. 1959;11:1-38.

Pilon D, Brodeur J, Plaa GL. 1,3-Butanediol-induced increases in ketone bodies and potentiation of CCl4 hepatotoxicity. Toxicology. 1986;40(2):165-80.

Pilon D, Charbonneau M, Brodeur J, Plaa GL. Metabolites and ketone body production following methyl n-butyl ketone exposure as possible indices of MnBK potentiation of carbon tetrachloride hepatotoxicity. Toxicology and applied pharmacology. 1986;85(1):49-59.

Pirtskhalava MV, Chernen'kaia SN, Lukerenko RV, Vasil'ev AN. Single- and double-stranded DNA from mouse liver after exposure to carbon tetrachloride. Ukrainskii biokhimicheskii zhurnal (1978). 1990;62(5):92-5.

Pitchumoni CS, Stenger RJ, Rosenthal WS, Johnson EA. Effects of 3,4-benzpyrene pretreatment on the hepatotoxicity of carbon tetrachloride in rats. The Journal of pharmacology and experimental therapeutics. 1972;181(2):227-33.

Piyachaturawat P, Kingkaeohoi S, Toskulkao C. Potentiation of carbon tetrachloride hepatotoxicity by piperine. Drug and chemical toxicology. 1995;18(4):333-44.

Plaa GL, Hewitt WR, du Souich P, Caille G, Lock S. Isopropanol and acetone potentiation of carbon tetrachloride-induced hepatotoxicity: single versus repetitive pretreatments in rats. Journal of toxicology and environmental health. 1982;9(2):235-50.

Podzei LK. Metastasis formation of Brown-Pearce tumor inoculated into different parts of the stomach under normal conditions and after exposure of the liver to carbon tetrachloride. Biulleten' eksperimental'noi biologii i meditsiny. 1961;51:704-6.

Poggioli R, Baggio G. Hepatoprotective action of 2,4-monofurfurylidene-tetra-O-methyl sorbitol (MSF) in rats. V. Effect on total lipids and triglycerides in the liver of animals intoxicated with CCl4. Bollettino della Societa italiana di biologia sperimentale. 1969;45(18):1195-6.

Poggioli R, Baggio G. Hepatoprotective action of 2,4-monofurfurylidene-tetra-O-methyl-sorbitol (MSF) in rats. IV. Effect on excretion of BSF in animals intoxicated with CCl4. Bollettino della Societa italiana di biologia sperimentale. 1969;45(18):1193-4.

Poli G, Cheeseman KH, Biasi F, Chiarpotto E, Dianzani MU, Esterbauer H, et al. Promethazine inhibits the formation of aldehydic products of lipid peroxidation but not covalent binding resulting from the exposure of rat liver fractions to CCl4. The Biochemical journal. 1989;264(2):527-32.

Poojari R, Gupta S, Maru G, Khade B, Bhagwat S. Sida rhombifolia ssp. retusa seed extract inhibits DEN induced murine hepatic preneoplasia and carbon tetrachloride hepatotoxicity. Asian Pacific journal of cancer prevention : APJCP. 2009;10(6):1107-12.

Poojari R, Gupta S, Maru G, Khade B, Bhagwat S. Chemopreventive and hepatoprotective effects of embelin on N-nitrosodiethylamine and carbon tetrachloride induced preneoplasia and toxicity in rat liver. Asian Pacific journal of cancer prevention : APJCP. 2010;11(4):1015-20.

Poon MKT, Chiu P-Y, Mak DHF, Ko K-M. Metformin protects against carbon tetrachloride hepatotoxicity in mice. Journal of pharmacological sciences. 2003;93(4):501-4.

Pooranaperundevi M, Sumiyabanu MS, Viswanathan P, Sundarapandiyan R, Anuradha CV. Insulin resistance induced by high-fructose diet potentiates carbon tetrachloride hepatotoxicity. Toxicology and industrial health. 2010;26(2):89-104.

Popov CS, Yantchev I, Georgiev G, Geneva L. Effect of different factors modifying the activity of some enzyme systems of the endoplastic reticulum on the sensitivity of cell organelles against the damaging action of chemical agents. I: Interrelations between the activity of some enzyme systems located in endoplasmic reticulum and hepatotoxicity of carbon tetrachloride. British journal of experimental pathology. 1976;57(5):593-603.

Popov TA. Certain aspects of the problem of adaptation to toxic effect of carbon tetrachloride. Gigiena i sanitariia. 1977(8):90-4.

Popovic D, Dukic D, Katic V, Jovic Z, Jovic M, Lalic J, et al. Antioxidant and proapoptotic effects of anthocyanins from bilberry extract in rats exposed to hepatotoxic effects of carbon tetrachloride. Life sciences. 2016;157:168-77.

Pound AW. The effect of a dose of dimethylnitrosamine on the toxicity of a subsequent dose and on the toxicity of carbon tetrachloride in mice. British journal of experimental pathology. 1975;56(3):271-5.

Pound AW, Horn L, Lawson TA. Decreased toxicity of dimethylnitrosamine in rats after treatment with carbon tetrachloride. Pathology. 1973;5(3):233-42.

Pound AW, Lawson TA. Protection by a small dose of carbon tetrachloride against the toxic effects of dimethylnitrosamine in rats. British journal of experimental pathology. 1974;55(2):203-12.

Pound AW, Lawson TA. Partial hepatectomy and toxicity of dimethyl-nitrosamine and carbon tetrachloride, in relation to the carcinogenic action of dimethylnitrosamine. British journal of cancer. 1975;32(5):596-603.

Pound AW, Lawson TA. Protection by carbon tetrachloride against the toxic effects of dimethylnitrosamine in mice. British journal of experimental pathology. 1975;56(1):77-82.

Pound AW, Lawson TA. Reduction of carbon tetrachloride toxicity by prior administration of a single small dose in mice and rats. British journal of experimental pathology. 1975;56(2):172-9.

Pradeep K, Mohan CVR, Anand KG, Karthikeyan S. Effect of pretreatment of Cassia fistula Linn. leaf extract against subacute CCl4 induced hepatotoxicity in rats. Indian journal of experimental biology. 2005;43(6):526-30.

Pritchard MT, Cohen JI, Roychowdhury S, Pratt BT, Nagy LE. Early growth response-1 attenuates liver injury and promotes hepatoprotection after carbon tetrachloride exposure in mice. Journal of hepatology. 2010;53(4):655-62.

Pritchard MT, Malinak RN, Nagy LE. Early growth response (EGR)-1 is required for timely cell-cycle entry and progression in hepatocytes after acute carbon tetrachloride exposure in mice. American journal of physiology Gastrointestinal and liver physiology. 2011;300(6):G1124-31.

Prodrom I, Ioan M, Anghel I, Oprea C, Bita T. Acute carbon tetrachloride poisoning. Revista medico-chirurgicala a Societatii de Medici si Naturalisti din Iasi. 1980;84(3):499-502.

Pu X, Fan W, Yu S, Li Y, Ma X, Liu L, et al. Polysaccharides from Angelica and Astragalus exert hepatoprotective effects against carbon-tetrachloride-induced intoxication in mice. Canadian journal of physiology and pharmacology. 2015;93(1):39-43.

Pupyshev AB, Shorina GN, Rukavishnikova EV. Elimination of asialoorosomucoid and its catabolism in liver of rats with toxic CCl4-induced cirrhosis. Patologicheskaia fiziologiia i eksperimental'naia terapiia. 1995(4):38-40.

Pushpendran CK, Shenoy BV, Eapen J. Studies on carbon tetrachloride toxicity. Indian journal of experimental biology. 1976;14(4):421-3.

Qin L-Q, Wang P-Y, Wang Y, Kaneko T, Hoshi K, Sato A. Voglibose potentiates the hepatotoxicity of carbon tetrachloride and acetaminophen by inducing CYP2E1 in rats. Hepatology research : the official journal of the Japan Society of Hepatology. 2005;33(1):50-6.

Qin L-Q, Wang Y, Xu J-Y, Kaneko T, Sato A, Wang P-Y. One-day dietary restriction changes hepatic metabolism and potentiates the hepatotoxicity of carbon tetrachloride and chloroform in rats. The Tohoku journal of experimental medicine. 2007;212(4):379-87.

Quan J, Li T, Zhao W, Xu H, Qiu D, Yin X. Hepatoprotective effect of polysaccharides from Boschniakia rossica on carbon tetrachloride-induced toxicity in mice. Journal of clinical biochemistry and nutrition. 2013;52(3):244-52.

Quan J, Piao L, Wang X, Li T, Yin X. Rossicaside B protects against carbon tetrachloride-induced hepatotoxicity in mice. Basic & clinical pharmacology & toxicology. 2009;105(6):380-6.

Quan J, Yin X, Xu H. Boschniakia rossica prevents the carbon tetrachloride-induced hepatotoxicity in rat. Experimental and toxicologic pathology : official journal of the Gesellschaft fur Toxikologische Pathologie. 2011;63(1-2):53-9.

Querci V, Massari L, Barni I. On the metabolism and toxic action of parathion in rats pretreated with CCl4. Atti della Accademia dei fisiocritici in Siena Sezione medico-fisica. 1968;17(1):235-8.

Raghavendra R, Neelagund S, Kuluvar G, Bhanuprakash V, Revanaiah Y. Protective effect of partially purified 35kDa protein from silk worm (Bombyx mori) fecal matter against carbon tetrachloride induced hepatotoxicity and in vitro anti-viral properties. Pharmaceutical biology. 2010;48(12):1426-31.

Rahmouni F, Hamdaoui L, Badraoui R, Rebai T. Protective effects of Teucrium polium aqueous extract and ascorbic acid on hematological and some biochemical parameters against carbon tetrachloride (CCl4) induced toxicity in rats. Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie. 2017;91:43-8.

Rahmouni F, Saoudi M, Amri N, El-Feki A, Rebai T, Badraoui R. Protective effect of Teucrium polium on carbon tetrachloride induced genotoxicity and oxidative stress in rats. Archives of physiology and biochemistry. 2018;124(1):1-9.

Rajeswary H, Vasuki R, Samudram P, Geetha A. Hepatoprotective action of ethanolic extracts of Melia azedarach Linn. and Piper longum Linn and their combination on CCl4 induced hepatotoxicity in rats. Indian journal of experimental biology. 2011;49(4):276-81.

Rak manin IV, Kushnerova NF, Gordeichuk TN, Fomenko SE, Sprygin VG. Metabolic reactions of the liver in carbon tetrachloride intoxication and their correction by plant antioxidants. Gigiena i sanitariia. 1997(1):30-2.

Ramkumar KM, Anuradha CV. Short-term dietary restriction modulates liver lipid peroxidation in carbon tetrachloride-intoxicated rats. Journal of basic and clinical physiology and pharmacology. 2005;16(4):245-56.

Ramkumar KM, Rajesh R, Anuradha CV. Food restriction attenuates blood lipid peroxidation in carbon tetrachloride-intoxicated rats. Nutrition (Burbank, Los Angeles County, Calif). 2003;19(4):358-62.

Rana SV, Tayal MK. Influence of zinc, vitamin B12 and glutathione on the liver of rats exposed to carbon tetrachloride. Industrial health. 1981;19(2):65-9.

Ranjbar A, Sharifzadeh M, Karimi J, Tavilani H, Baeeri M, Heidary Shayesteh T, et al. Propofol Attenuates Toxic Oxidative Stress by CCl4 in Liver Mitochondria and Blood in Rat. Iranian journal of pharmaceutical research : IJPR. 2014;13(1):253-62.

Rao PS, Dalu A, Kulkarni SG, Mehendale HM. Stimulated tissue repair prevents lethality in isopropanol-induced potentiation of carbon tetrachloride hepatotoxicity. Toxicology and applied pharmacology. 1996;140(2):235-44.

Rao PS, Mangipudy RS, Mehendale HM. Tissue injury and repair as parallel and opposing responses to CCl4 hepatotoxicity: a novel dose-response. Toxicology. 1997;118(2-3):181-93.

Rao SB, Mehendale HM. Protection from chlordecone (Kepone)-potentiated CCl4 hepatotoxicity in rats by fructose 1,6-diphosphate. The International journal of biochemistry. 1989;21(9):949-54.

Rao SB, Mehendale HM. Protective role of fructose 1,6-bisphosphate during CCl4 hepatotoxicity in rats. The Biochemical journal. 1989;262(3):721-5.

Rao SB, Young RA, Mehendale HM. Hepatic polyamines and related enzymes following chlordecone-potentiated carbon tetrachloride toxicity in rats. Journal of biochemical toxicology. 1989;4(1):55-63.

Rao VC, Mehendale HM. Effect of antimitotic agent colchicine on carbon tetrachloride toxicity. Archives of toxicology. 1993;67(6):392-400.

Rapin M, Got C, Le Gall JR, Goulon M. Effect of hyperbaric oxygen on the hepatic toxicity of carbon tetrachloride in the rat liver. Revue francaise d'etudes cliniques et biologiques. 1967;12(6):594-9.

Rat'kin AV, Saratikov AS, Chuchalin VS, Burkova VN, Frolov VN. Hepatoprotectors prevent the toxic action of cyclophosphamide on the liver of rats with CCl4-induced hepatitis model. Eksperimental'naia i klinicheskaia farmakologiia. 2005;68(2):47-50.

Rau JM, Reinke LA, McCay PB. Direct observation of spin-trapped carbon dioxide radicals in hepatocytes exposed to carbon tetrachloride. Free radical research communications. 1990;9(3-6):197-204.

Rauen HM, Schriewer H. The antihepatotoxic effect of silymarin on liver damage in rats induced by carbon tetrachloride, d-galactosamine and allyl alcohol. Arzneimittel-Forschung. 1971;21(8):1194-201.

Rauen HM, Schriewer H. The anti-hepatotoxic effect of parenterally administered silymarin in CCl4-induced liver damage of the rat. Arzneimittel-Forschung. 1973;23:Suppl:148-9.

Rauen HM, Schriewer H, Fels H. The anti-hepatotoxic effect of aliphatic and heterocyclic mercapto compounds in CCl4-induced liver damage in the rat. I. Arzneimittel-Forschung. 1973;23:Suppl:136-40.

Rauen HM, Schriewer H, Fels H. The anti-hepatotoxic effect of aliphatic and heterocyclic mercapto compounds in CCl4-induced liver damage in the rat. II. Arzneimittel-Forschung. 1973;23:Suppl:141-5.

Rauen HM, Schriewer H, Gebauer B, Abu Tair M, Rahmede D, Riese B. Duration of enzyme activities, free fatty acids and lipids in the rat serum following carbon tetrachloride intoxication. Arzneimittel-Forschung. 1973;23:Suppl:116-26.

Ray SD, Mehendale HM. Potentiation of CCl4 and CHCl3 hepatotoxicity and lethality by various alcohols. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1990;15(3):429-40.

Raymond P, Plaa GL. Ketone potentiation of haloalkane-induced hepatotoxicity: CCl4 and ketone treatment on hepatic membrane integrity. Journal of toxicology and environmental health. 1996;49(3):285-300.

Raymond P, Plaa GL. Effect of dosing vehicle on the hepatotoxicity of CCl4 and nephrotoxicity of CHCl3 in rats. Journal of toxicology and environmental health. 1997;51(5):463-76.

Rechnagel RO, Glende EA, Jr. Carbon tetrachloride hepatotoxicity: an example of lethal cleavage. CRC critical reviews in toxicology. 1973;2(3):263-97.

Recknagel RO. Carbon tetrachloride hepatotoxicity. Pharmacological reviews. 1967;19(2):145-208.

Recknagel RO. A new direction in the study of carbon tetrachloride hepatotoxicity. Life sciences. 1983;33(5):401-8.

Recknagel RO, Ghoshal AK. Lipoperoxidation as a vector in carbon tetrachloride hepatotoxicity. Laboratory investigation; a journal of technical methods and pathology. 1966;15(1 Pt 1):132-48.

Recknagel RO, Glende EA, Jr., Dolak JA, Waller RL. Mechanisms of carbon tetrachloride toxicity. Pharmacology & therapeutics. 1989;43(1):139-54.

Red'kina ED. Lymphoid tissue reaction to the action of carbon tetrachloride under monotonous and intermitten exposure regimens. Gigiena truda i professional'nye zabolevaniia. 1977(4):40-4.

Reddrop CJ, Cheeseman KH, Slater TF. Correlations between common tests for assessment of liver damage: indices of the hepatoprotective activity of promethazine in carbon tetrachloride hepatotoxicity. Cell biochemistry and function. 1983;1(1):55-63.

Reddy DG, Krishnamurthy KR, Bhaskar GR. Carbon tetrachloride cirrhosis in rats. 1. The influence of age, sex, and gonadectomy; 2. The changes in the livers of the fetuses born to mothers exposed to carbon tetrachloride. Archives of pathology. 1962;74:73-80.

Reen RK, Karan M, Singh K, Karan V, Johri RK, Singh J. Screening of various Swertia species extracts in primary monolayer cultures of rat hepatocytes against carbon tetrachloride- and paracetamol-induced toxicity. Journal of ethnopharmacology. 2001;75(2-3):239-47.

Reitman FA, Berger ML, Shertzer HG. Studies on calcium transport during carbon tetrachloride mediated hepatotoxicity in mice. Biochemical pharmacology. 1988;37(23):4584-6.

Rengarajan T, Rajendran P, Nandakumar N, Lokeshkumar B, Balasubramanian MP. D-Pinitol Protects Against Carbon Tetrachloride-Induced Hepatotoxicity in Rats. Journal of environmental pathology, toxicology and oncology : official organ of the International Society for Environmental Toxicology and Cancer. 2015;34(4):287-98.

Reyes-Gordillo K, Muriel P, Castaneda-Hernandez G, Favari L. Pharmacokinetics of diclofenac in rats intoxicated with CCL4, and in the regenerating liver. Biopharmaceutics & drug disposition. 2007;28(8):415-22.

Reyes-Gordillo K, Shah R, Arellanes-Robledo J, Rojkind M, Lakshman MR. Protective effects of thymosin beta4 on carbon tetrachloride-induced acute hepatotoxicity in rats. Annals of the New York Academy of Sciences. 2012;1269:61-8.

Rezende TP, do A Correa JO, Aarestrup BJV, Aarestrup FM, de Sousa OV, da Silva Filho AA. Protective effects of Baccharis dracunculifolia leaves extract against carbon tetrachloride- and acetaminophen-induced hepatotoxicity in experimental animals. Molecules (Basel, Switzerland). 2014;19(7):9257-72.

Richet G, Crosnier J, Lissac J. Anuria caused by carbon tetrachloride poisoning; 25 case reports. La Revue du praticien. 1959;9(6):591-4 passim.

Rikans LE, Hornbrook KR, Cai Y. Carbon tetrachloride hepatotoxicity as a function of age in female Fischer 344 rats. Mechanisms of ageing and development. 1994;76(2-3):89-99.

Risal P, Hwang PH, Yun BS, Yi H-K, Cho BH, Jang KY, et al. Hispidin analogue davallialactone attenuates carbon tetrachloride-induced hepatotoxicity in mice. Journal of natural products. 2012;75(10):1683-9.

Ritesh KR, Suganya A, Dileepkumar HV, Rajashekar Y, Shivanandappa T. A single acute hepatotoxic dose of CCl4 causes oxidative stress in the rat brain. Toxicology reports. 2015;2:891-5.

Roberts SM, Harbison RD, James RC. Methamphetamine potentiation of carbon tetrachloride hepatotoxicity in mice. The Journal of pharmacology and experimental therapeutics. 1994;271(2):1051-7.

Roberts SM, Harbison RD, James RC. Mechanistic studies on the potentiation of carbon tetrachloride hepatotoxicity by methamphetamine. Toxicology. 1995;97(1-3):49-57.

Roberts SM, Harbison RD, Seng JE, James RC. Potentiation of carbon tetrachloride hepatotoxicity by phenylpropanolamine. Toxicology and applied pharmacology. 1991;111(2):175-88.

Roland H, Baufle GH. A case of carbon tetrachloride poisoning. Annales de medecine legale, criminologie, police scientifique et toxicologie. 1958;38(1):42-3.

Romero G, Lasheras B, Sainz Suberviola L, Cenarruzabeitia E. Protective effects of calcium channel blockers in carbon tetrachloride-induced liver toxicity. Life sciences. 1994;55(13):981-90.

Ronneberger H. Influence of antithrombin III on carbon tetrachloride intoxication of rabbits. Archives of toxicology Supplement = Archiv fur Toxikologie Supplement. 1985;8:156-9.

Rood AS, McGavran PD, Aanenson JW, Till JE. Stochastic estimates of exposure and cancer risk from carbon tetrachloride released to the air from the rocky flats plant. Risk analysis : an official publication of the Society for Risk Analysis. 2001;21(4):675-95.

Roomi M, Kalinovsky T, Roomi NW, Ivanov V, Rath M, Niedzwiecki A. A nutrient mixture suppresses carbon tetrachloride-induced acute hepatic toxicity in ICR mice. Human & experimental toxicology. 2008;27(7):559-66.

Rossi F, McLean P. Effect of carbon tetrachloride intoxication on the activity of enzymes of the urea cycle in the liver of the rat. Nature. 1963;197:1207-8.

Rossi F, Zatti M. Liver and plasma phosphatides during the initial stages of carbon tetrachloride intoxication in rats. British journal of experimental pathology. 1963;44:131-6.

Rotaru G, Constantinescu S, Filipescu G, Ratea E. Hepatic protection in carbon tetrachloride experimental intoxication. Morphologie et embryologie. 1978;24(2):149-56.

Rothschild MA, Oratz M, Schreiber SS. Effect of tryptophan on the hepatotoxic effects of alcohol and carbon tetrachloride. Transactions of the Association of American Physicians. 1971;84:313-20.

Rubin E, Hutterer F, Popper H. Cell proliferation and fiber formation in chronic carbon tetrachloride intoxication. A morphologic and chemical study. The American journal of pathology. 1963;42:715-28.

Ruch RJ, Klaunig JE, Schultz NE, Askari AB, Lacher DA, Pereira MA, et al. Mechanisms of chloroform and carbon tetrachloride toxicity in primary cultured mouse hepatocytes. Environmental health perspectives. 1986;69:301-5.

Rungby J, Ernst E. Experimentally induced lipid peroxidation after exposure to chromium, mercury or silver: interactions with carbon tetrachloride. Pharmacology & toxicology. 1992;70(3):205-7.

Rusu MA, Bucur N, Puica C, Tamas M. Effects of Corylus avellana in acetaminophen and CCl4 induced toxicosis. Phytotherapy research : PTR. 1999;13(2):120-3.

Rusu MA, Tamas M, Puica C, Roman I, Sabadas M. The hepatoprotective action of ten herbal extracts in CCl4 intoxicated liver. Phytotherapy research : PTR. 2005;19(9):744-9.

Saad EA. Curative and protective effects of L-arginine on carbon tetrachloride-induced hepatotoxicity in mice. Biochemical and biophysical research communications. 2012;423(1):147-51.

Saba AB, Oyagbemi AA, Azeez OI. Amelioration of carbon tetrachloride-induced hepatotoxicity and haemotoxicity by aqueous leaf extract of Cnidoscolus aconitifolius in rats. Nigerian journal of physiological sciences : official publication of the Physiological Society of Nigeria. 2010;25(2):139-47.

Sacca R, Cerlesi M. Effect of antihepatotoxic liver extracts on the modificationns of serum GPT induced by carbon tetrachloride in rats. Bollettino chimico farmaceutico. 1968;107(1):43-6.

Sachan DS, Berger R, Su PK. Effects of diet restriction and carnitine on carbon tetrachloride toxicity in the rat. Journal of environmental pathology, toxicology and oncology : official organ of the International Society for Environmental Toxicology and Cancer. 1993;12(4):205-7.

Sadanobu S, Takeuchi M, Tezuka M. Effect of 4-phenyl-1,3-dithia-2-thioxo-cyclopent-4-ene on liver injury induced by repeated exposure to galactosamine plus carbon tetrachloride in rats. The Journal of toxicological sciences. 1998;23(2):129-48.

Sadeghi H, Hosseinzadeh S, Akbartabar Touri M, Ghavamzadeh M, Jafari Barmak M, Sayahi M, et al. Hepatoprotective effect of Rosa canina fruit extract against carbon tetrachloride induced hepatotoxicity in rat. Avicenna journal of phytomedicine. 2016;6(2):181-8.

Sadek K, Saleh E. Fasting ameliorates metabolism, immunity, and oxidative stress in carbon tetrachloride-intoxicated rats. Human & experimental toxicology. 2014;33(12):1277-83.

Saez JC, Bennett MV, Spray DC. Carbon tetrachloride at hepatotoxic levels blocks reversibly gap junctions between rat hepatocytes. Science (New York, NY). 1987;236(4804):967-9.

Safer A-M, Afzal M, Hanafy N, Mousa S. Green tea extract therapy diminishes hepatic fibrosis mediated by dual exposure to carbon tetrachloride and ethanol: A histopathological study. Experimental and therapeutic medicine. 2015;9(3):787-94.

Safhi MM. Nephroprotective Effect of Zingerone against CCl4-Induced Renal Toxicity in Swiss Albino Mice: Molecular Mechanism. Oxidative medicine and cellular longevity. 2018;2018:2474831.

Sahreen S, Khan MR, Khan RA. Ameliorating effect of various fractions of Rumex hastatus roots against hepato- and testicular toxicity caused by CCl4. Oxidative medicine and cellular longevity. 2013;2013:325406.

Sahreen S, Khan MR, Khan RA, Alkreathy HM. Cardioprotective role of leaves extracts of Carissa opaca against CCl4 induced toxicity in rats. BMC research notes. 2014;7:224.

Said MM, Ibrahim MH, Mekkawy MY. Early identification of carbon tetrachloride hepatotoxicity in albino rats. Die Pharmazie. 1984;39(1):64-5.

Sajid M, Khan MR, Shah NA, Ullah S, Younis T, Majid M, et al. Proficiencies of Artemisia scoparia against CCl4 induced DNA damages and renal toxicity in rat. BMC complementary and alternative medicine. 2016;16:149.

Saka MO, Sipahioglu U, Mizan N. Effects of cholesterol feeding on cholesterol metabolism in rabbits intoxicated with carbon tetrachloride: variations of serum protein and cholesterol patterns in various partitions of serum protein after cholesterol feeding of rabbits intoxicated with carbon tetrachloride. Tip Fakultesi mecmuasi. 1954;17(1):24-37.

Saka MO, Sipahioglu U, Mizan N. Toxic action of carbon tetrachloride on cholesterol and protein metabolism; variations of blood cholesterol level and of various fractions of serum proteins after subcutaneous injection of sublethal doses of carbon tetrachloride. Tip Fakultesi mecmuasi. 1955;18(1):192-209.

Sakuta GA, Kudriavtsev BN. The cellular mechanisms of the regeneration of the cirrhotic liver in rats. I. The correlation of the processes of cellular proliferation, polyploidization and hypertrophy after the cessation of chronic exposure to carbon tetrachloride. Tsitologiia. 1996;38(11):1158-70.

Salomatin VV. Metabolism of pseudouridine in rats with acute carbon tetrachloride intoxication. Voprosy meditsinskoi khimii. 1983;29(4):54-7.

Salto R, Sola M, Oliver FJ, Vargas AM. Effects of starvation, diabetes and carbon tetrachloride intoxication on rat kidney cortex and liver pyruvate carboxylase levels. Archives of physiology and biochemistry. 1996;104(7):845-50.

Salvatore F, Cozzolino D, Scoppa P. Antitoxic action of ornithine-aspartic acid mixture on chronic carbon tetrachloride poisoning in young rats. Bollettino della Societa italiana di biologia sperimentale. 1958;34(12):620-2.

Salvatore F, Scoppa P, Cozzolino D. Protective effect of ornithine and aspartic acid in chronic carbon tetrachloride intoxication. Clinica chimica acta; international journal of clinical chemistry. 1959;4:728-32.

Sancheti S, Sancheti S, Seo S-Y. Ameliorative effects of 7-methylcoumarin and 7-methoxycoumarin against CCl4-induced hepatotoxicity in rats. Drug and chemical toxicology. 2013;36(1):42-7.

Sanna A, Mascia A, Pani P, Congiu L. Protection by cerium chloride on CCl4-induced hepatotoxicity. Experientia. 1976;32(1):91-2.

Sanzgiri UY, Bruckner JV. Effect of Emulphor, an emulsifier, on the pharmacokinetics and hepatotoxicity of oral carbon tetrachloride in the rat. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1997;36(1):54-61.

Sanzgiri UY, Kim HJ, Muralidhara S, Dallas CE, Bruckner JV. Effect of route and pattern of exposure on the pharmacokinetics and acute hepatotoxicity of carbon tetrachloride. Toxicology and applied pharmacology. 1995;134(1):148-54.

Sanzgiri UY, Srivatsan V, Muralidhara S, Dallas CE, Bruckner JV. Uptake, distribution, and elimination of carbon tetrachloride in rat tissues following inhalation and ingestion exposures. Toxicology and applied pharmacology. 1997;143(1):120-9.

Saratikov AS, Novozheeva TP, Vengerovskii AI. Effect of benzobamil on the morpho-functional state of liver and drug metabolism in experimental CC14 intoxication. Voprosy meditsinskoi khimii. 1983;29(2):23-6.

Saric M, Prpic-Majic D, Beritic T. Activity of serum transaminase in workers exposed to carbon tetrachloride. Arhiv za higijenu rada i toksikologiju. 1962;13:19-27.

Sartori S, Valagussa L, Gibelli A. ACTION OF COENZYME A ON THE ENZYMATIC ACTIVITY OF THE BLOOD IN THE RAT INTOXICATED WITH CARBON TETRACHLORIDE. Rivista di patologia e clinica. 1963;18:693-8.

Sartori S, Valagussa L, Mainieri RL. STUDY OF ENZYME ACTIVITY IN THE BLOOD OF RATS INTOXICATED WITH CARBON TETRACHLORIDE AND PROTECTED WITH METHIONINE METHYLSULFONIUM CHLORIDE. Gazzetta internazionale di medicina e chirurgia. 1964;68:1050-4.

Sato C, Nakano M, Lieber CS. Prevention of acetaminophen-induced hepatotoxicity by acute ethanol administration in the rat: comparison with carbon tetrachloride-induced hepatoxicity. The Journal of pharmacology and experimental therapeutics. 1981;218(3):805-10.

Sawant SP, Dnyanmote AV, Shankar K, Limaye PB, Latendresse JR, Mehendale HM. Potentiation of carbon tetrachloride hepatotoxicity and lethality in type 2 diabetic rats. The Journal of pharmacology and experimental therapeutics. 2004;308(2):694-704.

Saxena A, Garg NK. Effect of Liv-52 on membrane lipids in carbon tetrachloride induced hepatotoxicity in rats. Indian journal of experimental biology. 1981;19(9):859-62.

Schaffer A, Hoch Z. A case of carbon tetrachloride poisoning. Giornale italiano di medicina del lavoro. 1983;5(2):81-4.

Schirardin H, Bauer M, Warter J. Effect of D-glucose on rat liver in chronic carbon tetrachloride poisoning; comparison with effects of ascorbic acid. Comptes rendus des seances de la Societe de biologie et de ses filiales. 1972;166(12):1795-800.

Schmidt P, Burck D, Burger A, Gohlke R, Grigorowa R, Jager H, et al. Hepatotoxicity of benzene, 1,1,2,2-tetrachloroethane and carbon tetrachloride. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1980;26(3):167-72.

Schnitger F, Uehleke H. Influence of diethylnitrosamine, carbon tetrachloride, butter yellow and cyclophosphamide on amino acid incorporation into fractions of liver homogenates after metabolic activation in vitro. Possibilities for the detection of hepatotoxic effects. Archiv fur Toxikologie. 1969;25(2):169-82.

Schols L, Mecke D, Gebhardt R. Reestablishment of the heterogeneous distribution of hepatic glutamine synthetase during regeneration after CCl4-intoxication. Histochemistry. 1990;94(1):49-54.

Schriewer H, Badde R, Roth G, Rauen HM. Pharmacokinetics of the anti-hepatotoxic effect of silymarin in CCl4-and deoxycholate-induced liver damage in the rat. Arzneimittel-Forschung. 1973;23:Suppl:157-8.

Schriewer H, Klusener H, Rauen HM. Methylating reactions on microsomal phospholipids in rat liver intoxicated with carbon tetrachloride (author's transl). Experientia. 1975;31(11):1319-20.

Schwarzbeck A, Kosters W. Extracorporeal hemoperfusion in acute carbon tetrachloride intoxication. Archives of toxicology. 1976;35(3):207-11.

Schwetz BA, Leong BK, Gehring PJ. Embryo- and fetotoxicity of inhaled carbon tetrachloride, 1,1-dichloroethane and methyl ethyl ketone in rats. Toxicology and applied pharmacology. 1974;28(3):452-64.

Schwetz BA, Plaa GL. Catecholamine potentiation of carbon tetrachloride-induced hepatotoxicity in mice. Toxicology and applied pharmacology. 1969;14(3):495-509.

Seawright AA, Filippich LJ, Steele DP. The effect of carbon disulphide on the toxicity of carbon tetrachloride for sheep. Australian veterinary journal. 1972;48(1):38.

Seawright AA, Filippich LJ, Steele DP. The effect of carbon disulphide used in combination with carbon tetrachloride on the toxicity of the latter drug for sheep. Research in veterinary science. 1973;15(2):158-66.

Seawright AA, McLean AE. Induced susceptibility of sheep to carbon tetrachloride intoxication. Australian veterinary journal. 1967;43(9):354-8.

Sehitoglu I, Tumkaya L, Bedir R, Ozer E, Cure MC, Kalkan Y, et al. Protective Effect of Infliximab Against Carbon Tetrachloride-Induced Hepatotoxicity. Journal of environmental pathology, toxicology and oncology : official organ of the International Society for Environmental Toxicology and Cancer. 2015;34(2):175-82.

Seki M, Kasama K, Imai K. Effect of food restriction on hepatotoxicity of carbon tetrachloride in rats. The Journal of toxicological sciences. 2000;25(1):33-40.

Semenov DE, Zhukova NA, Ivanova EP, Sorokina IV, Baiev DS, Nepomnyashchikh GI, et al. Hepatoprotective properties of betulonic acid amide and heptral in toxic liver injury induced by carbon tetrachloride in combination with ethanol. Bulletin of experimental biology and medicine. 2015;158(3):336-41.

Sengupta M, Sharma GD, Chakraborty B. Effect of aqueous extract of Tinospora cordifolia on functions of peritoneal macrophages isolated from CCl4 intoxicated male albino mice. BMC complementary and alternative medicine. 2011;11:102.

Serban M, Zamfirescu-Gheorghiu M, Chiriloiu C. Effect of the administration of cortisol on hepatic aspartate aminotransferase activity and its isoenzymes in experimental carbon tetrachloride poisoning. Studii si cercetari de medicina interna. 1971;12(1):51-6.

Serfas MS, Goufman E, Feuerman MH, Gartel AL, Tyner AL. p53-independent induction of p21WAF1/CIP1 expression in pericentral hepatocytes following carbon tetrachloride intoxication. Cell growth & differentiation : the molecular biology journal of the American Association for Cancer Research. 1997;8(9):951-61.

Shah MD, D'Souza UJA, Iqbal M. The potential protective effect of Commelina nudiflora L. against carbon tetrachloride (CCl4)-induced hepatotoxicity in rats, mediated by suppression of oxidative stress and inflammation. Environmental health and preventive medicine. 2017;22(1):66.

Shah NA, Khan MR. Increase of glutathione, testosterone and antioxidant effects of Jurenia dolomiaea on CCl4 induced testicular toxicity in rat. BMC complementary and alternative medicine. 2017;17(1):206.

Shah VN, Shah MB, Bhatt PA. Hepatoprotective activity of punarnavashtak kwath, an Ayurvedic formulation, against CCl4-induced hepatotoxicity in rats and on the HepG2 cell line. Pharmaceutical biology. 2011;49(4):408-15.

Shahjahan M, Vani G, Devi CSS. Protective effect of Indigofera oblongifolia in CCl4-induced hepatotoxicity. Journal of medicinal food. 2005;8(2):261-5.

Shan W, Palkar PS, Murray IA, McDevitt EI, Kennett MJ, Kang BH, et al. Ligand activation of peroxisome proliferator-activated receptor beta/delta (PPARbeta/delta) attenuates carbon tetrachloride hepatotoxicity by downregulating proinflammatory gene expression. Toxicological sciences : an official journal of the Society of Toxicology. 2008;105(2):418-28.

Shao Q, Mei MH. Effect of human hepatic stimulator substance on intracellular calcium and potassium homeostasis in CCl4-intoxication dissociated hepatocytes. Sheng li xue bao : [Acta physiologica Sinica]. 1993;45(4):387-94.

Sharma CK, Saxena M, Sharma V. Jaggery protects hepatorenal injury induced by acute exposure to carbon tetrachloride in Wistar rats. Journal of environmental pathology, toxicology and oncology : official organ of the International Society for Environmental Toxicology and Cancer. 2013;32(1):1-7.

Shchelkunova TA, Smirnov AN. Expression of the specific estrogen-binding protein in the liver of the androgenized mature female rats during liver regeneration after CCl4 intoxication. Biulleten' eksperimental'noi biologii i meditsiny. 1996;122(7):28-31.

Shea SM. Experimental toxic cirrhosis in the rat. Kinetics of hepatocyte proliferation during intermittent carbon tetrachloride intoxication. Experimental and molecular pathology. 1966;5(3):311-28.

Shen ES, Garry VF, Anders MW. Effect of hypoxia on carbon tetrachloride hepatotoxicity. Biochemical pharmacology. 1982;31(23):3787-93.

Shen J, Chang X, Wang CC. Hepatic protection of indomethacin against carbon tetrachloride toxicity in rats. Sheng li xue bao : [Acta physiologica Sinica]. 1988;40(5):502-9.

Shertzer HG, Niemi MP, Reitman FA, Berger ML, Myers BL, Tabor MW. Protection against carbon tetrachloride hepatotoxicity by pretreatment with indole-3-carbinol. Experimental and molecular pathology. 1987;46(2):180-9.

Shertzer HG, Reitman FA, Tabor MW. Influence of diet on the expression of hepatotoxicity from carbon tetrachloride in ICR mice. Drug-nutrient interactions. 1988;5(4):275-82.

Shertzer HG, Sainsbury M. Protection against carbon tetrachloride hepatotoxicity by 5,10-dihydroindeno 1,2-b indole, a potent inhibitor of lipid peroxidation. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 1988;26(6):517-22.

Shibayama Y. Potentiation of carbon tetrachloride hepatotoxicity by hypoxia. British journal of experimental pathology. 1986;67(6):909-14.

Shibayama Y. Hepatotoxicity of carbon tetrachloride after chronic ethanol consumption. Experimental and molecular pathology. 1988;49(2):234-42.

Shibuya K, Tajima M, Yamate J, Saitoh T, Nunoya T. Carbon tetrachloride-induced hepatotoxicity enhances the development of pulmonary foam cells in rats fed a cholesterol-cholic acid diet. Toxicologic pathology. 1997;25(5):487-94.

Shih Y-L, Wu M-F, Lee C-H, Yeh M-Y, Chou J, Liu J-Y, et al. Antrodia Cinnamomea Reduces Carbon Tetrachloride-induced Hepatotoxicity In Male Wister Rats. In vivo (Athens, Greece). 2017;31(5):877-84.

Shimizu Y, Isoda K, Tezuka E, Yufu T, Nagai Y, Ishida I, et al. Influence of 50-nm polystyrene particles in inducing cytotoxicity in mice co-injected with carbon tetrachloride, cisplatin, or paraquat. Die Pharmazie. 2012;67(8):712-4.

Shimuzu M, Morita S, Yamano T, Yamada A. Relationship between hepatic glutathione content and carbon tetrachloride-induced hepatotoxicity in vivo. Toxicology letters. 1989;47(1):95-102.

Shine VJ, Latha PG, Suja SNR, Anuja GI, Raj G, Rajasekharan SN. Ameliorative effect of alkaloid extract of Cyclea peltata (Poir.) Hook. f. & Thoms. roots (ACP) on APAP/CCl4 induced liver toxicity in Wistar rats and in vitro free radical scavenging property. Asian Pacific journal of tropical biomedicine. 2014;4(2):143-51.

Shmidt P. Study of the response to a short-term exposure to benzene and carbon tetrachloride in different concentrations with simultaneous stress in the form of bloodletting or alcohol administration. Gigiena truda i professional'nye zabolevaniia. 1972;16(2):19-23.

Shukla S, Bhadauria M, Jadon A. Effect of propolis extract on acute carbon tetrachloride induced hepatotoxicity. Indian journal of experimental biology. 2004;42(10):993-7.

Sidransky H, Verney E, Kurl RN, Razavi T. Effect of tryptophan on toxic cirrhosis induced by intermittent carbon tetrachloride intoxication in the rat. Experimental and molecular pathology. 1988;49(1):102-10.

Siegers CP, Horn W, Younes M. Effect of hypoxia on the metabolism and hepatotoxicity of carbon tetrachloride and vinylidene chloride in rats. Acta pharmacologica et toxicologica. 1985;56(2):81-6.

Siegers CP, Horn W, Younes M. Effect of phorone-induced glutathione depletion on the metabolism and hepatotoxicity of carbon tetrachloride and vinylidene chloride in rats. Journal of applied toxicology : JAT. 1985;5(6):352-6.

Sikander M, Malik S, Parveen K, Ahmad M, Yadav D, Hafeez ZB, et al. Hepatoprotective effect of Origanum vulgare in Wistar rats against carbon tetrachloride-induced hepatotoxicity. Protoplasma. 2013;250(2):483-93.

Simeonova PP, Gallucci RM, Hulderman T, Wilson R, Kommineni C, Rao M, et al. The role of tumor necrosis factor-alpha in liver toxicity, inflammation, and fibrosis induced by carbon tetrachloride. Toxicology and applied pharmacology. 2001;177(2):112-20.

Simeonova R, Bratkov VM, Kondeva-Burdina M, Vitcheva V, Manov V, Krasteva I. Experimental liver protection of n-butanolic extract of Astragalus monspessulanus L. on carbon tetrachloride model of toxicity in rat. Redox report : communications in free radical research. 2015;20(4):145-53.

Simile MM, Banni S, Angioni E, Carta G, De Miglio MR, Muroni MR, et al. 5'-Methylthioadenosine administration prevents lipid peroxidation and fibrogenesis induced in rat liver by carbon-tetrachloride intoxication. Journal of hepatology. 2001;34(3):386-94.

Simko V, Michael S, Katz J, Oberstein E, Popescu A. Protective effect of oral acetylcysteine against the hepatorenal toxicity of carbon tetrachloride potentiated by ethyl alcohol. Alcoholism, clinical and experimental research. 1992;16(4):795-9.

Simmons JE, McDonald A, Seely JC, Sey YM. Potentiation of carbon tetrachloride hepatotoxicity by inhaled methanol: time course of injury and recovery. Journal of toxicology and environmental health. 1995;46(2):203-16.

Simmons JE, Yang RS, Svendsgaard DJ, Thompson MB, Seely JC, McDonald A. Toxicology studies of a chemical mixture of 25 groundwater contaminants: hepatic and renal assessment, response to carbon tetrachloride challenge, and influence of treatment-induced water restriction. Journal of toxicology and environmental health. 1994;43(3):305-25.

Simon MA. ACUTE TOXIC NEPHRITIS DUE TO INHALATION OF CARBON TETRACHLORIDE FUMES. Canadian Medical Association journal. 1939;41(6):580-3.

Simplicio PD, Segre G. Ligandin content in liver of rats intoxicated by a carbon tetrachloride. Pharmacological research communications. 1977;9(3):283-98.

Singh D, Arya PV, Aggarwal VP, Gupta RS. Evaluation of Antioxidant and Hepatoprotective Activities of Moringa oleifera Lam. Leaves in Carbon Tetrachloride-Intoxicated Rats. Antioxidants (Basel, Switzerland). 2014;3(3):569-91.

Singh H, Sidhu S, Chopra K, Khan MU. The novel role of beta-aescin in attenuating CCl4-induced hepatotoxicity in rats. Pharmaceutical biology. 2017;55(1):749-57.

Singh KP, Saxena AK, Zaidi SI, Dwivedi PD, Srivastava SP, Seth PK, et al. Protection against carbon tetrachloride-induced hepatotoxicity by protein A. Journal of applied toxicology : JAT. 1988;8(6):407-10.

Singh KP, Zaidi SI, Raisuddin, Saxena AK, Dwivedi PD, Seth PK, et al. Protection against carbon-tetrachloride-induced lymphoid organotoxicity in rats by protein A. Toxicology letters. 1990;51(3):339-51.

Singh K, Khanna AK, Chander R. Hepatoprotective activity of ellagic acid against carbon tetrachloride induced hepatotoxicity in rats. Indian journal of experimental biology. 1999;37(10):1025-6.

Singh M, Tiwari V, Jain A, Ghoshal S. Protective activity of picroliv on hepatic amoebiasis associated with carbon tetrachloride toxicity. The Indian journal of medical research. 2005;121(5):676-82.

Singh N, Khullar N, Kakkar V, Kaur IP. Sesamol loaded solid lipid nanoparticles: a promising intervention for control of carbon tetrachloride induced hepatotoxicity. BMC complementary and alternative medicine. 2015;15:142.

Singh N, Khullar N, Kakkar V, Kaur IP. Hepatoprotective effects of sesamol loaded solid lipid nanoparticles in carbon tetrachloride induced sub-chronic hepatotoxicity in rats. Environmental toxicology. 2016;31(5):520-32.

Sinicrope RA, Gordon JA, Little JR, Schoolwerth AC. Carbon tetrachloride nephrotoxicity: a reassessment of pathophysiology based upon the urinary diagnostic indices. American journal of kidney diseases : the official journal of the National Kidney Foundation. 1984;3(5):362-5.

Sivikova K, Piesova E, Dianovsky J. The protection of Vitamin E and selenium against carbon tetrachloride-induced genotoxicity in ovine peripheral blood lymphocytes. Mutation research. 2001;494(1-2):135-42.

Skrzypinska-Gawrysiak M, Piotrowski JK, Sporny S. Circadian variations in hepatotoxicity of carbon tetrachloride in mice. International journal of occupational medicine and environmental health. 2000;13(2):165-73.

Slater TF, Cheeseman KH, Ingold KU. Carbon tetrachloride toxicity as a model for studying free-radical mediated liver injury. Philosophical transactions of the Royal Society of London Series B, Biological sciences. 1985;311(1152):633-45.

Sloan JEN. Carbon tetrachloride dosage in sheep; some observations on possible chronic toxicity. The Veterinary record. 1950;62(26):380-1.

Smejkalova J, Obrsal J, Tusl M, Simek J. Changes in the level of CCl4 and its toxic radical .CCl3 in the blood and liver in rats of both sexes. Sbornik vedeckych praci Lekarske fakulty Karlovy univerzity v Hradci Kralove Supplementum. 1985;28(3-4):391-8.

Smialowicz RJ, Simmons JE, Luebke RW, Allis JW. Immunotoxicologic assessment of subacute exposure of rats to carbon tetrachloride with comparison to hepatotoxicity and nephrotoxicity. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1991;17(1):186-96.

Smith AR. Doudenal ulcer following exposure to carbon tetrachloride; report of two cases. The Journal of industrial hygiene and toxicology. 1947;29(2):134.

Smith AR. Duodenal ulcer following exposure to carbon tetrachloride: report of two cases. Monthly review - New York State Department of Labor, Division of Industrial Hygiene. 1947;26(10):41.

Smith DH. Carbon tetrachloride toxicity. British medical journal. 1965;2(5475):1434.

Smuckler EA. Studies on carbon tetrachloride intoxication. IV. Effect of carbon tetrachloride on liver slices and isolated organelles in vitro. Laboratory investigation; a journal of technical methods and pathology. 1966;15(1 Pt 1):157-66.

Smuckler EA, Benditt EP. STUDIES ON CARBON TETRACHLORIDE INTOXICATION. 3. A SUBCELLULAR DEFECT IN PROTEIN SYNTHESIS. Biochemistry. 1965;4:671-9.

Smuckler EA, Iseri OA, Benditt EP. STUDIES ON CARBON TETRACHLORIDE INTOXICATION. II. DEPRESSED AMINO ACID INCORPORATION INTO MITOCHONDRIAL PROTEIN AND CYTOCHROME C. Laboratory investigation; a journal of technical methods and pathology. 1964;13:531-8.

Smyth R, Turton JA, Clarke CJ, York MJ, Dare TO, Lane CS, et al. Identification of superoxide dismutase as a potential urinary marker of carbon tetrachloride-induced hepatic toxicity. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2008;46(9):2972-83.

Snell AM. Carbon tetrachloride intoxication treated by peritoneal lavage: clinical aspects. Proceedings of the staff meetings Mayo Clinic. 1947;22(16):327-30.

Sofi G, Khan MY, Jafri MA. Hepatoprotective activity of Gumma (Leucas cephalotes Spreng.) against Carbon tetrachloride induced hepatotoxicity in wistar rats. Ancient science of life. 2011;31(2):44-8.

Soliman MA, Elwi AM, Kamel SH, el-Kateb H. The prophylaxis of carbon tetrachloride hepatotoxicity by total belladonna alkaloids. The Journal of the Egyptian Medical Association. 1966;49(1):59-69.

Soliman MA, Fahmy SA, De Hondt HA. Liver cell regeneration in prophylaxis and treatment of carbon tetrachloride hepatotoxicity. The Journal of the Egyptian Medical Association. 1970;53(3):214-22.

Solodkowska W, Alvarado-Andrade R, Munoz E, Mardones J. Ethanol metabolism in adipose tissue from rats chronically exposed to carbon tetrachloride. In vitro oxidation to CO2 and incorporation into fatty acids and insaponifiable fraction. Medicina experimentalis : International journal of experimental medicine. 1968;18(4):331-5.

Solt DB, Cayama E, Tsuda H, Enomoto K, Lee G, Farber E. Promotion of liver cancer development by brief exposure to dietary 2-acetylaminofluorene plus partial hepatectomy or carbon tetrachloride. Cancer research. 1983;43(1):188-91.

Song A, Ko H-J, Lai M-N, Ng L-T. Protective effects of Wu-Ling-Shen (Xylaria nigripes) on carbon tetrachloride-induced hepatotoxicity in mice. Immunopharmacology and immunotoxicology. 2011;33(3):454-60.

Song H-Y, Mao Z-M, Yang L-L, Liu T, Li D-F, Zhang L, et al. Dangfei liganning capsules attenuate the susceptibility of rat nonalcoholic fatty liver to carbon tetrachloride toxicity. Journal of traditional Chinese medicine = Chung i tsa chih ying wen pan. 2011;31(4):327-33.

Song J-Y, Li L, Ahn J-B, Park J-G, Jo J-S, Park D-H, et al. Acute liver toxicity by carbon tetrachloride in HSP70 knock out mice. Experimental and toxicologic pathology : official journal of the Gesellschaft fur Toxikologische Pathologie. 2007;59(1):29-34.

Song T-Y, Yen G-C. Protective effects of fermented filtrate from Antrodia camphorata in submerged culture against CCl4-induced hepatic toxicity in rats. Journal of agricultural and food chemistry. 2003;51(6):1571-7.

Soni MG, Mehendale HM. Protection from chlordecone-amplified carbon tetrachloride toxicity by cyanidanol: biochemical and histological studies. Toxicology and applied pharmacology. 1991;108(1):46-57.

Soni MG, Mehendale HM. Protection from chlordecone-amplified carbon tetrachloride toxicity by cyanidanol: regeneration studies. Toxicology and applied pharmacology. 1991;108(1):58-66.

Soni MG, Mehendale HM. Hepatic failure leads to lethality of chlordecone-amplified hepatotoxicity of carbon tetrachloride. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1993;21(4):442-50.

Soni MG, Mehendale HM. Adenosine triphosphate protection of chlordecone-amplified CCl4 hepatotoxicity and lethality. Journal of hepatology. 1994;20(2):267-74.

Sorgo G. Trichlorethylene-, carbon tetrachloride- and gasoline-intoxication in connection with arterio- and coronary sclerosis (author's transl). Archives of toxicology. 1976;35(4):295-318.

Sotelo-Felix JI, Martinez-Fong D, Muriel P, Santillan RL, Castillo D, Yahuaca P. Evaluation of the effectiveness of Rosmarinus officinalis (Lamiaceae) in the alleviation of carbon tetrachloride-induced acute hepatotoxicity in the rat. Journal of ethnopharmacology. 2002;81(2):145-54.

Sprygin VG, Kushnerova NF, Rakhmanin IA. Antioxidant action of oligomeric proanthocyanidins isolated from viburnum in liver lesions by carbon tetrachloride and prevention of the latter's toxicity. Gigiena i sanitariia. 2003(3):57-60.

Sreelatha S, Padma PR, Umadevi M. Protective effects of Coriandrum sativum extracts on carbon tetrachloride-induced hepatotoxicity in rats. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2009;47(4):702-8.

Srilakshmi VS, Vijayan P, Raj PV, Dhanaraj SA, Chandrashekhar HR. Hepatoprotective properties of Caesalpinia sappan Linn. heartwood on carbon tetrachloride induced toxicity. Indian journal of experimental biology. 2010;48(9):905-10.

Srinivasan M, Rukkumani R, Ram Sudheer A, Menon VP. Ferulic acid, a natural protector against carbon tetrachloride-induced toxicity. Fundamental & clinical pharmacology. 2005;19(4):491-6.

Srinivasan S, Balwani JH. Effect of zinc sulphate on carbon tetrachloride hepatotoxicity. Acta pharmacologica et toxicologica. 1969;27(6):424-8.

Srinivasan S, Recknagel RO. Carbon tetrachloride hepatotoxicity in female rats. Experimental and molecular pathology. 1971;15(2):268-70.

Sroka KH. Toxic effects of carbon tetrachloride. Arztliche Wochenschrift. 1950;5(35):685-6.

Stacey N, Priestly BG. Dose-dependent toxicity of CCl4 in isolated rat hepatocytes and the effects of hepatoprotective treatments. Toxicology and applied pharmacology. 1978;45(1):29-39.

Stacey N, Priestly BG. Lipid peroxidation in isolated rat hepatocytes: relationship to toxicity of CCl4, ADP/Fe3+, and diethyl maleate. Toxicology and applied pharmacology. 1978;45(1):41-8.

Stan M, Vladescu C, Radu S, Zamfirescu-Gheorghiu M. Effect of castration and administration of estrogens on the activity of some liver enzymes in carbon tetrachloride poisoning. Studii si cercetari de medicina interna. 1967;8(5):443-8.

Steinhauer LS, Joyave JL, Davidson CP, Born CK, Hamrick ME. Inhibition of carbon tetrachloride induced hepatotoxicity by dantrolene sodium. Research communications in chemical pathology and pharmacology. 1986;52(1):59-70.

Stenger RJ, Johnson EA. Further observations upon the effects of phenobarbital pretreatment on the hepatotoxicity of carbon tetrachloride. Experimental and molecular pathology. 1971;14(2):220-7.

Stenger RJ, Miller RA, Williamson JN. Effects of phenobarbital pretreatment on the hepatotoxicity of carbon tetrachloride. Experimental and molecular pathology. 1970;13(2):242-52.

Stenger RJ, Petrelli M, Segel A, Williamson JN, Johnson EA. Modification of carbon tetrachloride hepatotoxicity by prior loading of the reticuloendothelial system with carbon particles. The American journal of pathology. 1969;57(3):689-706.

Stenger RJ, Porway M, Johnson EA, Datta RK. Effects of chlordane pretreatment on the hepatotoxicity of carbon tetrachloride. Experimental and molecular pathology. 1975;23(1):144-53.

Steup DR, Wiersma D, McMillan DA, Sipes IG. Pretreatment with drinking water solutions containing trichloroethylene or chloroform enhances the hepatotoxicity of carbon tetrachloride in Fischer 344 rats. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1991;16(4):798-809.

Stevens H, Forster FM. Toxic effects of carbon tetrachloride on the central nervous system. Transactions of the American Neurological Association. 1953;3(78th Meeting):136-7.

Stewart A, Witts LJ. Chronic carbon tetrachloride intoxication. 1944. British journal of industrial medicine. 1993;50(1):7-16.

Stewart RD, Boettner EA, Southworth RR, Cerny JC. Acute carbon tetrachloride intoxication. Jama. 1963;183:994-7.

Stewart RD, Gay HH, Erley DS, Hake CL, Peterson JE. Human exposure to carbon tetrachloride vapor. Relationship of expired air concentration to exposure and toxicity. Journal of occupational medicine : official publication of the Industrial Medical Association. 1961;3:386-90.

Straus B. Aplastic anemia following exposure to carbon tetrachloride. Journal of the American Medical Association. 1954;155(8):737-9.

Striker GE, Smuckler EA, Kohnen PW, Nagle RB. Structural and functional changes in rat kidney during CCl4 intoxication. The American journal of pathology. 1968;53(5):769-89.

Stripp B, Sipes IG, Maling HM, Gillette JR. Dibenamine impairment of rat hepatic microsomal enzymes and its relation to hepatotoxicity induced by CCl4 and dimethylnitrosamine. Drug metabolism and disposition: the biological fate of chemicals. 1974;2(5):464-8.

Strouse CD. Carbon tetrachloride intoxication. California medicine. 1951;74(4):269-72.

Strubelt O, Breining H. Influence of hypoxia on the hepatotoxic effects of carbon tetrachloride, paracetamol, allyl alcohol, bromobenzene and thioacetamide. Toxicology letters. 1980;6(2):109-13.

Strubelt O, Buettner F, Siegers CP. Proceedings: The hepatotoxic effect of ethanol after pretreatment with carbon tetrachloride, allyl alcohol, or D-galactosamine. Naunyn-Schmiedeberg's archives of pharmacology. 1975;287 Suppl:R102.

Strubelt O, Obermeier F, Siegers CP, Vopel M. Increased carbon tetrachloride hepatotoxicity after low-level ethanol consumption. Toxicology. 1978;10(3):261-70.

Strubelt O, Siegers CP, Breining H. The influence of norepinephrine on the hepatotoxicity of carbon tetrachloride and allyl alcohol. Archiv fur Toxikologie. 1970;27(1):53-66.

Suarez KA, Bhonsle P. The relationship of cobaltous chloride-induced alterations of hepatic microsomal enzymes to altered carbon tetrachloride hepatotoxicity. Toxicology and applied pharmacology. 1976;37(1):23-7.

Suarez KA, Bhonsle P. Enhanced hepatotoxicity of carbon tetrachloride following sodium nitrite pretreatment. Archives internationales de pharmacodynamie et de therapie. 1978;234(2):329-34.

Suarez KA, Griffin K, Kopplin RP, Bhonsle P. Protective effect of diethylmaleate pretreatment on carbon tetrachloride hepatotoxicity. Toxicology and applied pharmacology. 1981;57(3):318-24.

Sudheesh NP, Ajith TA, Mathew J, Nima N, Janardhanan KK. Ganoderma lucidum protects liver mitochondrial oxidative stress and improves the activity of electron transport chain in carbon tetrachloride intoxicated rats. Hepatology research : the official journal of the Japan Society of Hepatology. 2012;42(2):181-91.

Sudhir S, Budhiraja RD. Comparison of the protective effect of Withaferin-'A' and hydrocortisone against CCL4 induced hepatotoxicity in rats. Indian journal of physiology and pharmacology. 1992;36(2):127-9.

Sugano M, Cho S, Imaizumi K, Wada M. Hepatotoxicity and lipid metabolism. 3. Changes in phosphatidylcholine and phosphatidylethanolamine during hepatic injury caused by carbon tetrachloride. Biochemical pharmacology. 1970;19(7):2325-33.

Sugano M, Imaizumi K, Cho S, Hori K, Wada M. Hepatotoxicity and lipid metabolism. I. Structure of liver triglyceride in rats dosed with carbon tetrachloride. Biochemical pharmacology. 1969;18(8):9161-70.

Sugano M, Imaizumi K, Cho S, Wada M. Hepatotoxicity and lipid metabolism. IV. Structure and molecular species of hepatic triglyceride in rats treated with carbon tetrachloride. Lipids. 1971;6(2):141-4.

Sugihara N, Furuno K, Kita N, Murakami T, Yata N. Increase in the plasma protein binding of weakly basic drugs in carbon tetrachloride-intoxicated rats. Chemical & pharmaceutical bulletin. 1991;39(10):2671-3.

Sugihara N, Furuno K, Kita N, Murakami T, Yata N. Distribution of quinidine in rats with carbon tetrachloride-intoxicated hepatic disease. Journal of pharmacobio-dynamics. 1992;15(4):167-74.

Sultana S, Ahmad S, Khan N, Jahangir T. Effect of Emblica officinalis (Gaertn) on CCl4 induced hepatic toxicity and DNA synthesis in Wistar rats. Indian journal of experimental biology. 2005;43(5):430-6.

Sun H-J, Chen J, Zhang H, Ni B, van Velkinburgh JC, Liu Y, et al. Von Willebrand factor protects against acute CCl4-induced hepatotoxicity through phospho-p38 MAPK signaling pathway inhibition. Immunologic research. 2017;65(5):1046-58.

Sun Y, Yang X, Lu X, Wang D, Zhao Y. Protective effects of Keemun black tea polysaccharides on acute carbon tetrachloride-caused oxidative hepatotoxicity in mice. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2013;58:184-92.

Sung SH, Lee EJ, Cho JH, Kim HS, Kim YC. Sauchinone, a lignan from Saururus chinensis, attenuates CCl4-induced toxicity in primary cultures of rat hepatocytes. Biological & pharmaceutical bulletin. 2000;23(5):666-8.

Suriyachan D, Thithapandha A. Modification of carbon tetrachloride hepatotoxicity by chemicals. Toxicology and applied pharmacology. 1977;41(2):369-76.

Suzek H, Celik I, Dogan A, Yildirim S. Protective effect and antioxidant role of sweetgum (Liquidambar orientalis) oil against carbon tetrachloride-induced hepatotoxicity and oxidative stress in rats. Pharmaceutical biology. 2016;54(3):451-7.

Szymonik-Lesiuk S, Czechowska G, Stryjecka-Zimmer M, Slomka M, Madro A, Celinski K, et al. Catalase, superoxide dismutase, and glutathione peroxidase activities in various rat tissues after carbon tetrachloride intoxication. Journal of hepato-biliary-pancreatic surgery. 2003;10(4):309-15.

Taieb D, Malicet C, Garcia S, Rocchi P, Arnaud C, Dagorn J-C, et al. Inactivation of stress protein p8 increases murine carbon tetrachloride hepatotoxicity via preserved CYP2E1 activity. Hepatology (Baltimore, Md). 2005;42(1):176-82.

Taira Z, Yabe K, Hamaguchi Y, Hirayama K, Kishimoto M, Ishida S, et al. Effects of Sho-saiko-to extract and its components, Baicalin, baicalein, glycyrrhizin and glycyrrhetic acid, on pharmacokinetic behavior of salicylamide in carbon tetrachloride intoxicated rats. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2004;42(5):803-7.

Taj D, Khan H, Sultana V, Ara J, Ehteshamul-Haque S. Antihepatotoxic effect of golden berry (Physalis peruviana Linn.) in carbon tetrachloride (CCl4) intoxicated rats. Pakistan journal of pharmaceutical sciences. 2014;27(3):491-4.

Takahara T, Kojima T, Miyabayashi C, Inoue K, Sasaki H, Muragaki Y, et al. Collagen production in fat-storing cells after carbon tetrachloride intoxication in the rat. Immunoelectron microscopic observation of type I, type III collagens, and prolyl hydroxylase. Laboratory investigation; a journal of technical methods and pathology. 1988;59(4):509-21.

Takahashi K, Wada T, Higashi Y, Yata N. Pharmacokinetics in hepatic transport of amaranth in rats intoxicated with carbon tetrachloride and alpha-naphthylisothiocyanate. Chemical & pharmaceutical bulletin. 1985;33(11):4973-80.

Takahashi S, Takahashi T, Mizobuchi S, Matsumi M, Morita K, Miyazaki M, et al. Increased cytotoxicity of carbon tetrachloride in a human hepatoma cell line overexpressing cytochrome P450 2E1. The Journal of international medical research. 2002;30(4):400-5.

Takahashi T, Sugimoto N, Takahata K, Okamoto T, Kishi T. Cellular antioxidant defense by a ubiquinol-regenerating system coupled with cytosolic NADPH-dependent ubiquinone reductase: protective effect against carbon tetrachloride-induced hepatotoxicity in the rat. Biological & pharmaceutical bulletin. 1996;19(8):1005-12.

Takano T, Tatematsu M, Hasegawa R, Imaida K, Ito N. Dose-response relationship for the promoting effect of phenobarbital on the induction of liver hyperplastic nodules in rats exposed to 2-fluorenylacetamide and carbon tetrachloride. Gan. 1980;71(4):580-1.

Takei N, Watanabe A, Sakata T, Hayashi S, Obata T, Shiota T, et al. Brain tyrosine hydroxylase activity and calculated amount of brain dopa synthesized in carbon tetrachloride-intoxicated rats. Gastroenterologia Japonica. 1983;18(1):11-4.

Taketa K. Electrophoretic multiplicity of phospho-fructokinase in rat liver and other tissues and effect of carbon tetrachloride intoxication. Acta medica Okayama. 1973;27(5):205-9.

Taketa K, Tanaka A, Watanabe A, Takesue A, Aoe H, Kosaka K. Undifferentiated patterns of key carbohydrate-metabolizing enzymes in injured livers. I. Acute carbon-tetrachloride intoxication of rat. Enzyme. 1976;21(2):158-73.

Taketa K, Watanabe A, Kosaka K. Different mechanisms of increased alpha-fetoprotein production in rats following CCl4 intoxication and partial hepatectomy. Annals of the New York Academy of Sciences. 1975;259:80-4.

Talwar S, Jagani HV, Nayak PG, Kumar N, Kishore A, Bansal P, et al. Toxicological evaluation of Terminalia paniculata bark extract and its protective effect against CCl4-induced liver injury in rodents. BMC complementary and alternative medicine. 2013;13:127.

Tamao H. Experimental and clinical studies on the intrahepatic vascular changes in chronic liver injury. I. Microscopic vital observation of the mouse liver in chronic carbon-tetrachloride intoxication. Japanese circulation journal. 1966;30(3):205-16.

Tan G, Pan S, Li J, Dong X, Kang K, Zhao M, et al. Hydrogen sulfide attenuates carbon tetrachloride-induced hepatotoxicity, liver cirrhosis and portal hypertension in rats. PloS one. 2011;6(10):e25943.

Tanaka E. Simultaneous determination of carbamazepine and its metabolites in plasma from carbon tetrachloride-intoxicated rats using a new reversed-phase chromatographic column of 2-microns porous microspherical silica gel. Journal of chromatography B, Biomedical sciences and applications. 1997;688(1):155-60.

Tanaka E. Chlorzoxazone: a probe drug the metabolism of which can be used to monitor one-point blood sampling in the carbon tetrachloride-intoxicated rat. Human & experimental toxicology. 2001;20(8):381-5.

Tanaka E, Ishikawa A, Misawa S. Changes in caffeine, lidocaine and trimethadione metabolism in carbon tetrachloride-intoxicated rats as assessed by a "cocktail" study. Pharmacology & toxicology. 1994;75(3-4):150-3.

Tanaka E, Ishikawa A, Misawa S. Changes in the metabolism of three model substrates catalysed by different P450 isozymes when administered as a cocktail to the carbon tetrachloride-intoxicated rat. Xenobiotica; the fate of foreign compounds in biological systems. 1995;25(10):1111-8.

Tanaka E, Ishikawa A, Yamamoto Y, Uchida E, Kobayashi S, Yasuhara H, et al. Simplified approach for evaluation of hepatic drug-oxidizing capacity with a simultaneous measurement of caffeine and its primary demethylated metabolites in carbon tetrachloride-intoxicated rats. Xenobiotica; the fate of foreign compounds in biological systems. 1992;22(5):535-41.

Tanaka E, Kinoshita H, Yoshida T, Kuroiwa Y. Determination of plasma trimethadione and its metabolite carbon tetrachloride-intoxicated rat liver: a useful tool for estimation of hepatic drug metabolizing capacity. Journal of pharmacobio-dynamics. 1981;4(12):961-7.

Tanaka E, Nakamura T, Nagashima A, Yamazaki K, Ohashi N, Tsuchihashi H, et al. Determination of plasma bromvalerylurea and its main metabolite by a simple high-performance liquid chromatographic method and quantitation of bromide by energy dispersive X-ray spectrometry in carbon tetrachloride-intoxicated rats. Journal of chromatography B, Biomedical sciences and applications. 2001;759(2):361-6.

Tanaka E, Sakamoto N, Inubushi M, Misawa S. Simultaneous determination of plasma phenytoin and its primary hydroxylated metabolites in carbon tetrachloride-intoxicated rats by high-performance liquid chromatography. Journal of chromatography B, Biomedical applications. 1995;673(1):147-51.

Tang A, Chen X, Lu Q, Zheng N, Wei Y, Wu X. Antihepatotoxic effect of tadehaginoside, extracted from Tadehagi triquetrum (L.), against CCl4-lesioned rats through activating the Nrf2 signaling pathway and attenuating the inflammatory response. Inflammation. 2014;37(4):1006-14.

Tang MH, Chiu PY, Ko KM. Hepatoprotective action of schisandrin B against carbon tetrachloride toxicity was mediated by both enhancement of mitochondrial glutathione status and induction of heat shock proteins in mice. BioFactors (Oxford, England). 2003;19(1-2):33-42.

Tang N. DDT and ethanol potentiation of the hepatotoxicity of CCl4. Zhonghua yu fang yi xue za zhi [Chinese journal of preventive medicine]. 1987;21(4):196-8.

Taper HS, Somer MP, Lans M, de Gerlache J, Roberfroid M. Histochemical detection of the in vivo produced cellular aldehydes by means of direct Schiff's reaction in CCl4 intoxicated rat liver. Archives of toxicology. 1988;61(5):406-10.

Tasduq SA, Kaiser PJ, Gupta BD, Gupta VK, Johri RK. Negundoside, an irridiod glycoside from leaves of Vitex negundo, protects human liver cells against calcium-mediated toxicity induced by carbon tetrachloride. World journal of gastroenterology. 2008;14(23):3693-709.

Teng H, Chen M, Zou A, Jiang H, Han J, Sun L, et al. Hepatoprotective effects of licochalcone B on carbon tetrachloride-induced liver toxicity in mice. Iranian journal of basic medical sciences. 2016;19(8):910-5.

Teschke R, Hauptmeier KH, Frenzel H. Effect of an acute dose of ethanol on the hepatotoxicity due to carbon tetrachloride. Liver. 1983;3(2):100-9.

Teschke R, Vierke W, Gellert J. Effect of ethanol on carbon tetrachloride levels and hepatotoxicity after acute carbon tetrachloride poisoning. Archives of toxicology. 1984;56(2):78-82.

Teschke R, Vierke W, Goldermann L. Carbon tetrachloride (CCl4) levels and serum activities of liver enzymes following acute CCl4 intoxication. Toxicology letters. 1983;17(1-2):175-80.

Teschke R. Liver Injury by Carbon Tetrachloride Intoxication in 16 Patients Treated with Forced Ventilation to Accelerate Toxin Removal via the Lungs: A Clinical Report. Toxics. 2018;6(2).

Tezuka M, Momiyama K, Edano T, Okada S. Protective effect of chromium(III) on acute lethal toxicity of carbon tetrachloride in rats and mice. Journal of inorganic biochemistry. 1991;42(1):1-8.

Tezuka M, Sadanobu S, Gomi K, Tachikawa M, Sawamura R. In vitro effect of chromium and other trace metals on mouse hepatotoxicity induced by carbon tetrachloride exposure. Biological & pharmaceutical bulletin. 1995;18(2):256-61.

Thayumanavan P, Loganathan C, Iruthayaraj A, Poomani K, Nallaiyan S. S-allyl-glutathione, a synthetic analogue of glutathione protected liver against carbon tetrachloride toxicity: Focus towards anti-oxidative efficiency. Environmental toxicology and pharmacology. 2018;58:21-8.

Theocharis SE, Margeli AP, Skaltsas SD, Spiliopoulou CA, Koutselinis AS. Induction of metallothionein in the liver of carbon tetrachloride intoxicated rats: an immunohistochemical study. Toxicology. 2001;161(1-2):129-38.

Theret CG, Kobele H, Alliet J, Gourdier D. Phosphatidylcholines and fatty liver. Therapeutic effects in the rat with ethyl alcohol and carbon tetrachloride intoxication. Medecine & chirurgie digestives. 1977;6(2):69-74.

Thiesen LC, da Silva LM, Santin JR, Bresolin TMB, de Andrade SF, Amorim CdM, et al. Hepatoprotective effect of Maytenus robusta Reiss extract on CCl4-induced hepatotoxicity in mice and HepG2 cells. Regulatory toxicology and pharmacology : RTP. 2017;86:93-100.

Thomas DW, van Kuijk FJ, Stephens RJ. Quantitative determination of hydroxy fatty acids as an indicator of in vivo lipid peroxidation: oxidation products of arachidonic and docosapentaenoic acids in rat liver after exposure to carbon tetrachloride. Analytical biochemistry. 1992;206(2):353-8.

Tirmenstein MA, Ge X, Elkins CR, Fariss MW. Administration of the tris salt of alpha-tocopheryl hemisuccinate inactivates CYP2E1, enhances microsomal alpha-tocopherol levels and protects against carbon tetrachloride-induced hepatotoxicity. Free radical biology & medicine. 1999;26(7-8):825-35.

Tirmenstein MA, Leraas TL, Fariss MW. alpha-Tocopheryl hemisuccinate administration increases rat liver subcellular alpha-tocopherol levels and protects against carbon tetrachloride-induced hepatotoxicity. Toxicology letters. 1997;92(1):67-77.

Tiwary BK, Dutta S, Dey P, Hossain M, Kumar A, Bihani S, et al. Radical Scavenging Activities of Lagerstroemia speciosa (L.) Pers. Petal Extracts and its hepato-protection in CCl4-intoxicated mice. BMC complementary and alternative medicine. 2017;17(1):55.

Tlili N, Feriani A, Allagui MS, Saadoui E, Khaldi A, Nasri N. Effects of Rhus tripartitum fruit extract on CCl4-induced hepatotoxicity and cisplatin-induced nephrotoxicity in rats. Canadian journal of physiology and pharmacology. 2016;94(8):801-7.

Tolooei M, Mirzaei A. Effects of Pistacia Atlantica Extract on Erythrocyte Membrane Rigidity, Oxidative Stress, and Hepatotoxicity Induced by CCl4 in Rats. Global journal of health science. 2015;7(7 Spec No):32-8.

Tomenson JA, Baron CE, O'Sullivan JJ, Edwards JC, Stonard MD, Walker RJ, et al. Hepatic function in workers occupationally exposed to carbon tetrachloride. Occupational and environmental medicine. 1995;52(8):508-14.

Tong J, Yao X, Zeng H, Zhou G, Chen Y, Ma B, et al. Hepatoprotective activity of flavonoids from Cichorium glandulosum seeds in vitro and in vivo carbon tetrachloride-induced hepatotoxicity. Journal of ethnopharmacology. 2015;174:355-63.

Torrielli MV, Ugazio G, Gabriel L, Burdino E. Time course of protection by N'N--diphenyl-p-phenylendiamine (DPPD) against carbon tetrachloride hepatotoxicy. Agents and actions. 1974;4(5):383-90.

Toskulkao C, Nhongsaeng J, Glinsukon T. Potentiation of carbon tetrachloride induced hepatotoxicity by thinner inhalation. The Journal of toxicological sciences. 1990;15(2):75-86.

Towner RA, Janzen EG, Chu SC, Rath A. Use of 1H/23Na and 1H/31P double frequency tuned birdcage coils to study in vivo carbon tetrachloride-induced hepatotoxicity in rats. Magnetic resonance imaging. 1992;10(4):679-88.

Towner RA, Janzen EG, Zhang YK, Yamashiro S. MRI study of the inhibitory effect of new spin traps on in vivo CCl4-induced hepatotoxicity in rats. Free radical biology & medicine. 1993;14(6):677-81.

Towner RA, Reinke LA, Janzen EG, Yamashiro S. In vivo magnetic resonance imaging study of Kupffer cell involvement in CCl4-induced hepatotoxicity in rats. Canadian journal of physiology and pharmacology. 1994;72(5):441-6.

Towner RA, Zhdanov RI, Janzen EG. Use of nitroxides as MRI contrast agents to study in vivo carbon tetrachloride induced hepatotoxicity in rats. Free radical research communications. 1993;19 Suppl 1:S211-8.

Traiger GJ, Bruckner JV. The participation of 2-butanone in 2-butanol-induced potentiation of carbon tetrachloride hepatotoxicity. The Journal of pharmacology and experimental therapeutics. 1976;196(2):493-500.

Tran G-B, Dam S-M, Le N-TT. Amelioration of Single Clove Black Garlic Aqueous Extract on Dyslipidemia and Hepatitis in Chronic Carbon Tetrachloride Intoxicated Swiss Albino Mice. International journal of hepatology. 2018;2018:9383950.

Trasino M, Malagamba G. Behavior of the ovary, pituitary and adrenals in splenectomized and carbon tetrachloride intoxicated animals. Bollettino della Societa italiana di biologia sperimentale. 1950;26(11-12):1584-6.

Tropeano L, Belfiore F. Arginase activity in the serum of guinea pigs intoxicated with carbon tetrachloride. Bollettino della Societa italiana di biologia sperimentale. 1959;35:1081-4.

Tropeano L, Belfiore F. Arginase activity in the serum of guinea pigs intoxicated with carbon tetrachloride and hepatoprotective vitamin complex. Bollettino della Societa italiana di biologia sperimentale. 1959;35:1084-6.

Truhaut R, Delarue JC, Bohuon C. On the value of the study of blood amino acid variations during carbon tetrachloride poisoning as a test of impregnation and prognosis. Experimental studies in rats. Annales de biologie clinique. 1966;24(5):727-38.

Tsai CC, Kao ST, Hsu CT, Lin CC, Lai JS, Lin JG. Ameliorative effect of traditional Chinese medicine prescriptions on alpha-naphthylisothiocyanate and carbon-tetrachloride induced toxicity in rats. The American journal of Chinese medicine. 1997;25(2):185-96.

Tschope W, Czygan P, Ritz E, Kommerell B, Deppermann D. Intramural hematoma of the esophagus: a complication of carbon tetrachloride intoxication with acute renal failure. Clinical nephrology. 1976;6(6):526-8.

Tsokos-Kuhn JO, Smith CV, Mitchell JR, Tate CA, Entman ML. Evidence for increased membrane permeability of plasmalemmal vesicles from livers of phenobarbital-induced CCl4-intoxicated rats. Molecular pharmacology. 1986;30(5):444-51.

Tsuji M, Kodama K, Oguchi K. Protective effect of S-adenosyl-L-methionine against CCl4-induced hepatotoxicity in cultured hepatocytes. Japanese journal of pharmacology. 1990;52(2):209-14.

Tsujimura K, Ichinose F, Hara T, Yamasaki K, Otsuka M, Fukushima S. The inhalation exposure of carbon tetrachloride promote rat liver carcinogenesis in a medium-term liver bioassay. Toxicology letters. 2008;176(3):207-14.

Tsukada Y. Effects of glutathione on acute intoxication by carbon tetrachloride. Saishin igaku Modern medicine. 1971;26(4):813-9.

Tuchweber B, Kovacs K. Influence of phenobarbital and various steroids on CCl4 hepatotoxicity. Archiv fur Toxikologie. 1971;27(2):159-67.

Tuchweber B, Werringloer J, Kourounakis P. Effect of phenobarbital or pregnenolone-16alpha-carbonitrile (PCN) pretreatment on acute carbon tetrachloride hepatotoxicity in rats. Biochemical pharmacology. 1974;23(3):513-8.

Turkdogan MK, Ozbek H, Yener Z, Tuncer I, Uygan I, Ceylan E. The role of Urtica dioica and Nigella sativa in the prevention of carbon tetrachloride-induced hepatotoxicity in rats. Phytotherapy research : PTR. 2003;17(8):942-6.

Tyson CA, Story DL, Stephens RJ. Ultrastructural changes in isolated rat hepatocytes exposed to different CCl4 concentrations. Biochemical and biophysical research communications. 1983;114(2):511-7.

Ueng TH, Moore L, Elves RG, Alvares AP. Isopropanol enhancement of cytochrome P-450-dependent monooxygenase activities and its effects on carbon tetrachloride intoxication. Toxicology and applied pharmacology. 1983;71(2):204-14.

Ugazio G, Bosia S, Cornaglia E. Experimental model of cirrhosis in rabbits exposed to carbon tetrachloride by inhalation. Research communications in molecular pathology and pharmacology. 1995;88(1):63-77.

Ugazio G, Burdino E, Dacasto M, Bosio A, van't Klooster G, Nebbia C. Induction of hepatic drug metabolizing enzymes and interaction with carbon tetrachloride in rats after a single oral exposure to atrazine. Toxicology letters. 1993;69(3):279-88.

Ugazio G, Danni O, Milillo P, Burdino E, Congiu AM. Mechanism of protection against carbon tetrachloride toxicity. I. Prevention of lethal effects by partial surgical hepatectomy. Drug and chemical toxicology. 1982;5(2):115-24.

Ulicna O, Vancova O, Waczulikova I, Bozek P, Janega P, Babal P, et al. Does rooibos tea (Aspalathus linearis) support regeneration of rat liver after intoxication by carbon tetrachloride? General physiology and biophysics. 2008;27(3):179-86.

Upur H, Amat N, Blazekovic B, Talip A. Protective effect of Cichorium glandulosum root extract on carbon tetrachloride-induced and galactosamine-induced hepatotoxicity in mice. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2009;47(8):2022-30.

Uryvaeva IV, Faktor VM. Relationship between cell division and function. Resistance of the liver to toxic effect of CCL4 after partial hepatectomy. Tsitologiia. 1976;18(11):1354-9.

Ushakov VF, Palienko LA, Livshits KI, Grisha NP, Kramar SD, Filimonova LA. Status of cell surface of hepatocytes after exposure to carbon tetrachloride. Arkhiv anatomii, gistologii i embriologii. 1990;99(12):44-8.

Uskova MA, Vasil'eva MA, Trusov NV, Avrem'eva LI, Guseva GV, Aksenov IV, et al. Evaluation of antioxidant and hepatoprotective properties of strain Lactobacillus casei 114001 in carbon tetrachloride-induced liver toxicity model. Voprosy pitaniia. 2009;78(5):24-30.

Vadiraja BB, Gaikwad NW, Madyastha KM. Hepatoprotective effect of C-phycocyanin: protection for carbon tetrachloride and R-(+)-pulegone-mediated hepatotoxicty in rats. Biochemical and biophysical research communications. 1998;249(2):428-31.

Vaisler L, Costiner E, Ganea E. Changes in amide nitrogen and urea nitrogen in the normal and CCl 4-intoxicated, isolated and perfused liver. Studii si cercetari de endocrinologie. 1967;18(3):249-55.

Vajdovich P, Szilagyi A, Gaal T. Evaluation of blood lipid peroxidation parameters in carbon tetrachloride (CCl4) toxicity in sheep. Acta veterinaria Hungarica. 1995;43(4):423-9.

Valcheva-Kuzmanova SV, Popova PB, Galunska BT, Belcheva A. Protective effect of Aronia melanocarpa fruit juice pretreatment in a model of carbon tetrachloride-induced hepatotoxicity in rats. Folia medica. 2006;48(2):57-62.

Valcheva-Kuzmanova SV, Popova PB, Krasnaliev IJ, Galunska BT, Belcheva A, Schunack W. Protective effect of BP 2-94, a histamine H3-receptor agonist prodrug, in a model of carbon tetrachloride-induced hepatotoxicity in rats. Folia medica. 2004;46(2):36-41.

Valdivia E, Sonnad J. Fatty change of the granular pneumocyte in CCl4 intoxication. Archives of pathology. 1966;81(6):514-9.

Van Stee EW, Boorman GA, Moorman MP, Sloane RA. Time-varying concentration profile as a determinant of the inhalation toxicity of carbon tetrachloride. Journal of toxicology and environmental health. 1982;10(4-5):785-95.

Van Vleet JF, Alberts JO. Evaluation of liver function tests and liver biopsy in experimental carbon tetrachloride intoxication and extrahepatic bile duct obstruction in the dog. American journal of veterinary research. 1968;29(11):2119-31.

Vandenhaute J, Maenhaut W. Trace element alterations in rat tissues induced by the hepatotoxic agent CCl4. Journal of trace elements and electrolytes in health and disease. 1994;8(3-4):145-50.

Vanitha A, Murthy KNC, Kumar V, Sakthivelu G, Veigas JM, Saibaba P, et al. Effect of the carotenoid-producing alga, Dunaliella bardawil, on CCl4-induced toxicity in rats. International journal of toxicology. 2007;26(2):159-67.

Vanlerenberghe JV, Lejeune-Lecocq C, Bel C, Cassaigne R, Adenis L. Effects of carbon tetrachloride poisoning on bile secretion of the rat. Lille medical : journal de la Faculte de medecine et de pharmacie de l'Universite de Lille. 1968;13(4):398-407.

Vantelon J. Acute poisoning caused by carbon tetrachloride: manifestations, diagnosis & development. Vie medicale (Paris, France : 1920). 1958;39(4):441 passim.

Vatakuti S, Schoonen WGEJ, Elferink MLG, Groothuis GMM, Olinga P. Acute toxicity of CCl4 but not of paracetamol induces a transcriptomic signature of fibrosis in precision-cut liver slices. Toxicology in vitro : an international journal published in association with BIBRA. 2015;29(5):1012-20.

Vedel R. A difficult etiologic diagnosis: the possibility of poisoning by carbon tetrachloride. La Medecine aeronautique. 1957;12(4):367-70.

Veigas JM, Shrivasthava R, Neelwarne B. Efficient amelioration of carbon tetrachloride induced toxicity in isolated rat hepatocytes by Syzygium cumini Skeels extract. Toxicology in vitro : an international journal published in association with BIBRA. 2008;22(6):1440-6.

Veng-Pedersen P, Paustenbach DJ, Carlson GP, Suarez L. A linear systems approach to analyzing the pharmacokinetics of carbon tetrachloride in the rat following repeated exposures of 8 and 11.5 h/day. Archives of toxicology. 1987;60(5):355-64.

Venkatanarayana G, Sudhakara G, Sivajyothi P, Indira P. Protective effects of curcumin and vitamin E on carbon tetrachloride-induced nephrotoxicity in rats. EXCLI journal. 2012;11:641-50.

Vereerstraeten P, Verniory A, Vereerstraeten J, Toussaint C, Verbanck M, Lambert PP. APROPOS OF 8 CASES OF CARBON TETRACHLORIDE POISONING. Acta clinica Belgica. 1963;18:116-27.

Verma N, Singh AP, Amresh G, Sahu PK, Rao CV. Protective effect of ethyl acetate fraction of Rhododendron arboreum flowers against carbon tetrachloride-induced hepatotoxicity in experimental models. Indian journal of pharmacology. 2011;43(3):291-5.

Verma N, Khosa RL. Hepatoprotective activity of leaves of Zanthoxylum armatum DC in CCl4 induced hepatotoxicity in rats. Indian journal of biochemistry & biophysics. 2010;47(2):124-7.

Verne J, Ceccaldi PF, Herbert S, Roux J. Research on fatty liver development during poisoning by volatile organic compounds. III. Histochemical and biochemical study of fatty liver caused by carbon tetrachloride poisoning. Pathologie et biologie. 1958;6(1-2):9-14.

Vijaya S, Nagarajan B. Changes in arginase, ornithine carbamyl transferase & arginine-related metabolites in chronic carbon tetrachloride toxicity. Indian journal of biochemistry & biophysics. 1981;18(4):298-9.

Vilstrup H. The galactose elimination capacity as a quantitative measure of liver function in acute carbon tetrachloride intoxication of rats. European journal of clinical investigation. 1978;8(5):317-9.

Vilstrup H. Effects of acute carbon tetrachloride intoxication on kinetics of galactose elimination by perfused rat livers. Scandinavian journal of clinical and laboratory investigation. 1983;43(2):127-31.

Vinogradova LF, Mirzoian ZA, Kharlitskaia EV, Beketova TP. Experimental antioxidant therapy in toxic liver damage from CCl4 and chloxyl. Patologicheskaia fiziologiia i eksperimental'naia terapiia. 1989(4):52-6.

Vohra BP, Hui X. Taurine protects against carbon tetrachloride toxicity in the cultured neurons and in vivo. Archives of physiology and biochemistry. 2001;109(1):90-4.

Voros K, Albert M, Vetesi F, Harmat Gy, Binder K, Szaniszlo F. Hepatic ultrasonographic findings in experimental carbon tetrachloride intoxication of the dog. Acta veterinaria Hungarica. 1997;45(2):137-50.

Vyshtakaliuk AB, Nazarov NG, Porfiriev AG, Zueva IV, Minnechanova OA, Mayatina OV, et al. The influence of the Xymedon preparation (Hydroxyethyldimethyldihydropyrimidine) on the rat liver recovery under toxic damage induced by carbon tetrachloride. Doklady Biochemistry and biophysics. 2015;462:143-6.

Vyshtakalyuk AB, Nazarov NG, Zobov VV, Abdulkhakov SR, Minnekhanova OA, Semenov VE, et al. Evaluation of the Hepatoprotective Effect of L-Ascorbate 1-(2-Hydroxyethyl)-4,6-Dimethyl-1,2-Dihydropyrimidine-2-One Upon Exposure to Carbon Tetrachloride. Bulletin of experimental biology and medicine. 2017;162(3):340-2.

Wahid A, Hamed AN, Eltahir HM, Abouzied MM. Hepatoprotective activity of ethanolic extract of Salix subserrata against CCl4-induced chronic hepatotoxicity in rats. BMC complementary and alternative medicine. 2016;16:263.

Waller RL, Glende EA, Jr., Recknagel RO. Carbon tetrachloride and bromotrichloromethane toxicity. Dual role of covalent binding of metabolic cleavage products and lipid peroxidation in depression of microsomal calcium sequestration. Biochemical pharmacology. 1983;32(10):1613-7.

Waller RL, Recknagel RO. Evaluation of a role for phosgene production in the hepatotoxic mechanism of action of carbon tetrachloride and bromotrichloromethane. Toxicology and applied pharmacology. 1982;66(2):172-81.

Wands JR, Smuckler EA, Woodbury WJ. Transmembrane potential changes in liver cells following CCl4 intoxication. The American journal of pathology. 1970;58(3):499-508.

Wang C, Liu Y-r, Zhou Y, Li A-p, Zhou J-w. The study of susceptibility to carbon tetrachloride and benzene in offspring of expanded simple tandem repeats mutation mice exposed to formaldehyde. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2011;29(5):324-9.

Wang DH, Ishii K, Zhen LX, Taketa K. Enhanced liver injury in acatalasemic mice following exposure to carbon tetrachloride. Archives of toxicology. 1996;70(3-4):189-94.

Wang GS, Han ZW. The protective action of glycyrrhiza flavonoids against carbon tetrachloride hepatotoxicity in mice. Yao xue xue bao = Acta pharmaceutica Sinica. 1993;28(8):572-6.

Wang PY, Kaneko T, Tsukada H, Nakano M, Sato A. Dose- and route-dependent alterations in metabolism and toxicity of chemical compounds in ethanol-treated rats: difference between highly (chloroform) and poorly (carbon tetrachloride) metabolized hepatotoxic compounds. Toxicology and applied pharmacology. 1997;142(1):13-21.

Wang PY, Kaneko T, Wang Y, Sato A. Acarbose alone or in combination with ethanol potentiates the hepatotoxicity of carbon tetrachloride and acetaminophen in rats. Hepatology (Baltimore, Md). 1999;29(1):161-5.

Wang T, Sun N-L, Zhang W-D, Li H-L, Lu G-C, Yuan B-J, et al. Protective effects of dehydrocavidine on carbon tetrachloride-induced acute hepatotoxicity in rats. Journal of ethnopharmacology. 2008;117(2):300-8.

Wang Y, Lou L, Wang J, Lu J, Li J, Jia L. Comparative study on Artemisia halodendron Turcz. and its two related plants by GC-MS analysis and protective effect against carbon tetrachloride-induced hepatotoxicity in mice. Natural product research. 2018;32(11):1303-6.

Washino Y, Koga E, Kitamura Y, Kamikawa C, Kobayashi K, Nakagawa T, et al. Effect of celecoxib, a selective cyclooxygenase-2 inhibitor on carbon tetrachloride intoxication in rats. Biological & pharmaceutical bulletin. 2010;33(4):707-9.

Watanabe A, Nakatsukasa H, Kobayashi M, Nagashima H. Potentiation of carbon tetrachloride hepatotoxicity by beta-phenethyl alcohol. Acta medica Okayama. 1984;38(5):453-9.

Waterfield CJ, Mesquita M, Parnham P, Timbrell JA. Taurine protects against the cytotoxicity of hydrazine, 1,4-naphthoquinone and carbon tetrachloride in isolated rat hepatocytes. Biochemical pharmacology. 1993;46(4):589-95.

Waterfield CJ, Turton JA, Scales MD, Timbrell JA. Taurine synthesis in isolated rat hepatocytes in suspension exposed to carbon tetrachloride. Biochemical Society transactions. 1990;18(6):1218-9.

Waterfield CJ, Turton JA, Scales MD, Timbrell JA. Reduction of liver taurine in rats by beta-alanine treatment increases carbon tetrachloride toxicity. Toxicology. 1993;77(1-2):7-20.

Watkins JB, 3rd, Sanders RA, Beck LV. The effect of long-term streptozotocin-induced diabetes on the hepatotoxicity of bromobenzene and carbon tetrachloride and hepatic biotransformation in rats. Toxicology and applied pharmacology. 1988;93(2):329-38.

Waynforth HB, Parkin R, Stoddart DJ. The effect of a protein-free diet, a sugar diet and of carbon tetrachloride administration on the toxicity and rate of metabolism of dimethylnitrosamine in different rat strains. British journal of experimental pathology. 1977;58(2):225-9.

Weber LWD, Boll M, Stampfl A. Hepatotoxicity and mechanism of action of haloalkanes: carbon tetrachloride as a toxicological model. Critical reviews in toxicology. 2003;33(2):105-36.

Weddle CC, Hornbrook KR, McCay PB. Lipid peroxidation and alteration of membrane lipids in isolated hepatocytes exposed to carbon tetrachloride. The Journal of biological chemistry. 1976;251(16):4973-8.

Wegmann R, Marcy J. Multi-enzyme regulatory effects on carbon tetrachloride poisoning by a precursor of purine bases. Annales d'histochimie. 1969;14(1):79-103.

Wei E, Wong LC, Hine CH. Potentiation of carbon tetrachloride hepatotoxicity by ethanol and cold. Toxicology and applied pharmacology. 1971;18(2):329-34.

Wei E, Wong LC, Hine CH. Selective potentiation of carbon tetrachloride hepatotoxicity by ethanol. Archives internationales de pharmacodynamie et de therapie. 1971;189(1):5-11.

Wei Y, Kang X-l, Wang X. The peripheral cannabinoid receptor 1 antagonist VD60 efficiently inhibits carbon tetrachloride-intoxicated hepatic fibrosis progression. Experimental biology and medicine (Maywood, NJ). 2014;239(2):183-92.

Weinstein I, Willhite L, Klausner H, Heimberg M. The requirement of free fatty acids for the fatty liver of CCl4 intoxication. Proceedings of the Society for Experimental Biology and Medicine Society for Experimental Biology and Medicine (New York, NY). 1968;127(3):850-4.

Weirich J, Micheels KH. Acute intoxication by inhalation of carbon tetrachloride (CCl-4). Das Deutsche Gesundheitswesen. 1966;21(21):964-7.

Weissova J, Musil J, Adam M. Effect of the toxic damage to the liver by carbon tetrachloride on the content of collagen in granulation tissue of rats. Casopis lekaru ceskych. 1968;107(9):274-6.

Wenkebach P, Skurczynski W. Cochleo-vestibular findings in carbon tetrachloride exposure. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1977;23(3):145-7.

Wilamowski K, Blazniak H, Zebrowski W. Effect of B-12 vitamin on glycogen content in skeletal muscles and liver of rats intoxicated with carbon tetrachloride. Chirurgia narzadow ruchu i ortopedia polska. 1976;41(6):653-7.

Willcox W. The Toxic Effects of Substances of the Carbon Tetrachloride Type: (Section of Therapeutics and Pharmacology). Proceedings of the Royal Society of Medicine. 1934;27(4):455-8.

Williams AT, Burk RF. Carbon tetrachloride hepatotoxicity: an example of free radical-mediated injury. Seminars in liver disease. 1990;10(4):279-84.

Williams JF. Carbon tetrachloride hepatotoxicity in endotoxin tolerant and polymyxin B-treated rats. International journal of immunopharmacology. 1988;10(8):975-80.

Wills PJ, Asha VV. Lygodium flexuosum extract down regulates the expression of proinflammatory cytokines in CCl4-induced hepatotoxicity. Asian Pacific journal of tropical medicine. 2012;5(6):421-6.

Wirtschafter ZT. Toxic Amblyopia and Accompanying Physiological Disturbances in Carbon Tetrachloride Intoxication. American journal of public health and the nation's health. 1933;23(10):1035-8.

Wirtschafter ZT, Cronyn MW. RELATIVE HEPATOTOXICITY: PENTANE, TRICHLOROETHYLENE, BENZENE, CARBON TETRACHLORIDE. Archives of environmental health. 1964;9:180-5.

Wolff R, Royer P, Karlin R. Variations in the vitamin B12 content of the liver in experimental poisoning with carbon tetrachloride. Bulletin de la Societe de chimie biologique. 1952;34(5-6):538-47.

Wolfgang GH, Donarski WJ, Petry TW. Effects of novel antioxidants on carbon tetrachloride-induced lipid peroxidation and toxicity in precision-cut rat liver slices. Toxicology and applied pharmacology. 1990;106(1):63-70.

Wong AO, Mankovitz R, Kennedy JC. Potentiation by carbon tetrachloride of the immunosuppressive effects of fibrosarcoma and toxic material produced by fibrosarcoma cells. Journal of the National Cancer Institute. 1975;55(5):1113-8.

Wong FW, Chan WY, Lee SS. Resistance to carbon tetrachloride-induced hepatotoxicity in mice which lack CYP2E1 expression. Toxicology and applied pharmacology. 1998;153(1):109-18.

Wong H-S, Chen J-H, Leong P-K, Leung H-Y, Chan W-M, Ko K-M. beta-sitosterol protects against carbon tetrachloride hepatotoxicity but not gentamicin nephrotoxicity in rats via the induction of mitochondrial glutathione redox cycling. Molecules (Basel, Switzerland). 2014;19(11):17649-62.

Wong LLY, Fan ST, Man K, Sit W-H, Jiang PP, Jor IW-Y, et al. Identification of liver proteins and their roles associated with carbon tetrachloride-induced hepatotoxicity. Human & experimental toxicology. 2011;30(9):1369-81.

Wu C, Kennedy DO, Yano Y, Otani S, Matsui-Yuasa I. Thiols and polyamines in the cytoprotective effect of taurine on carbon tetrachloride-induced hepatotoxicity. Journal of biochemical and molecular toxicology. 1999;13(2):71-6.

Wu C, Miyagawa C, Kennedy DO, Yano Y, Otani S, Matsui-Yuasa I. Involvement of polyamines in the protection of taurine against the cytotoxicity of hydrazine or carbon tetrachloride in isolated rat hepatocytes. Chemico-biological interactions. 1997;103(3):213-24.

Wu F, Zheng H, Yang Z-T, Cheng B, Wu J-X, Liu X-W, et al. Urinary metabonomics study of the hepatoprotective effects of total alkaloids from Corydalis saxicola Bunting on carbon tetrachloride-induced chronic hepatotoxicity in rats using 1H NMR analysis. Journal of pharmaceutical and biomedical analysis. 2017;140:199-209.

Wu Q, Gong D, Tian N, Zhu L, Guan L, Yang M, et al. Protection of regenerating liver after partial hepatectomy from carbon tetrachloride hepatotoxicity in rats: roles of mitochondrial uncoupling protein 2 and ATP stores. Digestive diseases and sciences. 2009;54(9):1918-25.

Wu R, Xiao Z, Zhang X, Liu F, Zhou W, Zhang Y. The Cytochrome P450-Mediated Metabolism Alternation of Four Effective Lignans From Schisandra chinensis in Carbon Tetrachloride-Intoxicated Rats and Patients With Advanced Hepatocellular Carcinoma. Frontiers in pharmacology. 2018;9:229.

Wu T, Li J, Li Y, Song H. Antioxidant and Hepatoprotective Effect of Swertiamarin on Carbon Tetrachloride-Induced Hepatotoxicity via the Nrf2/HO-1 Pathway. Cellular physiology and biochemistry : international journal of experimental cellular physiology, biochemistry, and pharmacology. 2017;41(6):2242-54.

Wu Y-W, Chen K-D, Lin W-C. Effect of Ganoderma tsugae on chronically carbon tetrachloride-intoxicated rats. The American journal of Chinese medicine. 2004;32(6):841-50.

Wu Y, Li L, Wen T, Li Y-Q. Protective effects of echinacoside on carbon tetrachloride-induced hepatotoxicity in rats. Toxicology. 2007;232(1-2):50-6.

Xia D, Fan Y, Zhang P, Fu Y, Ju M, Zhang X. Protective effects of the flavonoid-rich fraction from rhizomes of Smilax glabra Roxb. on carbon tetrachloride-induced hepatotoxicity in rats. The Journal of membrane biology. 2013;246(6):479-85.

Yadav NP, Pal A, Shanker K, Bawankule DU, Gupta AK, Darokar MP, et al. Synergistic effect of silymarin and standardized extract of Phyllanthus amarus against CCl4-induced hepatotoxicity in Rattus norvegicus. Phytomedicine : international journal of phytotherapy and phytopharmacology. 2008;15(12):1053-61.

Yamamoto H. Relation of Ca++ accumulation and lipid peroxidation with CCl4-induced toxicity in the rat liver. Pharmacology & toxicology. 1990;66(3):213-6.

Yamamoto H, Nagano T, Hirobe M. Carbon tetrachloride toxicity on Escherichia coli exacerbated by superoxide. The Journal of biological chemistry. 1988;263(25):12224-7.

Yamamura Y, Kotaki H, Tanaka N, Aikawa T, Sawada Y, Iga T. The pharmacokinetics of glycyrrhizin and its restorative effect on hepatic function in patients with chronic hepatitis and in chronically carbon-tetrachloride-intoxicated rats. Biopharmaceutics & drug disposition. 1997;18(8):717-25.

Yamane J, Fujii A, Kobayashi S, Tamura T. Acute toxicity of local anesthetic in rats bearing carbon tetrachloride-induced hepatic lesion. Nichidai koku kagaku = Nihon University journal of oral science. 1988;14(4):473-80.

Yamazaki Y, Kakizaki S, Horiguchi N, Takagi H, Mori M, Negishi M. Role of nuclear receptor CAR in carbon tetrachloride-induced hepatotoxicity. World journal of gastroenterology. 2005;11(38):5966-72.

Yang C-H, Ting W-J, Shen C-Y, Hsu H-H, Lin Y-M, Kuo C-H, et al. Anti-apoptotic effect of San Huang Shel Shin Tang cyclodextrin complex (SHSSTc) on CCl4 -induced hepatotoxicity in rats. Environmental toxicology. 2016;31(6):663-70.

Yang L, Wang C-z, Ye J-z, Li H-t. Hepatoprotective effects of polyprenols from Ginkgo biloba L. leaves on CCl4-induced hepatotoxicity in rats. Fitoterapia. 2011;82(6):834-40.

Yang Y-S, Ahn T-H, Lee J-C, Moon C-J, Kim S-H, Jun W, et al. Protective effects of Pycnogenol on carbon tetrachloride-induced hepatotoxicity in Sprague-Dawley rats. Food and chemical toxicology : an international journal published for the British Industrial Biological Research Association. 2008;46(1):380-7.

Yasuda H, Izumi N, Shimada O, Kobayakawa T, Nakanishi M. The protective effect of tinoridine against carbon tetrachloride hepatotoxicity. Toxicology and applied pharmacology. 1980;52(3):407-13.

Yasui H, Yamaoka K, Fukuyama T, Nakagawa T. Effect of liver intoxication by carbon tetrachloride on hepatic local disposition of oxacillin using moment characteristics as index. Drug metabolism and disposition: the biological fate of chemicals. 1995;23(8):779-85.

Ye X, Feng Y, Tong Y, Ng K-M, Tsao S, Lau GKK, et al. Hepatoprotective effects of Coptidis rhizoma aqueous extract on carbon tetrachloride-induced acute liver hepatotoxicity in rats. Journal of ethnopharmacology. 2009;124(1):130-6.

Yeh Y-H, Hsieh Y-L, Lee Y-T. Effects of yam peel extract against carbon tetrachloride-induced hepatotoxicity in rats. Journal of agricultural and food chemistry. 2013;61(30):7387-96.

Yeh Y-L, Ting W-J, Kuo W-W, Hsu H-H, Lin Y-M, Shen C-Y, et al. San Huang Shel Shin Tang beta-cyclodextrin complex augmented the hepatoprotective effects against carbon tetrachloride-induced acute hepatotoxicity in rats. BMC complementary and alternative medicine. 2016;16:150.

Yemitan OK, Izegbu MC. Protective effects of Zingiber officinale (Zingiberaceae) against carbon tetrachloride and acetaminophen-induced hepatotoxicity in rats. Phytotherapy research : PTR. 2006;20(11):997-1002.

Yoshida T, Andoh K, Fukuhara M. Estimation of absorption of trihalomethanes and carbon tetrachloride in low-level exposure by inhalation pharmacokinetic analysis in rats. Archives of environmental contamination and toxicology. 1999;36(3):347-54.

Yoshikawa T, Furukawa Y, Murakami M, Takemura S, Kondo M. Effects of vitamin E on D-galactosamine-induced or carbon tetrachloride-induced hepatotoxicity. Digestion. 1982;25(4):222-9.

Yoshikawa T, Furukawa Y, Wakamatsu Y, Kondo M. Protective effect of levamisole on carbon tetrachloride-induced lipid peroxidation and hepatotoxicity. Biomedicine / [publiee pour l'AAICIG]. 1981;35(7-8):208-11.

Yoshikawa T, Furukawa Y, Wakamatsu Y, Kondo M. Immunopotentiators and the protection they give against carbon tetrachloride hepatotoxicity. Experientia. 1982;38(4):501-2.

Yoshikawa T, Furukawa Y, Wakamatsu Y, Kondo M. Protection by BCG, levamisole, PS-K, OK-432, and vitamin E against carbon tetrachloride hepatotoxicity. Hepato-gastroenterology. 1982;29(6):240-2.

Yoshikawa T, Furukawa Y, Wakamatsu Y, Nishida K, Takemura S, Tanaka H, et al. The protection of coenzyme Q10 against carbon tetrachloride hepatotoxicity. Gastroenterologia Japonica. 1981;16(3):281-5.

Yoshimine K, Takagi M. Effects of starvation and protein deficiency on the acute carbon tetrachloride-induced hepatotoxicity. The Bulletin of Tokyo Medical and Dental University. 1982;29(2):37-46.

Yoshioka H, Fukaya S, Miura N, Onosaka S, Nonogaki T, Nagatsu A. Suppressive Effect of Kampo Formula "Juzen-taiho-to" on Carbon Tetrachloride-Induced Hepatotoxicity in Mice. Biological & pharmaceutical bulletin. 2016;39(9):1564-7.

Yoshioka H, Fukaya S, Onosaka S, Nonogaki T, Nagatsu A. Kampo formula "Hochu-ekki-to" suppressed carbon tetrachloride-induced hepatotoxicity in mice. Environmental health and preventive medicine. 2016;21(6):579-84.

Yoshioka H, Ichimaru Y, Fukaya S, Nagatsu A, Nonogaki T. Potentiating effect of acetaminophen and carbon tetrachloride-induced hepatotoxicity is mediated by activation of receptor interaction protein in mice. Toxicology mechanisms and methods. 2018:1-21.

Yoshioka H, Nonogaki T, Fukuishi N, Onosaka S. Calcium-deficient diet attenuates carbon tetrachloride-induced hepatotoxicity in mice through suppression of lipid peroxidation and inflammatory response. Heliyon. 2016;2(6):e00126.

Yoshioka H, Tanaka M, Fujii H, Nonogaki T. Sasa veitchii extract suppresses carbon tetrachloride-induced hepato- and nephrotoxicity in mice. Environmental health and preventive medicine. 2016;21(6):554-62.

Yoshioka H, Usuda H, Fukuishi N, Nonogaki T, Onosaka S. Carbon Tetrachloride-Induced Nephrotoxicity in Mice Is Prevented by Pretreatment with Zinc Sulfate. Biological & pharmaceutical bulletin. 2016;39(6):1042-6.

Yoshioka H, Usuda H, Miura N, Fukuishi N, Nonogaki T, Onosaka S. Vitamin D3-induced hypercalcemia increases carbon tetrachloride-induced hepatotoxicity through elevated oxidative stress in mice. PloS one. 2017;12(4):e0176524.

Yoshioka Y, Kojima H, Tamura A, Tsuji K, Tamesada M, Yagi K, et al. Low-molecular-weight lignin-rich fraction in the extract of cultured Lentinula edodes mycelia attenuates carbon tetrachloride-induced toxicity in primary cultures of rat hepatocytes. Journal of natural medicines. 2012;66(1):185-91.

You X, Mulchinski EA, Agarwal AK. Protection of carbon tetrachloride hepatotoxicity by cinchona alkaloids. Research communications in chemical pathology and pharmacology. 1994;84(2):223-32.

Younes M, Albrecht M, Siegers CP. Interrelationship between in vivo lipid peroxidation, microsomal Ca2+-sequestration activity and hepatotoxicity in rats treated with carbon tetrachloride, cumene hydroperoxide or thioacetamide. Research communications in chemical pathology and pharmacology. 1983;40(3):405-15.

Younes M, Siegers CP. The role of iron in the paracetamol- and CCl4-induced lipid peroxidation and hepatotoxicity. Chemico-biological interactions. 1985;55(3):327-34.

Young RA, Mehendale HM. Effect of endrin and endrin derivatives on hepatobiliary function and carbon tetrachloride-induced hepatotoxicity in male and female rats. Food and chemical toxicology : an

international journal published for the British Industrial Biological Research Association. 1986;24(8):863-8.

Young RA, Mehendale HM. Carbon tetrachloride metabolism in partially hepatectomized and sham-operated rats pre-exposed to chlordecone (Kepone). Journal of biochemical toxicology. 1989;4(4):211-9.

Younis T, Khan MR, Sajid M. Protective effects of Fraxinus xanthoxyloides (Wall.) leaves against CCl4 induced hepatic toxicity in rat. BMC complementary and alternative medicine. 2016;16(1):407.

Yuki T, Hashimoto T, Kuriyama K, Ogasawara T, Takino T. Alteration of hepatic ethanol metabolism in CCL4-intoxicated rats: analysis using isolated liver perfusion system. Substance and alcohol actions/misuse. 1982;3(3):163-75.

Yuki T, Hashimoto T, Ohkuma S, Tamura J, Kuriyama K. Alteration of acetaldehyde metabolism in carbon tetrachloride-intoxicated rat liver: analysis using liver perfusion system. Alcohol and alcoholism (Oxford, Oxfordshire). 1984;19(2):101-7.

Yun H-S, Do S-H, Jeong W-I, Yang H-J, Yuan D-W, Hong I-H, et al. Cytotoxic effects of the conjugated linoleic acid isomers t10c12, c9t11-CLA and mixed form on rat hepatic stellate cells and CCl4-induced hepatic fibrosis. The Journal of nutritional biochemistry. 2008;19(3):175-83.

Yun J-W, Kim C-W, Bae I-H, Park Y-H, Chung J-H, Lim K-M, et al. Determination of the key innate genes related to individual variation in carbon tetrachloride-induced hepatotoxicity using a pre-biopsy procedure. Toxicology and applied pharmacology. 2009;239(1):55-63.

Yun J-W, Lee T-R, Kim C-W, Park Y-H, Chung J-H, Lee Y-S, et al. Predose blood gene expression profiles might identify the individuals susceptible to carbon tetrachloride-induced hepatotoxicity. Toxicological sciences : an official journal of the Society of Toxicology. 2010;115(1):12-21.

Zabrodskii PF, Gromov MS, Masliakov VV. Immune homeostasis impairment in acute carbon tetrachloride intoxicated rats corrected by administration of tocopherol acetate and unithiol. Eksperimental'naia i klinicheskaia farmakologiia. 2015;78(1):30-3.

Zagorul'ko AK, Birkun AA, Kobozev GV, Safronova LG, Zagorul'ko GV. Pulmonary surfactant in guinea pigs after toxic exposure to CCl4. Patologicheskaia fiziologiia i eksperimental'naia terapiia. 1989(2):22-4.

Zaib S, Khan MR. Protective effect of Cucurbita pepo fruit peel against CCl4 induced neurotoxicity in rat. Pakistan journal of pharmaceutical sciences. 2014;27(6):1967-73.

Zakharova NV, Khodosova IA, Fel VI. Detection of cells resistant to the cytotoxic action of CCl4 in rat hepatocyte populations following a single exposure to diethylnitrosamine and subsequent injections of phenobarbital. Tsitologiia. 1986;28(8):888-91.

Zakharova NV, Khodosova IA, Kudriatsev BN, Fel VI. Detection of cells resistant to the cytotoxic action of CCl4 in the hepatocyte populations of rats following a single exposure to 4-dimethylaminoazobenzene combined with subsequent injections of the tumor promoter phenobarbital. Tsitologiia. 1985;27(11):1280-4.

Zarezade V, Moludi J, Mostafazadeh M, Mohammadi M, Veisi A. Antioxidant and hepatoprotective effects of Artemisia dracunculus against CCl4-induced hepatotoxicity in rats. Avicenna journal of phytomedicine. 2018;8(1):51-62.

Zatti M, Rossi F, Zoppi G. Liver phospholipides after carbon tetrachloride intoxication in rats. Experientia. 1965;21(4):215-6.

Zavadskaia EE, Kudriavtseva MV, Kudriavtsev BN. Change in the dry weight of hepatocytes during chronic intoxication of rats with CCl4. Tsitologiia. 1989;31(4):419-25.

Zavodnik IB. Mitochondrial dysfunction and compensatory mechanisms in liver cells during acute carbon tetrachloride-induced rat intoxication. Biomeditsinskaia khimiia. 2015;61(6):731-6.

Zavodnik LB, Zavodnik IB, Lapshina EA, Belonovskaya EB, Martinchik DI, Kravchuk RI, et al. Protective effects of melatonin against carbon tetrachloride hepatotoxicity in rats. Cell biochemistry and function. 2005;23(5):353-9.

Zeashan H, Amresh G, Singh S, Rao CV. Hepatoprotective and antioxidant activity of Amaranthus spinosus against CCl4 induced toxicity. Journal of ethnopharmacology. 2009;125(2):364-6.

Zhang BH, Gong DZ, Mei MH. Protection of regenerating liver after partial hepatectomy from carbon tetrachloride hepatotoxicity in rats: role of hepatic stimulator substance. Journal of gastroenterology and hepatology. 1999;14(10):1010-7.

Zhang BH, Mei MH. Effect of carbon tetrachloride intoxication on leakage of intracellular potassium in regenerating rat hepatocytes in vitro. Sheng li xue bao : [Acta physiologica Sinica]. 1992;44(1):62-8.

Zhang F, Shu R, Wu X, Zhao X, Feng D, Wang L, et al. Delayed liver injury and impaired hepatocyte proliferation after carbon tetrachloride exposure in BPOZ2-deficient mice. Toxicology letters. 2009;188(3):201-7.

Zhang K, Zhang M, Liu Z, Zhang Y, Gu L, Hu G, et al. Development of quercetin-phospholipid complex to improve the bioavailability and protection effects against carbon tetrachloride-induced hepatotoxicity in SD rats. Fitoterapia. 2016;113:102-9.

Zhang W, Dong Z, Chang X, Zhang C, Rong G, Gao X, et al. Protective effect of the total flavonoids from Apocynum venetum L. on carbon tetrachloride-induced hepatotoxicity in vitro and in vivo. Journal of physiology and biochemistry. 2018;74(2):301-12.

Zhang W, Zhang X, Zou K, Xie J, Zhao S, Liu J, et al. Seabuckthorn berry polysaccharide protects against carbon tetrachloride-induced hepatotoxicity in mice via anti-oxidative and anti-inflammatory activities. Food & function. 2017;8(9):3130-8.

Zhang Z-F, Liu Y, Lu L-Y, Luo P. Hepatoprotective activity of Gentiana veitchiorum Hemsl. against carbon tetrachloride-induced hepatotoxicity in mice. Chinese journal of natural medicines. 2014;12(7):488-94.

Zhao F, Wang Y-XJ, Yuan J, Deng M, Wong HL, Chu ESH, et al. MR T1rho as an imaging biomarker for monitoring liver injury progression and regression: an experimental study in rats with carbon tetrachloride intoxication. European radiology. 2012;22(8):1709-16.

Zheng Z, Gelling RW. Attenuation of Carbon Tetrachloride-Induced Hepatic Toxicity by a Dietary Supplement. Journal of dietary supplements. 2017;14(2):121-31.

Zhu B, Zhai Q, Yu B. Tanshinone IIA protects rat primary hepatocytes against carbon tetrachloride toxicity via inhibiting mitochondria permeability transition. Pharmaceutical biology. 2010;48(5):484-7.

Zhu M, Lin KF, Yeung RY, Li RC. Evaluation of the protective effects of Schisandra chinensis on Phase I drug metabolism using a CCl4 intoxication model. Journal of ethnopharmacology. 1999;67(1):61-8.

Zhu M, Yeung RY, Lin KF, Li RC. Improvement of phase I drug metabolism with Schisandra chinensis against CCl4 hepatotoxicity in a rat model. Planta medica. 2000;66(6):521-5.

Zhu Y-H, Jiang J-G. Toxicity of carbon tetrachloride to Dunaliella salina, an environmentally tolerant alga. Journal of toxicology and environmental health Part A. 2008;71(8):474-7.

Zim MCA, Silveira TR, Schwartsmann G, Cerski T, Motta A. Potentiation of carbon tetrachloride hepatotoxicity by pentosan polysulfate in rats. Brazilian journal of medical and biological research = Revista brasileira de pesquisas medicas e biologicas. 2002;35(11):1339-46.

Zimmerman HJ, Kodera Y, West M. RATE OF INCREASE IN PLASMA LEVELS OF CYTOPLASMIC AND MITOCHONDRIAL ENZYMES IN EXPERIMENTAL CARBON TETRACHLORIDE HEPATOTOXICITY. The Journal of laboratory and clinical medicine. 1965;66:315-23.

Zimmerman HJ, Mao R. Cytotoxicity of carbon tetrachloride as measured by loss of cellular enzymes to surrounding medium. The American journal of the medical sciences. 1965;250(6):688-92.

Zimmerman HJ, Mao R, Israsena S. Phenothiazine inhibition of carbon tetrachloride cytotoxicity in vitro. Proceedings of the Society for Experimental Biology and Medicine Society for Experimental Biology and Medicine (New York, NY). 1966;123(3):893-8.

Zimmerman SW, Norbach DH. Nephrotoxic effects of long-term carbon tetrachloride administration in rats. Archives of pathology & laboratory medicine. 1980;104(2):94-9.

Zimmerman SW, Norback DH, Powers K. Carbon tetrachloride nephrotoxicity in rats with reduced renal mass. Archives of pathology & laboratory medicine. 1983;107(5):264-9.

Zuinen R, Yamaji K, Aoki M, Chikuma T, Hojo H. Early induced, high-level interleukin-6 expression in the rat peritoneal cavity into which a hepatotoxicant carbon tetrachloride was administered. Toxicology letters. 2007;170(1):42-8.

Zullo A, Cannistra M, Cavallari G, Puviani L, Atzeni F, Pisano A, et al. Liver Regeneration Induced By Extracorporeal Portal Vein Arterialization in a Swine Model of Carbon Tetrachloride Intoxication. Transplantation proceedings. 2015;47(7):2173-5.

BIB-9. Hydrogen Sulfide

Abdrashitova AT, Panova TN, Belolapenko IA. Changes in ageing pace and major immune parameters among individuals with long exposure to hydrogen sulfide. Meditsina truda i promyshlennaia ekologiia. 2011(7):10-6.

Adelson L, Sunshine I. Fatal hydrogen sulfide intoxication. Report of three cases occurring in a sewer. Archives of pathology. 1966;81(5):375-80.

Ago M, Ago K, Ogata M. Two fatalities by hydrogen sulfide poisoning: variation of pathological and toxicological findings. Legal medicine (Tokyo, Japan). 2008;10(3):148-52.

Ahangarpour A, Abdollahzade Fard A, Gharibnaseri MK, Jalali T, Rashidi I. Hydrogen sulfide ameliorates the kidney dysfunction and damage in cisplatin-induced nephrotoxicity in rat. Veterinary research forum : an international quarterly journal. 2014;5(2):121-7.

Aitbaev TK. Changes in various indicators of lipid metabolism during isolated and combined exposure to hydrogen fluoride, sulfur dioxide and hydrogen sulfide in various concentrations. Gigiena truda i professional'nye zabolevaniia. 1984(6):16-9.

Ali S, Farooq MA, Hussain S, Yasmeen T, Abbasi GH, Zhang G. Alleviation of chromium toxicity by hydrogen sulfide in barley. Environmental toxicology and chemistry. 2013;32(10):2234-9.

Anantharam P, Kim D-S, Whitley EM, Mahama B, Imerman P, Padhi P, et al. Midazolam Efficacy Against Acute Hydrogen Sulfide-Induced Mortality and Neurotoxicity. Journal of medical toxicology : official journal of the American College of Medical Toxicology. 2018;14(1):79-90.

Anantharam P, Whitley EM, Mahama B, Kim D-S, Imerman PM, Shao D, et al. Characterizing a mouse model for evaluation of countermeasures against hydrogen sulfide-induced neurotoxicity and neurological sequelae. Annals of the New York Academy of Sciences. 2017;1400(1):46-64.

Arnold IM, Dufresne RM, Alleyne BC, Stuart PJ. Health implication of occupational exposures to hydrogen sulfide. Journal of occupational medicine : official publication of the Industrial Medical Association. 1985;27(5):373-6.

Artem'ev VI. Effect of Matsest's hydrogen sulfide baths on the antitoxic function of the liver of children with eczema and neurodermatitis. Sovetskaia meditsina. 1970;33(10):148.

Asif MJ, Exline MC. Utilization of hyperbaric oxygen therapy and induced hypothermia after hydrogen sulfide exposure. Respiratory care. 2012;57(2):307-10.

Attene-Ramos MS, Nava GM, Muellner MG, Wagner ED, Plewa MJ, Gaskins HR. DNA damage and toxicogenomic analyses of hydrogen sulfide in human intestinal epithelial FHs 74 Int cells. Environmental and molecular mutagenesis. 2010;51(4):304-14.

Attene-Ramos MS, Wagner ED, Plewa MJ, Gaskins HR. Evidence that hydrogen sulfide is a genotoxic agent. Molecular cancer research : MCR. 2006;4(1):9-14.

Ballerino-Regan D, Longmire AW. Hydrogen sulfide exposure as a cause of sudden occupational death. Archives of pathology & laboratory medicine. 2010;134(8):1105.

Banki K, Elfarra AA, Lash LH, Anders MW. Metabolism of S-(2-chloro-1,1,2-trifluoroethyl)-L-cysteine to hydrogen sulfide and the role of hydrogen sulfide in S-(2-chloro-1,1,2-trifluoroethyl)-L-cysteine-induced mitochondrial toxicity. Biochemical and biophysical research communications. 1986;138(2):707-13.

Barbera N, Montana A, Indorato F, Arbouche N, Romano G. Evaluation of the Role of Toxicological Data in Discriminating Between H2 S Femoral Blood Concentration Secondary to Lethal poisoning and Endogenous H2 S Putrefactive Production. Journal of forensic sciences. 2017;62(2):392-4.

Barton LL, Fardeau M-L, Fauque GD. Hydrogen sulfide: a toxic gas produced by dissimilatory sulfate and sulfur reduction and consumed by microbial oxidation. Metal ions in life sciences. 2014;14:237-77.

Basic A, Alizadehgharib S, Dahlen G, Dahlgren U. Hydrogen sulfide exposure induces NLRP3 inflammasome-dependent IL-1beta and IL-18 secretion in human mononuclear leukocytes in vitro. Clinical and experimental dental research. 2017;3(3):115-20.

Bates MN, Crane J, Balmes JR, Garrett N. Investigation of hydrogen sulfide exposure and lung function, asthma and chronic obstructive pulmonary disease in a geothermal area of New Zealand. PloS one. 2015;10(3):e0122062.

Bates MN, Garrett N, Crane J, Balmes JR. Associations of ambient hydrogen sulfide exposure with self-reported asthma and asthma symptoms. Environmental research. 2013;122:81-7.

Beauchamp RO, Jr., Bus JS, Popp JA, Boreiko CJ, Andjelkovich DA. A critical review of the literature on hydrogen sulfide toxicity. Critical reviews in toxicology. 1984;13(1):25-97.

Beaumont M, Andriamihaja M, Lan A, Khodorova N, Audebert M, Blouin J-M, et al. Detrimental effects for colonocytes of an increased exposure to luminal hydrogen sulfide: The adaptive response. Free radical biology & medicine. 2016;93:155-64.

Bebarta VS, Garrett N, Brenner M, Mahon SB, Maddry JK, Boudreau S, et al. Efficacy of Intravenous Cobinamide Versus Hydroxocobalamin or Saline for Treatment of Severe Hydrogen Sulfide Toxicity in a Swine (Sus scrofa) Model. Academic emergency medicine : official journal of the Society for Academic Emergency Medicine. 2017;24(9):1088-98.

Beck JF, Bradbury CM, Connors AJ, Donini JC. Nitrite as antidote for acute hydrogen sulfide intoxication? American Industrial Hygiene Association journal. 1981;42(11):805-9.

Belley R, Bernard N, Cote M, Paquet F, Poitras J. Hyperbaric oxygen therapy in the management of two cases of hydrogen sulfide toxicity from liquid manure. Cjem. 2005;7(4):257-61.

Benini F, Colamussi V. Various chronic or relapsing skin manifestations, observed in refinery workmen exposed to long term action of hydrogen sulfide. L' Arcispedale S Anna di Ferrara. 1969;22:973-83.

Benson F, Karlsson T. Hydrogen sulfide intoxication--toxicity and therapy. Lakartidningen. 1972;69(6):627-31.

Berkman N, Moubri M. Ophthalmologic manifestations in hydrogen sulfide poisoning. Bulletin des societes d'ophtalmologie de France. 1980;80(4-5):369-72.

Bhambhani Y, Burnham R, Snydmiller G, MacLean I, Martin T. Comparative physiological responses of exercising men and women to 5 ppm hydrogen sulfide exposure. American Industrial Hygiene Association journal. 1994;55(11):1030-5.

Birke H, De Kok LJ, Wirtz M, Hell R. The role of compartment-specific cysteine synthesis for sulfur homeostasis during H2S exposure in Arabidopsis. Plant & cell physiology. 2015;56(2):358-67.

Bittersohl G. Toxical effect of hydrogen sulfide. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1971;17(5):305-8.

Boev VM, Perepelkin SV, Solovykh DI. The characteristics of the behavior and brain lipid peroxidation function of rats in acute inhalation exposure to a hydrogen sulfide-containing gas condensate. Zhurnal vysshei nervnoi deiatelnosti imeni I P Pavlova. 1992;42(3):583-90.

Brenneman KA, James RA, Gross EA, Dorman DC. Olfactory neuron loss in adult male CD rats following subchronic inhalation exposure to hydrogen sulfide. Toxicologic pathology. 2000;28(2):326-33.

Brenneman KA, Meleason DF, Sar M, Marshall MW, James RA, Gross EA, et al. Olfactory mucosal necrosis in male CD rats following acute inhalation exposure to hydrogen sulfide: reversibility and the possible role of regional metabolism. Toxicologic pathology. 2002;30(2):200-8.

Brodersen KE, Hammer KJ, Schrameyer V, Floytrup A, Rasheed MA, Ralph PJ, et al. Sediment Resuspension and Deposition on Seagrass Leaves Impedes Internal Plant Aeration and Promotes Phytotoxic H2S Intrusion. Frontiers in plant science. 2017;8:657.

Brown KG, Strickland JA. Utilizing data from multiple studies (meta-analysis) to determine effective dose-duration levels. Example: rats and mice exposed to hydrogen sulfide. Regulatory toxicology and pharmacology : RTP. 2003;37(2):305-17.

Buick JB, Lowry RC, Magee TR. Is a reduction in residual volume a sub-clinical manifestation of hydrogen sulfide intoxication? American journal of industrial medicine. 2000;37(3):296-9.

Burgess JE, Stuetz RM. Withstanding shock loads in activated sludge treatment by pre-exposure to low H2S concentrations. Environmental technology. 2003;24(3):339-48.

Calenic B, Yaegaki K, Ishkitiev N, Kumazawa Y, Imai T, Tanaka T. p53-Pathway activity and apoptosis in hydrogen sulfide-exposed stem cells separated from human gingival epithelium. Journal of periodontal research. 2013;48(3):322-30.

Cao X, Xiong S, Zhou Y, Wu Z, Ding L, Zhu Y, et al. Renal Protective Effect of Hydrogen Sulfide in Cisplatin-Induced Nephrotoxicity. Antioxidants & redox signaling. 2018.

Caro AA, Thompson S, Tackett J. Increased oxidative stress and cytotoxicity by hydrogen sulfide in HepG2 cells overexpressing cytochrome P450 2E1. Cell biology and toxicology. 2011;27(6):439-53.

Carson MB. Hydrogen sulfide exposure in the gas industry. Industrial medicine & surgery. 1963;32:63-4.

Centers for Disease C. Occupational fatality following exposure to hydrogen sulfide--Nebraska. MMWR Morbidity and mortality weekly report. 1986;35(33):533-5.

Chalupka AN, Chalupka S. Acute occupational exposure to hydrogen sulfide. AAOHN journal : official journal of the American Association of Occupational Health Nurses. 2008;56(7):324.

Chang CW, Chung H, Huang CF, Su HJ. Exposure assessment to airborne endotoxin, dust, ammonia, hydrogen sulfide and carbon dioxide in open style swine houses. The Annals of occupational hygiene. 2001;45(6):457-65.

Chegaev K, Rolando B, Cortese D, Gazzano E, Buondonno I, Lazzarato L, et al. H2S-Donating Doxorubicins May Overcome Cardiotoxicity and Multidrug Resistance. Journal of medicinal chemistry. 2016;59(10):4881-9.

Chen A, Zeng G, Chen G, Zhang C, Yan M, Shang C, et al. Hydrogen sulfide alleviates 2,4-dichlorophenol toxicity and promotes its degradation in Phanerochaete chrysosporium. Chemosphere. 2014;109:208-12.

Chen Z, Chen M, Jiang M. Hydrogen sulfide alleviates mercury toxicity by sequestering it in roots or regulating reactive oxygen species productions in rice seedlings. Plant physiology and biochemistry : PPB. 2017;111:179-92.

Chernikov AP. Intoxications with hydrogen sulfide and their prevention. Fel'dsher i akusherka. 1952;7:19-23.

Claudet I, Marcoux MO, Karsenty C, Rittie JL, Honorat R, Lelong-Tissier MC. Severe hydrogen sulfide intoxication: a pediatric case of survival. Annales francaises d'anesthesie et de reanimation. 2012;31(3):255-8.

Costigan MG. Hydrogen sulfide: UK occupational exposure limits. Occupational and environmental medicine. 2003;60(4):308-12.

Daldal H, Beder B, Serin S, Sungurtekin H. Hydrogen sulfide toxicity in a thermal spring: a fatal outcome. Clinical toxicology (Philadelphia, Pa). 2010;48(7):755-6.

Dawood M, Cao F, Jahangir MM, Zhang G, Wu F. Alleviation of aluminum toxicity by hydrogen sulfide is related to elevated ATPase, and suppressed aluminum uptake and oxidative stress in barley. Journal of hazardous materials. 2012;209-210:121-8.

De Fruyt F, Thiery E, De Bacquer D, Vanhoorne M. Neuropsychological effects of occupational exposures to carbon disulfide and hydrogen sulfide. International journal of occupational and environmental health. 1998;4(3):139-46.

Demaret D, Fialaire J. Intoxication by hydrogen sulfide in a natural gas refinery. European journal of toxicology and environmental hygiene Journal europeen de toxicologie. 1974;7(1):32-6.

Demus H. Method for determining hydrogen sulfide exposure in man. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1983;29(7):391.

Donatti AF, Soriano RN, Leite-Panissi CRA, Branco LGS, de Souza AS. Anxiolytic-like effect of hydrogen sulfide (H2S) in rats exposed and re-exposed to the elevated plus-maze and open field tests. Neuroscience letters. 2017;642:77-85.

Dorman DC, Brenneman KA, Struve MF, Miller KL, James RA, Marshall MW, et al. Fertility and developmental neurotoxicity effects of inhaled hydrogen sulfide in Sprague-Dawley rats. Neurotoxicology and teratology. 2000;22(1):71-84.

Dorman DC, Struve MF, Gross EA, Brenneman KA. Respiratory tract toxicity of inhaled hydrogen sulfide in Fischer-344 rats, Sprague-Dawley rats, and B6C3F1 mice following subchronic (90-day) exposure. Toxicology and applied pharmacology. 2004;198(1):29-39.

Doujaiji B, Al-Tawfiq JA. Hydrogen sulfide exposure in an adult male. Annals of Saudi medicine. 2010;30(1):76-80.

Drimal M, Koppova K, Kloslova Z, Fabianova E. Environmental exposure to hydrogen sulfide in central Slovakia (Ruzomberok area) in context of health risk assessment. Central European journal of public health. 2010;18(4):224-9.

Du S, Huang Y, Jin H, Wang T. Protective Mechanism of Hydrogen Sulfide against Chemotherapy-Induced Cardiotoxicity. Frontiers in pharmacology. 2018;9:32.

Du X-q, Wang D-x, Wu N, Hao F-t, Zhou S, Lu Q-s, et al. Effect of oxygen therapy on the morphology of cardiac muscle, lung and liver in rats with acute hydrogen sulfide intoxication. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2011;29(5):338-42.

Dubilier N. H2S-A Settlement Cue or a Toxic Substance For Capitella sp. I Larvae? The Biological bulletin. 1988;174(1):30-8.

Dugbartey GJ, Bouma HR, Lobb I, Sener A. Hydrogen sulfide: A novel nephroprotectant against cisplatin-induced renal toxicity. Nitric oxide : biology and chemistry. 2016;57:15-20.

Duong TX, Suruda AJ, Maier LA. Interstitial fibrosis following hydrogen sulfide exposure. American journal of industrial medicine. 2001;40(2):221-4.

Durenkamp M, De Kok LJ, Kopriva S. Adenosine 5'-phosphosulphate reductase is regulated differently in Allium cepa L. and Brassica oleracea L. upon exposure to H2S. Journal of experimental botany. 2007;58(7):1571-9.

Dvoriantseva MV. Toxicity of chronic dermatoses using hydrogen sulfide baths from Sokolovogorskii spring. Voprosy kurortologii, fizioterapii, i lechebnoi fizicheskoi kultury. 1973;38(3):252-4.

Eghbal MA, Pennefather PS, O'Brien PJ. H2S cytotoxicity mechanism involves reactive oxygen species formation and mitochondrial depolarisation. Toxicology. 2004;203(1-3):69-76.

Elovaara E, Tossavainen A, Savolainen H. Effects of subclinical hydrogen sulfide intoxication on mouse brain protein metabolism. Experimental neurology. 1978;62(1):93-8.

Ensabella F, Spirito A, Dupre S, Leoni V, Schinina ME, Strinati F, et al. Measurement of sulfhemoglobin (S-Hb) blood levels to determine individual hydrogen sulfide exposure in thermal baths in Italy. Igiene e sanita pubblica. 2004;60(4):201-17.

Fabian-Wheeler EE, Hile ML, Murphy DJ, Hill DE, Meinen R, Brandt RC, et al. Operator Exposure to Hydrogen Sulfide from Dairy Manure Storages Containing Gypsum Bedding. Journal of agricultural safety and health. 2017;23(1):9-22.

Fernandez RAR, Soriano RN, Francescato HDC, Sabino JP, Coimbra TM, Branco LGS. Cryogenic role of central endogenous hydrogen sulfide in the rat model of endotoxic shock. Brain research. 2016;1650:218-23.

Fiedler N, Kipen H, Ohman-Strickland P, Zhang J, Weisel C, Laumbach R, et al. Sensory and cognitive effects of acute exposure to hydrogen sulfide. Environmental health perspectives. 2008;116(1):78-85.

Finnbjornsdottir RG, Carlsen HK, Thorsteinsson T, Oudin A, Lund SH, Gislason T, et al. Association between Daily Hydrogen Sulfide Exposure and Incidence of Emergency Hospital Visits: A Population-Based Study. PloS one. 2016;11(5):e0154946.

Foster JC, Radzinski SC, Zou X, Finkielstein CV, Matson JB. H2S-Releasing Polymer Micelles for Studying Selective Cell Toxicity. Molecular pharmaceutics. 2017;14(4):1300-6.

Frankowska M, Wilinski B, Somogyi E, Piotrowska J, Filip M, Opoka W. Cocaine exposure alters H2S tissue concentrations in peripheral mouse organs. Pharmacological reports : PR. 2015;67(3):421-5.

Fujino Y, Inoue Y, Onodera M, Kikuchi S, Endo J, Endo S, et al. Case followed by delayed loss of consciousness after exposure to hydrogen sulfide that was treated with intermittent administration of sodium nitrite. Chudoku kenkyu : Chudoku Kenkyukai jun kikanshi = The Japanese journal of toxicology. 2010;23(4):297-302.

Fulton JP, Vanderslice R, Marshall RJ, Dundulis W. Hydrogen sulfide exposure on Rhode Island's shoreline. Medicine and health, Rhode Island. 2003;86(11):365-6.

Gabbay DS, De Roos F, Perrone J. Twenty-foot fall averts fatality from massive hydrogen sulfide exposure. The Journal of emergency medicine. 2001;20(2):141-4.

Gagnaire F, Simon P, Bonnet P, De Ceaurriz J. The influence of simultaneous exposure to carbon disulfide and hydrogen sulfide on the peripheral nerve toxicity and metabolism of carbon disulfide in rats. Toxicology letters. 1986;34(2-3):175-83.

Gao S, Li W, Zou W, Zhang P, Tian Y, Xiao F, et al. H2S protects PC12 cells against toxicity of corticosterone by modulation of BDNF-TrkB pathway. Acta biochimica et biophysica Sinica. 2015;47(11):915-24.

Gaultier M, Lecceur J, Le Breton R, Gervais P, Frejaville JP. A case of extremely acute hydrogen sulfide poisoning with symptoms of pulmonary involvement. Journal francais de medecine et chirurgie thoraciques. 1967;21(1):23-6.

Ge Y, Sun W, Wu Z-S, Jiang X-Z, Qiu Q-M, Hong G-L, et al. Effect of ulinastatin on oxidative stress and nuclear factor E2-related factor 2 expression in the lung tissues of acute hydrogen sulfide intoxicated rats. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2012;30(1):27-32.

George AK, Behera J, Kelly KE, Zhai Y, Tyagi N. Hydrogen sulfide, endoplasmic reticulum stress and alcohol mediated neurotoxicity. Brain research bulletin. 2017;130:251-6.

Gonzalez-Carter DA, Leo BF, Ruenraroengsak P, Chen S, Goode AE, Theodorou IG, et al. Silver nanoparticles reduce brain inflammation and related neurotoxicity through induction of H2S-synthesizing enzymes. Scientific reports. 2017;7:42871.

Green FH, Schurch S, De Sanctis GT, Wallace JA, Cheng S, Prior M. Effects of hydrogen sulfide exposure on surface properties of lung surfactant. Journal of applied physiology (Bethesda, Md : 1985). 1991;70(5):1943-9.

Guarrasi J, Trask C, Kirychuk S. A systematic review of occupational exposure to hydrogen sulfide in livestock operations. Journal of agromedicine. 2015;20(2):225-36.

Guidotti TL. Occupational exposure to hydrogen sulfide in the sour gas industry: some unresolved issues. International archives of occupational and environmental health. 1994;66(3):153-60.

Guidotti TL. Hydrogen sulfide: advances in understanding human toxicity. International journal of toxicology. 2010;29(6):569-81.

Guidotti TL. Hydrogen sulfide intoxication. Handbook of clinical neurology. 2015;131:111-33.

Gunn B, Wong R. Noxious gas exposure in the outback: two cases of hydrogen sulfide toxicity. Emergency medicine (Fremantle, WA). 2001;13(2):240-6.

Guo R, Lin J, Xu W, Shen N, Mo L, Zhang C, et al. Hydrogen sulfide attenuates doxorubicin-induced cardiotoxicity by inhibition of the p38 MAPK pathway in H9c2 cells. International journal of molecular medicine. 2013;31(3):644-50.

Guo R, Wu K, Chen J, Mo L, Hua X, Zheng D, et al. Exogenous hydrogen sulfide protects against doxorubicin-induced inflammation and cytotoxicity by inhibiting p38MAPK/NFkappaB pathway in H9c2 cardiac cells. Cellular physiology and biochemistry : international journal of experimental cellular physiology, biochemistry, and pharmacology. 2013;32(6):1668-80.

Guo R, Wu Z, Jiang J, Liu C, Wu B, Li X, et al. New mechanism of lipotoxicity in diabetic cardiomyopathy: Deficiency of Endogenous H2S Production and ER stress. Mechanisms of ageing and development. 2017;162:46-52.

Han J, Yang X, Chen X, Li Z, Fang M, Bai B, et al. Hydrogen sulfide may attenuate methylmercury-induced neurotoxicity via mitochondrial preservation. Chemico-biological interactions. 2017;263:66-73.

Hannah RS, Bennington R, Roth SH. A relationship between hydrogen sulfide exposure and taurine levels in maternal rats. Proceedings of the Western Pharmacology Society. 1990;33:177-9.

Hannah RS, Hayden LJ, Roth SH. Hydrogen sulfide exposure alters the amino acid content in developing rat CNS. Neuroscience letters. 1989;99(3):323-7.

Hannah RS, Roth SH. Chronic exposure to low concentrations of hydrogen sulfide produces abnormal growth in developing cerebellar Purkinje cells. Neuroscience letters. 1991;122(2):225-8.

Haouzi P, Chenuel B, Sonobe T. High-dose hydroxocobalamin administered after H2S exposure counteracts sulfide-poisoning-induced cardiac depression in sheep. Clinical toxicology (Philadelphia, Pa). 2015;53(1):28-36.

Haouzi P, Sonobe T. Cardiogenic shock induced reduction in cellular O2 delivery as a hallmark of acute H2S intoxication. Clinical toxicology (Philadelphia, Pa). 2015;53(4):416-7.

Haouzi P, Sonobe T, Judenherc-Haouzi A. Developing effective countermeasures against acute hydrogen sulfide intoxication: challenges and limitations. Annals of the New York Academy of Sciences. 2016;1374(1):29-40.

Hayden LJ, Goeden H, Roth SH. Exposure to low levels of hydrogen sulfide elevates circulating glucose in maternal rats. Journal of toxicology and environmental health. 1990;31(1):45-52.

Hayden LJ, Goeden H, Roth SH. Growth and development in the rat during sub-chronic exposure to low levels of hydrogen sulfide. Toxicology and industrial health. 1990;6(3-4):389-401.

He H, Li Y, He L-F. The central role of hydrogen sulfide in plant responses to toxic metal stress. Ecotoxicology and environmental safety. 2018;157:403-8.

Hessel PA, Herbert FA, Melenka LS, Yoshida K, Nakaza M. Lung health in relation to hydrogen sulfide exposure in oil and gas workers in Alberta, Canada. American journal of industrial medicine. 1997;31(5):554-7.

Higashi T, Toyama T, Sakurai H, Nakaza M, Omae K, Nakadate T, et al. Cross-sectional study of respiratory symptoms and pulmonary functions in rayon textile workers with special reference to H2S exposure. Industrial health. 1983;21(4):281-92.

Higuchi Y. Behavioral studies on toxicity of hydrogen sulfide by means of conditioned avoidance responses in rats (author's transl). Nihon yakurigaku zasshi Folia pharmacologica Japonica. 1977;73(3):307-19.

Hirakawa A, Takeyama N, Iwatsuki S, Iwata T, Kano H. Delayed myocardial injury following acute hydrogen sulfide intoxication. Chudoku kenkyu : Chudoku Kenkyukai jun kikanshi = The Japanese journal of toxicology. 2013;26(1):44-8.

Hirsch AR. Hydrogen sulfide exposure without loss of consciousness: chronic effects in four cases. Toxicology and industrial health. 2002;18(2):51-61.

Hoffman M, Rajapakse A, Shen X, Gates KS. Generation of DNA-damaging reactive oxygen species via the autoxidation of hydrogen sulfide under physiologically relevant conditions: chemistry relevant to both the genotoxic and cell signaling properties of H(2)S. Chemical research in toxicology. 2012;25(8):1609-15.

Hoidal CR, Hall AH, Robinson MD, Kulig K, Rumack BH. Hydrogen sulfide poisoning from toxic inhalations of roofing asphalt fumes. Annals of emergency medicine. 1986;15(7):826-30.

Hoyem-Johansen A. Toxic lung edema after H2S poisoning. A case report. Tidsskrift for den Norske laegeforening : tidsskrift for praktisk medicin, ny raekke. 1981;101(28):1580-2.

Hu H-J, Jiang Z-S, Zhou S-H, Liu Q-M. Hydrogen sulfide suppresses angiotensin II-stimulated endothelin-1 generation and subsequent cytotoxicity-induced endoplasmic reticulum stress in endothelial cells via NF-kappaB. Molecular medicine reports. 2016;14(5):4729-40.

Huang CC, Chu NS. A case of acute hydrogen sulfide (H2S) intoxication successfully treated with nitrites. Taiwan yi xue hui za zhi Journal of the Formosan Medical Association. 1987;86(9):1018-20.

Huang X-l, Zhou X-h, Wei P, Xian X-h, Ling Y-l. The role of hydrogen sulfide in acute lung injury during endotoxic shock and its relationship with nitric oxide and carbon monoxide. Zhonghua yi xue za zhi. 2008;88(32):2240-5.

Huang Z, Dong X, Zhuang X, Hu X, Wang L, Liao X. Exogenous hydrogen sulfide protects against high glucoseâ€˜induced inflammation and cytotoxicity in H9c2 cardiac cells. Molecular medicine reports. 2016;14(5):4911-7.

Huang Z, Zhuang X, Xie C, Hu X, Dong X, Guo Y, et al. Exogenous Hydrogen Sulfide Attenuates High Glucose-Induced Cardiotoxicity by Inhibiting NLRP3 Inflammasome Activation by Suppressing TLR4/NF-kappaB Pathway in H9c2 Cells. Cellular physiology and biochemistry : international journal of experimental cellular physiology, biochemistry, and pharmacology. 2016;40(6):1578-90.

Ikebuchi J, Yamamoto Y, Nishi K, Okada K, Irizawa Y. Toxicological findings in a death involving hydrogen sulfide. Nihon hoigaku zasshi = The Japanese journal of legal medicine. 1993;47(5):406-9.

Inserra SG, Phifer BL, Anger WK, Lewin M, Hilsdon R, White MC. Neurobehavioral evaluation for a community with chronic exposure to hydrogen sulfide gas. Environmental research. 2004;95(1):53-61.

Inserra S, Phifer B, Pierson R, Campagna D. Community-based exposure estimate for hydrogen sulfide. Journal of exposure analysis and environmental epidemiology. 2002;12(2):124-9.

Ishii I, Kamata S, Hagiya Y, Abiko Y, Kasahara T, Kumagai Y. Protective effects of hydrogen sulfide anions against acetaminophen-induced hepatotoxicity in mice. The Journal of toxicological sciences. 2015;40(6):837-41.

Jain SK, Huning L, Micinski D. Hydrogen sulfide upregulates glutamate-cysteine ligase catalytic subunit, glutamate-cysteine ligase modifier subunit, and glutathione and inhibits interleukin-1beta secretion in monocytes exposed to high glucose levels. Metabolic syndrome and related disorders. 2014;12(5):299-302.

Jia H, Wang X, Dou Y, Liu D, Si W, Fang H, et al. Hydrogen sulfide - cysteine cycle system enhances cadmium tolerance through alleviating cadmium-induced oxidative stress and ion toxicity in Arabidopsis roots. Scientific reports. 2016;6:39702.

Jiang H, Xiao J, Kang B, Zhu X, Xin N, Wang Z. PI3K/SGK1/GSK3beta signaling pathway is involved in inhibition of autophagy in neonatal rat cardiomyocytes exposed to hypoxia/reoxygenation by hydrogen sulfide. Experimental cell research. 2016;345(2):134-40.

Jiang J-M, Wang L, Gu H-F, Wu K, Xiao F, Chen Y, et al. Arecoline Induces Neurotoxicity to PC12 Cells: Involvement in ER Stress and Disturbance of Endogenous H2S Generation. Neurochemical research. 2016;41(8):2140-8.

Jiang J-M, Zhou C-F, Gao S-L, Tian Y, Wang C-Y, Wang L, et al. BDNF-TrkB pathway mediates neuroprotection of hydrogen sulfide against formaldehyde-induced toxicity to PC12 cells. PloS one. 2015;10(3):e0119478.

Jiang J, Chan A, Ali S, Saha A, Haushalter KJ, Lam W-LM, et al. Hydrogen Sulfide--Mechanisms of Toxicity and Development of an Antidote. Scientific reports. 2016;6:20831.

Jianwen Z, Da L, Wenxing F. An approach for estimating toxic releases of H2S-containing natural gas. Journal of hazardous materials. 2014;264:350-62.

Jones K, Martinez A, Rizwan M, Boswell J. Sulfur toxicity and media capacity for H2S removal in biofilters packed with a natural or a commercial granular medium. Journal of the Air & Waste Management Association (1995). 2005;55(4):415-20.

Joyner-Matos J, Downs CA, Julian D. Increased expression of stress proteins in the surf clam Donax variabilis following hydrogen sulfide exposure. Comparative biochemistry and physiology Part A, Molecular & integrative physiology. 2006;145(2):245-57.

Judenherc-HaouzI A, Sonobe T, Bebarta VS, Haouzi P. On the Efficacy of Cardio-Pulmonary Resuscitation and Epinephrine Following Cyanide- and H2S Intoxication-Induced Cardiac Asystole. Cardiovascular toxicology. 2018.

Judenherc-Haouzi A, Zhang X-Q, Sonobe T, Song J, Rannals MD, Wang J, et al. Methylene blue counteracts H2S toxicity-induced cardiac depression by restoring L-type Ca channel activity. American journal of physiology Regulatory, integrative and comparative physiology. 2016;310(11):R1030-44.

Julian D, April KL, Patel S, Stein JR, Wohlgemuth SE. Mitochondrial depolarization following hydrogen sulfide exposure in erythrocytes from a sulfide-tolerant marine invertebrate. The Journal of experimental biology. 2005;208(Pt 21):4109-22.

Kaipainen WJ. Hydrogen sulfide in toxication; rapidly transient changes in the electrocardiogram suggestive of myocardial infarction. Annales medicinae internae Fenniae. 1954;43(2):97-101.

Kamat PK, Kalani A, Tyagi SC, Tyagi N. Hydrogen Sulfide Epigenetically Attenuates Homocysteine-Induced Mitochondrial Toxicity Mediated Through NMDA Receptor in Mouse Brain Endothelial (bEnd3) Cells. Journal of cellular physiology. 2015;230(2):378-94.

Kangas J, Jappinen P, Savolainen H. Exposure to hydrogen sulfide, mercaptans and sulfur dioxide in pulp industry. American Industrial Hygiene Association journal. 1984;45(12):787-90.

Kaya C, Ashraf M, Akram NA. Hydrogen sulfide regulates the levels of key metabolites and antioxidant defense system to counteract oxidative stress in pepper (Capsicum annuum L.) plants exposed to high zinc regime. Environmental science and pollution research international. 2018;25(13):12612-8.

Kessler KL, Olson KC, Wright CL, Austin KJ, Johnson PS, Cammack KM. Effects of supplemental molybdenum on animal performance, liver copper concentrations, ruminal hydrogen sulfide concentrations, and the appearance of sulfur and molybdenum toxicity in steers receiving fiber-based diets. Journal of animal science. 2012;90(13):5005-12.

Kfir H, Rimbrot S, Markel A. Toxic effects of hydrogen sulfide: experience with three simultaneous patients. QJM : monthly journal of the Association of Physicians. 2015;108(12):977-8.

Khan AA, Schuler MM, Prior MG, Yong S, Coppock RW, Florence LZ, et al. Effects of hydrogen sulfide exposure on lung mitochondrial respiratory chain enzymes in rats. Toxicology and applied pharmacology. 1990;103(3):482-90.

Khan AA, Yong S, Prior MG, Lillie LE. Cytotoxic effects of hydrogen sulfide on pulmonary alveolar macrophages in rats. Journal of toxicology and environmental health. 1991;33(1):57-64.

Khodasevich LS. The toxic complications of hydrogen sulfide-based balneotherapy in the spa and health resort practice. Voprosy kurortologii, fizioterapii, i lechebnoi fizicheskoi kultury. 2015;92(5):61-6.

Kim D-S, Anantharam P, Hoffmann A, Meade ML, Grobe N, Gearhart JM, et al. Broad spectrum proteomics analysis of the inferior colliculus following acute hydrogen sulfide exposure. Toxicology and applied pharmacology. 2018.

Kimura K, Hasegawa M, Matsubara K, Maseda C, Kagawa M, Takahashi S, et al. A fatal disaster case based on exposure to hydrogen sulfide--an estimation of the hydrogen sulfide concentration at the scene. Forensic science international. 1994;66(2):111-6.

Kleinfeld M, Giel C, Rosso A. ACUTE HYDROGEN SULFIDE INTOXICATION; AN UNUSUAL SOURCE OF EXPOSURE. Industrial medicine & surgery. 1964;33:656-60.

Klingerman CM, Trushin N, Prokopczyk B, Haouzi P. H2S concentrations in the arterial blood during H2S administration in relation to its toxicity and effects on breathing. American journal of physiology Regulatory, integrative and comparative physiology. 2013;305(6):R630-8.

Koike S, Nishimoto S, Ogasawara Y. Cysteine persulfides and polysulfides produced by exchange reactions with H2S protect SH-SY5Y cells from methylglyoxal-induced toxicity through Nrf2 activation. Redox biology. 2017;12:530-9.

Kombian SB, Warenycia MW, Mele FG, Reiffenstein RJ. Effects of acute intoxication with hydrogen sulfide on central amino acid transmitter systems. Neurotoxicology. 1988;9(4):587-95.

Kosmider S, Rogala E, Pacholek A. Studies on the toxic action mechanism of hydrogen sulfide. Internationales Archiv fur Arbeitsmedizin. 1966;22(1):60-76.

Kurokawa Y, Sekiguchi F, Kubo S, Yamasaki Y, Matsuda S, Okamoto Y, et al. Involvement of ERK in NMDA receptor-independent cortical neurotoxicity of hydrogen sulfide. Biochemical and biophysical research communications. 2011;414(4):727-32.

Lannigan R, Hussain Z. Wound isolate of Salmonella typhimurium that became chlorate resistant after exposure to Dakin's solution: concomitant loss of hydrogen sulfide production, gas production, and nitrate reduction. Journal of clinical microbiology. 1993;31(9):2497-8.

Leduc G. Report of a study of the pathological consequences of chronic exposure to sulfur anhydride, hydrogen sulfide and chlorine dioxide. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1967;28(1):307-11.

Lee E-C, Kwan J, Leem J-H, Park S-G, Kim H-C, Lee D-H, et al. Hydrogen sulfide intoxication with dilated cardiomyopathy. Journal of occupational health. 2009;51(6):522-5.

Legator MS, Singleton CR, Morris DL, Philips DL. Health effects from chronic low-level exposure to hydrogen sulfide. Archives of environmental health. 2001;56(2):123-31.

Leschelle X, Robert V, Delpal S, Mouille B, Mayeur C, Martel P, et al. Isolation of pig colonic crypts for cytotoxic assay of luminal compounds: effects of hydrogen sulfide, ammonia, and deoxycholic acid. Cell biology and toxicology. 2002;18(3):193-203.

Lewis RJ, Copley GB. Chronic low-level hydrogen sulfide exposure and potential effects on human health: a review of the epidemiological evidence. Critical reviews in toxicology. 2015;45(2):93-123.

Li L, Salto-Tellez M, Tan C-H, Whiteman M, Moore PK. GYY4137, a novel hydrogen sulfide-releasing molecule, protects against endotoxic shock in the rat. Free radical biology & medicine. 2009;47(1):103-13.

Li M, Li J, Zhang T, Zhao Q, Cheng J, Liu B, et al. Syntheses, toxicities and anti-inflammation of H2S-donors based on non-steroidal anti-inflammatory drugs. European journal of medicinal chemistry. 2017;138:51-65.

Lim E, Mbowe O, Lee ASW, Davis J. Effect of environmental exposure to hydrogen sulfide on central nervous system and respiratory function: a systematic review of human studies. International journal of occupational and environmental health. 2016;22(1):80-90.

Liu M-H, Lin X-L, Yuan C, He J, Tan T-P, Wu S-J, et al. Hydrogen sulfide attenuates doxorubicin-induced cardiotoxicity by inhibiting the expression of peroxiredoxin III in H9c2 cells. Molecular medicine reports. 2016;13(1):367-72.

Liu M-H, Lin X-L, Zhang Y, He J, Tan T-P, Wu S-J, et al. Hydrogen sulfide attenuates doxorubicin-induced cardiotoxicity by inhibiting reactive oxygen species-activated extracellular signal-regulated kinase 1/2 in H9c2 cardiac myocytes. Molecular medicine reports. 2015;12(5):6841-8.

Liu M-H, Zhang Y, He J, Tan T-P, Wu S-J, Guo D-M, et al. Hydrogen sulfide protects H9c2 cardiac cells against doxorubicin-induced cytotoxicity through the PI3K/Akt/FoxO3a pathway. International journal of molecular medicine. 2016;37(6):1661-8.

Liu M-H, Zhang Y, Lin X-L, He J, Tan T-P, Wu S-J, et al. Hydrogen sulfide attenuates doxorubicinâ€˜induced cardiotoxicity by inhibiting calreticulin expression in H9c2 cells. Molecular medicine reports. 2015;12(4):5197-202.

Liu YY, Sparatore A, Del Soldato P, Bian JS. H2S releasing aspirin protects amyloid beta induced cell toxicity in BV-2 microglial cells. Neuroscience. 2011;193:80-8.

Liu Y-Y, Bian J-S. Hydrogen sulfide protects amyloid-beta induced cell toxicity in microglia. Journal of Alzheimer's disease : JAD. 2010;22(4):1189-200.

Liu Y-Y, Sparatore A, Del Soldato P, Bian J-S. ACS84, a novel hydrogen sulfide-releasing compound, protects against amyloid beta-induced cell cytotoxicity. Neurochemistry international. 2011;58(5):591-8.

Logue JN, Ramaswamy K, Hersh JH. Investigation of illness associated with exposure to hydrogen sulfide among Pennsylvania school students. Journal of environmental health. 2001;63(6):9-13.

Longmire AW, Boivin M, Eaton JL, Sokas RK. What diagnostic tools are available to document death by H2S exposure? Journal of occupational and environmental medicine. 2013;55(11):1379-80.

Lopez A, Prior MG, Reiffenstein RJ, Goodwin LR. Peracute toxic effects of inhaled hydrogen sulfide and injected sodium hydrosulfide on the lungs of rats. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1989;12(2):367-73.

Lopez A, Prior M, Lillie LE, Gulayets C, Atwal OS. Histologic and ultrastructural alterations in lungs of rats exposed to sub-lethal concentrations of hydrogen sulfide. Veterinary pathology. 1988;25(5):376-84.

Lopez A, Prior M, Yong S, Albassam M, Lillie LE. Biochemical and cytologic alterations in the respiratory tract of rats exposed for 4 hours to hydrogen sulfide. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1987;9(4):753-62.

Lopez A, Prior M, Yong S, Lillie L, Lefebvre M. Nasal lesions in rats exposed to hydrogen sulfide for four hours. American journal of veterinary research. 1988;49(7):1107-11.

Lu Y, Shen H, Shi X, Feng S, Wang Z, Shi Y. Hydrogen sulfide ameliorates high-glucose toxicity in rat peritoneal mesothelial cells by attenuating oxidative stress. Nephron Experimental nephrology. 2014;126(3):157-65.

Maebashi K, Iwadate K, Sakai K, Takatsu A, Fukui K, Aoyagi M, et al. Toxicological analysis of 17 autopsy cases of hydrogen sulfide poisoning resulting from the inhalation of intentionally generated hydrogen sulfide gas. Forensic science international. 2011;207(1-3):91-5.

Malone Rubright SL, Pearce LL, Peterson J. Environmental toxicology of hydrogen sulfide. Nitric oxide : biology and chemistry. 2017;71:1-13.

Mandegary A, Saeedi A, Eftekhari A, Montazeri V, Sharif E. Hepatoprotective effect of silyamarin in individuals chronically exposed to hydrogen sulfide; modulating influence of TNF-alpha cytokine genetic polymorphism. Daru : journal of Faculty of Pharmacy, Tehran University of Medical Sciences. 2013;21(1):28.

Matei IV, Ii H, Yaegaki K. Hydrogen sulfide enhances pancreatic beta-cell differentiation from human tooth under normal and glucotoxic conditions. Regenerative medicine. 2017;12(2):125-41.

Mehan N, Mansingh A. Study of tarnished films formed on silver by exposure to H2S with the surface-plasmon resonance technique. Applied optics. 2000;39(28):5214-20.

Milby TH. Hydrogen sulfide intoxication. Review of the literature and report of unusual accident resulting in two cases of nonfatal poisoning. Journal of occupational medicine : official publication of the Industrial Medical Association. 1962;4:431-7.

Mirandola P, Gobbi G, Sponzilli I, Pambianco M, Malinverno C, Cacchioli A, et al. Exogenous hydrogen sulfide induces functional inhibition and cell death of cytotoxic lymphocytes subsets. Journal of cellular physiology. 2007;213(3):826-33.

Morsy MA, Ibrahim SA, Abdelwahab SA, Zedan MZ, Elbitar HI. Curative effects of hydrogen sulfide against acetaminophen-induced hepatotoxicity in mice. Life sciences. 2010;87(23-26):692-8.

Mostofa MG, Rahman A, Ansary MMU, Watanabe A, Fujita M, Tran L-SP. Hydrogen sulfide modulates cadmium-induced physiological and biochemical responses to alleviate cadmium toxicity in rice. Scientific reports. 2015;5:14078.

Mousa HA-L. Short-term effects of subchronic low-level hydrogen sulfide exposure on oil field workers. Environmental health and preventive medicine. 2015;20(1):12-7.

Muller PH, Lenoir L, Furon D, Willot M, Debarge A, de Mendonca JP. Double poisoning by hydrogen sulfide. Medecine legale et dommage corporel. 1973;6(3):284-6.

Nakamura M, Kuramata M, Kasugai I, Abe M, Youssefian S. Increased thiol biosynthesis of transgenic poplar expressing a wheat O-acetylserine(thiol) lyase enhances resistance to hydrogen sulfide and sulfur dioxide toxicity. Plant cell reports. 2009;28(2):313-23.

Nakaza M, Toyama T, Omae K. A personal diffusion sampler for evaluating time weighted exposure to gaseous hydrogen sulfide (author's transl). Sangyo igaku Japanese journal of industrial health. 1980;22(5):372-6.

Nelson K, Robinson DL. A case review: near fatal residential hydrogen sulfide exposure. Air medical journal. 2002;21(3):46-8.

Nie L, Hu Y, Yan X, Li M, Chen L, Li H, et al. The anti-apoptotic effect of hydrogen sulfide attenuates injuries to the medullary respiratory centers of neonatal rats subjected to in utero cigarette smoke exposure. Respiratory physiology & neurobiology. 2013;188(1):29-38.

Nikkanen HE, Burns MM. Severe hydrogen sulfide exposure in a working adolescent. Pediatrics. 2004;113(4):927-9.

Nino MA, Flores E, Sanchez C, Rojo JM. Reactivity of a FeS Surface under Room Temperature Exposure to Nitrogen and H2S. The journal of physical chemistry B. 2018;122(2):705-12.

Okamoto M, Yamaoka M, Takei M, Ando T, Taniguchi S, Ishii I, et al. Endogenous hydrogen sulfide protects pancreatic beta-cells from a high-fat diet-induced glucotoxicity and prevents the development of type 2 diabetes. Biochemical and biophysical research communications. 2013;442(3-4):227-33.

Ooi XJ, Tan KS. Reduced Glutathione Mediates Resistance to H2S Toxicity in Oral Streptococci. Applied and environmental microbiology. 2016;82(7):2078-85.

Ortega JA, Ortega JM, Julian D. Hypotaurine and sulfhydryl-containing antioxidants reduce H2S toxicity in erythrocytes from a marine invertebrate. The Journal of experimental biology. 2008;211(Pt 24):3816-25.

Otulakowski G, Kavanagh BP. Hydrogen sulfide in lung injury: therapeutic hope from a toxic gas? Anesthesiology. 2010;113(1):4-6.

Pan Y, Zhou C, Yuan D, Zhang J, Shao C. Radiation Exposure Promotes Hepatocarcinoma Cell Invasion through Epithelial Mesenchymal Transition Mediated by H2S/CSE Pathway. Radiation research. 2016;185(1):96-105.

Partlo LA, Sainsbury RS, Roth SH. Effects of repeated hydrogen sulphide (H2S) exposure on learning and memory in the adult rat. Neurotoxicology. 2001;22(2):177-89.

Perna AF, Lanza D, Sepe I, Raiola I, Capasso R, De Santo NG, et al. Hydrogen sulfide, a toxic gas with cardiovascular properties in uremia: how harmful is it? Blood purification. 2011;31(1-3):102-6.

Pfenninger M, Lerp H, Tobler M, Passow C, Kelley JL, Funke E, et al. Parallel evolution of cox genes in H2S-tolerant fish as key adaptation to a toxic environment. Nature communications. 2014;5:3873.

Picton R, Eggo MC, Langman MJS, Singh S. Impaired detoxication of hydrogen sulfide in ulcerative colitis? Digestive diseases and sciences. 2007;52(2):373-8.

Piva C, Diamant-Berger O, Frejaville JP, Fournier E. Intoxication by hydrogen sulfide. European journal of toxicology and environmental hygiene Journal europeen de toxicologie. 1974;7(1):30-1.

Poliakova VS. Structural reorganization in the lining epithelium of airways and respiratory areas of the lungs following exposure to hydrogen sulfide-containing gas mixture. Morfologiia (Saint Petersburg, Russia). 2003;124(5):20-3.

Policastro MA, Otten EJ. Case files of the University of Cincinnati fellowship in medical toxicology: two patients with acute lethal occupational exposure to hydrogen sulfide. Journal of medical toxicology : official journal of the American College of Medical Toxicology. 2007;3(2):73-81.

Pope K, So YT, Crane J, Bates MN. Ambient geothermal hydrogen sulfide exposure and peripheral neuropathy. Neurotoxicology. 2017;60:10-5.

Querellou E, Jaffrelot M, Savary D, Savry C, Perfus JP. Fatal outcome of an hydrogen sulfide poisoning. Annales francaises d'anesthesie et de reanimation. 2005;24(10):1302-4.

Ravizza AG, Carugo D, Cerchiari EL, Cantadore R, Bianchi GE. The treatment of hydrogen sulfide intoxication: oxygen versus nitrites. Veterinary and human toxicology. 1982;24(4):241-2.

Reed BR, Crane J, Garrett N, Woods DL, Bates MN. Chronic ambient hydrogen sulfide exposure and cognitive function. Neurotoxicology and teratology. 2014;42:68-76.

Reiffenstein RJ, Hulbert WC, Roth SH. Toxicology of hydrogen sulfide. Annual review of pharmacology and toxicology. 1992;32:109-34.

Ribeiro BA, Stettiner HM, Bedrikow B, Lambert MI. Exposure to carbon disulfide and hydrogen sulfide in the manufacture of rayon by the viscose process in the state of Sao Paulo. Arquivos da Faculdade de Higiene e Saude Publica da Universidade de Sao Paulo. 1959;13:219-41.

Richardson DB. Respiratory effects of chronic hydrogen sulfide exposure. American journal of industrial medicine. 1995;28(1):99-108.

Riesch R, Plath M, Schlupp I. Toxic hydrogen sulfide and dark caves: life-history adaptations in a livebearing fish (Poecilia mexicana, Poeciliidae). Ecology. 2010;91(5):1494-505.

Roberts ES, Wong VA, McManus BE, Marshall MW, Lancianese S, Dorman DC. Changes in intracellular pH play a secondary role in hydrogen sulfide-induced nasal cytotoxicity. Inhalation toxicology. 2006;18(3):159-67.

Robinson AV. Effect of in vitro exposure to hydrogen sulfide on rabbit alveolar macrophages cultured on gas-permeable membranes. Environmental research. 1982;27(2):491-500.

Robinson SE, Grinwald BA, Bremer LL, Kupcho KA, Acharya BR, Owens PD. A liquid crystal-based passive badge for personal monitoring of exposure to hydrogen sulfide. Journal of occupational and environmental hygiene. 2014;11(11):741-50.

Roman HB, Hirschberger LL, Krijt J, Valli A, Kozich V, Stipanuk MH. The cysteine dioxgenase knockout mouse: altered cysteine metabolism in nonhepatic tissues leads to excess H2S/HS(-) production and evidence of pancreatic and lung toxicity. Antioxidants & redox signaling. 2013;19(12):1321-36.

Roth SH, Skrajny B, Bennington R, Brookes J. Neurotoxicity of hydrogen sulfide may result from inhibition of respiratory enzymes. Proceedings of the Western Pharmacology Society. 1997;40:41-3.

Rubin HH, Arieff AJ, Tauber FW. Carbon disulfide and hydrogen sulfide. II. A follow-up clinical study of low grade exposures. AMA archives of industrial hygiene and occupational medicine. 1950;2(5):529-33.

Sabon F, Monnet R. Fatal hydrogen sulfide intoxication on board a tank boat. Archives des maladies professionnelles de medecine du travail et de securite sociale. 1954;15(2):147-8.

Saeedi A, Najibi A, Mohammadi-Bardbori A. Effects of long-term exposure to hydrogen sulfide on human red blood cells. The international journal of occupational and environmental medicine. 2015;6(1):20-5.

Saillenfait AM, Bonnet P, de Ceaurriz J. Effects of inhalation exposure to carbon disulfide and its combination with hydrogen sulfide on embryonal and fetal development in rats. Toxicology letters. 1989;48(1):57-66.

Savolainen H, Tenhunen R, Elovaara E, Tossavainen A. Cumulative biochemical effects of repeated subclinical hydrogen sulfide intoxication in mouse brain. International archives of occupational and environmental health. 1980;46(1):87-92.

Savolainen H. High toxicity of hydrogen sulfide by the inhibition of mitochondrial respiration. The Journal of biological chemistry. 2010;285(24):le9; author reply le10.

Schaffernicht H. Dosimeter for the determination of hydrogen sulfide exposure. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1982;28(5):303-5.

Schaffernicht H, Sussenbach D, Wedekind P. Hydrogen sulfide and noise exposure in industrial animal production. Zeitschrift fur die gesamte Hygiene und ihre Grenzgebiete. 1973;19(3):177-80.

Schreier SM, Muellner MK, Steinkellner H, Hermann M, Esterbauer H, Exner M, et al. Hydrogen sulfide scavenges the cytotoxic lipid oxidation product 4-HNE. Neurotoxicity research. 2010;17(3):249-56.

Schwander D. Toxic pulmonary edema after inhalation of hydrogen sulfide. Successful treatment by continuous positive pressure ventilation. Cahiers d'anesthesiologie. 1972;20(7):785-92.

Seuren P. A case of hydrogen sulfide poisoning and stench nuisance in a broiler stockbreeding farm caused by storage finished mushroom manure. Tijdschrift voor diergeneeskunde. 1979;104(9):383-4.

Shaparenko BA, Foderman VM, Drevniak NS. Use of antidote hydrogen sulfide prophylactic inhalations in persons exposed to metallic mercury vapor. Zhurnal ushnykh, nosovykh i gorlovykh boleznei = The journal of otology, rhinology, and laryngologie [sic]. 1972;32(4):1-3.

Shen D-S, Du Y, Fang Y, Hu L-F, Fang C-R, Long Y-Y. Characteristics of H2S emission from aged refuse after excavation exposure. Journal of environmental management. 2015;154:159-65.

Short SB, Edwards WC. Sulfur (hydrogen sulfide) toxicosis in cattle. Veterinary and human toxicology. 1989;31(5):451-3.

Silva M. A review of developmental and reproductive toxicity of CS2 and H2 S generated by the pesticide sodium tetrathiocarbonate. Birth defects research Part B, Developmental and reproductive toxicology. 2013;98(2):119-38.

Simonton DS, Spears M. Human health effects from exposure to low-level concentrations of hydrogen sulfide. Occupational health & safety (Waco, Tex). 2007;76(10):102, 4.

Singh VP, Singh S, Kumar J, Prasad SM. Hydrogen sulfide alleviates toxic effects of arsenate in pea seedlings through up-regulation of the ascorbate-glutathione cycle: Possible involvement of nitric oxide. Journal of plant physiology. 2015;181:20-9.

Skoczynska A, Gruszczynski L, Turczyn B, Scieszka M, Wojakowska A, Pawlowski T, et al. Serum cystathionine beta-synthase (CBS), cystathionine gamma-lyase (CSE) and cytochrome c oxidase (COX) in copper mine miners potentially expose d to hydrogen sulfide. Medycyna pracy. 2015;66(4):539-48.

Smith B, Cummins K. Hydrogen sulfide exposure at a waste treatment facility. Journal of occupational and environmental hygiene. 2004;1(3):D23-5.

Snyder JW, Safir EF, Summerville GP, Middleberg RA. Occupational fatality and persistent neurological sequelae after mass exposure to hydrogen sulfide. The American journal of emergency medicine. 1995;13(2):199-203.

Sola A, Tarraga A, Molina P. The ferrocene-pyrylium dyad as a selective colorimetric chemodosimeter for the toxic cyanide and hydrogen sulfide anions in water. Organic & biomolecular chemistry. 2014;12(16):2547-51.

Solnyshkova TG. Demyelination of nerve fibers in the central nervous system caused by chronic exposure to natural hydrogen sulfide-containing gas. Bulletin of experimental biology and medicine. 2003;136(4):328-32.

Solnyshkova TG, Parkhomenko IG. Pathomorphological changes of the macroglia in chronic intoxication produced by gas containing hydrogen sulfide. Arkhiv patologii. 2003;65(3):41-4.

Solnyshkova TG, Shakhlamov VA. Ultrastructural and morphometric characteristics of nerve cells and myelinated fibers in the cerebral cortex after chronic exposure to natural gas containing hydrogen sulfide in low concentrations. Bulletin of experimental biology and medicine. 2002;134(4):411-3.

Solnyshkova TG, Shakhlamov VA. Ultrastructural changes in the cortex of cerebral hemispheres in acute and subacute intoxication with natural gas containing hydrogen sulfide. Arkhiv patologii. 2003;65(2):17-20.

Solnyshkova TG, Shakhlamov VA, Volodina EP. Ultrastructure of the cerebral cortex after exposure to gas containing hydrogen sulfide. Morfologiia (Saint Petersburg, Russia). 2002;122(6):11-3.

Solnyshkova TG, Shakhlamov VA, Volodina EP. Cerebral cortex ultrastructure during exposure to hydrogen sulfide gas. Neuroscience and behavioral physiology. 2004;34(4):343-5.

Sonobe T, Chenuel B, Cooper TK, Haouzi P. Immediate and Long-Term Outcome of Acute H2S Intoxication Induced Coma in Unanesthetized Rats: Effects of Methylene Blue. PloS one. 2015;10(6):e0131340.

Sreejai R, Jaya DS. Studies on the changes in lipid peroxidation and antioxidants in fishes exposed to hydrogen sulfide. Toxicology international. 2010;17(2):71-7.

Stein A, Kraus DW, Doeller JE, Bailey SM. Inhalation exposure model of hydrogen sulfide (Hâ‚‚S)-induced hypometabolism in the male Sprague-Dawley rat. Methods in enzymology. 2015;555:19-35.

Stine RJ, Slosberg B, Beacham BE. Hydrogen sulfide intoxication. A case report and discussion of treatment. Annals of internal medicine. 1976;85(6):756-8.

Struve MF, Brisbois JN, James RA, Marshall MW, Dorman DC. Neurotoxicological effects associated with short-term exposure of Sprague-Dawley rats to hydrogen sulfide. Neurotoxicology. 2001;22(3):375-85.

Sun J, Wang R, Zhang X, Yu Y, Zhao R, Li Z, et al. Hydrogen sulfide alleviates cadmium toxicity through regulations of cadmium transport across the plasma and vacuolar membranes in Populus euphratica cells. Plant physiology and biochemistry : PPB. 2013;65:67-74.

Tai IH, Sheen J-M, Lin Y-J, Yu H-R, Tiao M-M, Chen C-C, et al. Maternal N-acetylcysteine therapy regulates hydrogen sulfide-generating pathway and prevents programmed hypertension in male offspring exposed to prenatal dexamethasone and postnatal high-fat diet. Nitric oxide : biology and chemistry. 2016;53:6-12.

Tan G, Pan S, Li J, Dong X, Kang K, Zhao M, et al. Hydrogen sulfide attenuates carbon tetrachloride-induced hepatotoxicity, liver cirrhosis and portal hypertension in rats. PloS one. 2011;6(10):e25943.

Tang X-Q, Chen R-Q, Dong L, Ren Y-K, Del Soldato P, Sparatore A, et al. Role of paraoxonase-1 in the protection of hydrogen sulfide-donating sildenafil (ACS6) against homocysteine-induced neurotoxicity. Journal of molecular neuroscience : MN. 2013;50(1):70-7.

Tang X-Q, Fan L-L, Li Y-J, Shen X-T, Zhuan Y-Y, He J-Q, et al. Inhibition of hydrogen sulfide generation contributes to 1-methy-4-phenylpyridinium ion-induced neurotoxicity. Neurotoxicity research. 2011;19(3):403-11.

Tang X-Q, Fang H-R, Li Y-J, Zhou C-F, Ren Y-K, Chen R-Q, et al. Endogenous hydrogen sulfide is involved in asymmetric dimethylarginine-induced protection against neurotoxicity of 1-methyl-4-phenyl-pyridinium ion. Neurochemical research. 2011;36(11):2176-85.

Tang X-Q, Fang H-R, Zhou C-F, Zhuang Y-Y, Zhang P, Gu H-F, et al. A novel mechanism of formaldehyde neurotoxicity: inhibition of hydrogen sulfide generation by promoting overproduction of nitric oxide. PloS one. 2013;8(1):e54829.

Tang X-Q, Ren Y-K, Zhou C-F, Yang C-T, Gu H-F, He J-Q, et al. Hydrogen sulfide prevents formaldehyde-induced neurotoxicity to PC12 cells by attenuation of mitochondrial dysfunction and pro-apoptotic potential. Neurochemistry international. 2012;61(1):16-24.

Tang X-Q, Shen X-T, Huang Y-E, Chen R-Q, Ren Y-K, Fang H-R, et al. Inhibition of endogenous hydrogen sulfide generation is associated with homocysteine-induced neurotoxicity: role of ERK1/2 activation. Journal of molecular neuroscience : MN. 2011;45(1):60-7.

Tang X-Q, Shen X-T, Huang Y-E, Ren Y-K, Chen R-Q, Hu B, et al. Hydrogen sulfide antagonizes homocysteine-induced neurotoxicity in PC12 cells. Neuroscience research. 2010;68(3):241-9.

Tang X-Q, Zhuang Y-Y, Fan L-L, Fang H-R, Zhou C-F, Zhang P, et al. Involvement of K(ATP)/PI (3)K/AKT/Bcl-2 pathway in hydrogen sulfide-induced neuroprotection against the toxicity of 1-methy-4-phenylpyridinium ion. Journal of molecular neuroscience : MN. 2012;46(2):442-9.

Tavares AB, Marques AC, Anastacio MD, Campos J. Hydrogen sulfide poisoning. Imprensa medica. 1950;25(437):31-7.

Tisherman SA, Drabek T. Hydrogen sulfide: metabolic mediator or toxic gas? Pediatric critical care medicine : a journal of the Society of Critical Care Medicine and the World Federation of Pediatric Intensive and Critical Care Societies. 2008;9(1):129-30.

Tobler M, Dewitt TJ, Schlupp I, Garcia de Leon FJ, Herrmann R, Feulner PGD, et al. Toxic hydrogen sulfide and dark caves: phenotypic and genetic divergence across two abiotic environmental gradients in Poecilia mexicana. Evolution; international journal of organic evolution. 2008;62(10):2643-59.

Tobler M, Henpita C, Bassett B, Kelley JL, Shaw JH. H2S exposure elicits differential expression of candidate genes in fish adapted to sulfidic and non-sulfidic environments. Comparative biochemistry and physiology Part A, Molecular & integrative physiology. 2014;175:7-14.

Torrans EL, Clemens HP. Physiological and biochemical effects of acute exposure of fish to hydrogen sulfide. Comparative biochemistry and physiology C: Comparative pharmacology. 1982;71(2):183-90.

Truong DH, Eghbal MA, Hindmarsh W, Roth SH, O'Brien PJ. Molecular mechanisms of hydrogen sulfide toxicity. Drug metabolism reviews. 2006;38(4):733-44.

Truong DH, Mihajlovic A, Gunness P, Hindmarsh W, O'Brien PJ. Prevention of hydrogen sulfide (H2S)-induced mouse lethality and cytotoxicity by hydroxocobalamin (vitamin B(12a)). Toxicology. 2007;242(1-3):16-22.

Ugliano M, Kwiatkowski M, Vidal S, Capone D, Siebert T, Dieval J-B, et al. Evolution of 3-mercaptohexanol, hydrogen sulfide, and methyl mercaptan during bottle storage of Sauvignon blanc wines. Effect of glutathione, copper, oxygen exposure, and closure-derived oxygen. Journal of agricultural and food chemistry. 2011;59(6):2564-72.

Verma S, Landisch R, Quirk B, Schmainda K, Prah M, Whelan HT, et al. Presumed hydrogen sulfide-mediated neurotoxicity after streptococcus anginosus group meningitis. The Pediatric infectious disease journal. 2013;32(2):189-91.

Volodina EP, Fomenko AV, Novikov IV, Slobin PI, Poliakova VS. Effectiveness of sanitation measures for workers exposed to gases containing hydrogen sulfide. Meditsina truda i promyshlennaia ekologiia. 2004(6):39-41.

Wanek R. Monitoring H2S to meet new exposure standards. Occupational health & safety (Waco, Tex). 2011;80(9):20, 2, 4.

Wang B-L, Shi L, Li Y-X, Zhang W-H. Boron toxicity is alleviated by hydrogen sulfide in cucumber (Cucumis sativus L.) seedlings. Planta. 2010;231(6):1301-9.

Wang X-Y, Yang H-W. Upregulation of CBS/H2S system contributes to asymmetric dimethylarginine-triggered protection against the neurotoxicity of glutamate to PC12 cells by inhibiting NOS/NO pathway. Experimental cell research. 2016;346(1):111-8.

Wang X-Y, Yang C-T, Zheng D-D, Mo L-Q, Lan A-P, Yang Z-L, et al. Hydrogen sulfide protects H9c2 cells against doxorubicin-induced cardiotoxicity through inhibition of endoplasmic reticulum stress. Molecular and cellular biochemistry. 2012;363(1-2):419-26.

Warenycia MW, Reiffenstein RJ, Goodwin LR, Dieken FP. Brain sulfide levels in anaesthesia: a comparison with hydrogen sulfide intoxication. Toxicology letters. 1989;47(3):221-4.

Warenycia MW, Smith KA, Blashko CS, Kombian SB, Reiffenstein RJ. Monoamine oxidase inhibition as a sequel of hydrogen sulfide intoxication: increases in brain catecholamine and 5-hydroxytryptamine levels. Archives of toxicology. 1989;63(2):131-6.

Wasch HH, Estrin WJ, Yip P, Bowler R, Cone JE. Prolongation of the P-300 latency associated with hydrogen sulfide exposure. Archives of neurology. 1989;46(8):902-4.

Weber HD, Lendle L. CONDITIONS FOR THE TOXIC EFFECT OF HYDROGEN SULFIDE AND POSSIBILITIES OF TREATMENT IN ACUTE POISONING. Archiv fur Toxikologie. 1965;20:290-312.

Wei L, Kan L-Y, Zeng H-Y, Tang Y-Y, Huang H-L, Xie M, et al. BDNF/TrkB Pathway Mediates the Antidepressant-Like Role of H2S in CUMS-Exposed Rats by Inhibition of Hippocampal ER Stress. Neuromolecular medicine. 2018;20(2):252-61.

Wei W-B, Hu X, Zhuang X-D, Liao L-Z, Li W-D. GYY4137, a novel hydrogen sulfide-releasing molecule, likely protects against high glucose-induced cytotoxicity by activation of the AMPK/mTOR signal pathway in H9c2 cells. Molecular and cellular biochemistry. 2014;389(1-2):249-56.

Weisiger RA, Pinkus LM, Jakoby WB. Thiol S-methyltransferase: suggested role in detoxication of intestinal hydrogen sulfide. Biochemical pharmacology. 1980;29(20):2885-7.

Wnek S, Berg M, Skelton S, Lemond L, Goad P. Hazards after the storm: Floodwater drainage pump stations and exposure to hydrogen sulfide. Journal of occupational and environmental hygiene. 2017;14(4):D39-D48.

Wu J, Guo W, Lin SZ, Wang ZJ, Kan JT, Chen SY, et al. Gp130-mediated STAT3 activation by S-propargyl-cysteine, an endogenous hydrogen sulfide initiator, prevents doxorubicin-induced cardiotoxicity. Cell death & disease. 2016;7(8):e2339.

Wu S-H, Chen K-F, Chan Y-L. Severe hydrogen sulfide intoxication treated with therapeutic hypothermia. The American journal of emergency medicine. 2015;33(9):1327.e1-2.

Yalamanchili C, Smith MD. Acute hydrogen sulfide toxicity due to sewer gas exposure. The American journal of emergency medicine. 2008;26(4):518.e5-7.

Yalcin Yeler D, Aydin M, Hocaoglu PT, Koraltan M, Ozdemir H, Kotil T, et al. Ultrastructural changes in epithelial cells of rats exposed to low concentration of hydrogen sulfide for 50 days. Ultrastructural pathology. 2016;40(6):351-7.

Yamamoto I. Acute hydrogen sulfide poisoning-risk assessments and management problems associated with H2S exposure by suicide attempt. Chudoku kenkyu : Chudoku Kenkyukai jun kikanshi = The Japanese journal of toxicology. 2009;22(1):19-24.

Yan X, Lei F, Hu Y, Nie L, Jia Q, Zhou H, et al. Hydrogen sulfide protects neonatal rat medulla oblongata against prenatal cigarette smoke exposure via anti-oxidative and anti-inflammatory effects. Environmental toxicology and pharmacology. 2018;57:151-8.

Yang B, Bai Y, Yin C, Qian H, Xing G, Wang S, et al. Activation of autophagic flux and the Nrf2/ARE signaling pathway by hydrogen sulfide protects against acrylonitrile-induced neurotoxicity in primary rat astrocytes. Archives of toxicology. 2018;92(6):2093-108.

Yang C, Yang Z, Zhang M, Dong Q, Wang X, Lan A, et al. Hydrogen sulfide protects against chemical hypoxia-induced cytotoxicity and inflammation in HaCaT cells through inhibition of ROS/NF-kappaB/COX-2 pathway. PloS one. 2011;6(7):e21971.

Yang L-L, Zhao Y, Luo S-M, Ma J-Y, Ge Z-J, Shen W, et al. Toxic effects and possible mechanisms of hydrogen sulfide and/or ammonia on porcine oocyte maturation in vitro. Toxicology letters. 2018;285:20-6.

Yang Y, Hu D, Peng D. Diffuse ST-Segment Elevation After Hydrogen Sulfide Intoxication. The Journal of emergency medicine. 2018;54(2):241-3.

Yuan Y, Zheng J, Zhao T, Tang X, Hu N. Hydrogen sulfide alleviates uranium-induced acute hepatotoxicity in rats: Role of antioxidant and antiapoptotic signaling. Environmental toxicology. 2017;32(2):581-93.

Zayachkivska O, Bula N, Khyrivska D, Gavrilyuk E, Wallace JL. Exposure to non-steroid anti-inflammatory drugs (NSAIDs) and suppressing hydrogen sulfide synthesis leads to altered structure and impaired function of the oesophagus and oesophagogastric junction. Inflammopharmacology. 2015;23(2-3):91-9.

Zburzhinskii VK. On the mechanism of the toxic effect of hydrogen sulfide. Gigiena i sanitariia. 1962;27:64-7.

Zhang H, Tan Z-Q, Hu L-Y, Wang S-H, Luo J-P, Jones RL. Hydrogen sulfide alleviates aluminum toxicity in germinating wheat seedlings. Journal of integrative plant biology. 2010;52(6):556-67.

Zhang P, Luo Q, Wang R, Xu J. Hydrogen sulfide toxicity inhibits primary root growth through the ROS-NO pathway. Scientific reports. 2017;7(1):868.

Zhang Q, Yuan L, Liu D, Wang J, Wang S, Zhang Q, et al. Hydrogen sulfide attenuates hypoxia-induced neurotoxicity through inhibiting microglial activation. Pharmacological research. 2014;84:32-44.

Zhang S, Lei F, Zhao F, Yan X, Wang W, Zheng Y. Hydrogen sulfide ameliorates prenatal cigarette smoke exposure-induced impairment of respiratory responses to hypercapnia in neonatal rats. Respiratory physiology & neurobiology. 2017;243:1-6.

Zhao F, Lei F, Zhang S, Yan X, Wang W, Zheng Y. Hydrogen sulfide alleviates placental injury induced by maternal cigarette smoke exposure during pregnancy in rats. Nitric oxide : biology and chemistry. 2018;74:102-11.

Zheng J, Zhao T, Yuan Y, Hu N, Tang X. Hydrogen sulfide (H2S) attenuates uranium-induced acute nephrotoxicity through oxidative stress and inflammatory response via Nrf2-NF-kappaB pathways. Chemico-biological interactions. 2015;242:353-62.

Zhong J-F, Wang S-P, Shi X-Q, Mu L-l, Li G-Q. Hydrogen sulfide exposure increases desiccation tolerance in Drosophila melanogaster. Journal of insect physiology. 2010;56(12):1777-82.

Zhou H, Ding L, Wu Z, Cao X, Zhang Q, Lin L, et al. Hydrogen sulfide reduces RAGE toxicity through inhibition of its dimer formation. Free radical biology & medicine. 2017;104:262-71.

Zhou J, Lian J, Li HX, Hong GL, Zhao GJ, Zhi SC, et al. Mechanism research and effect of ulinastatin in the brain tissue injury of acute hydrogen sulfide intoxicated rats. Zhonghua lao dong wei sheng zhi ye bing za zhi = Zhonghua laodong weisheng zhiyebing zazhi = Chinese journal of industrial hygiene and occupational diseases. 2016;34(3):166-72.

Zhu CQ, Zhang JH, Sun LM, Zhu LF, Abliz B, Hu WJ, et al. Hydrogen Sulfide Alleviates Aluminum Toxicity via Decreasing Apoplast and Symplast Al Contents in Rice. Frontiers in plant science. 2018;9:294.

Zhuang X-D, Hu X, Long M, Dong X-B, Liu D-H, Liao X-X. Exogenous hydrogen sulfide alleviates high glucose-induced cardiotoxicity via inhibition of leptin signaling in H9c2 cells. Molecular and cellular biochemistry. 2014;391(1-2):147-55.

BIB-10. Methyl Isobutyl Ketone

Indoor air guide values for methyl isobutyl ketone. Bundesgesundheitsblatt, Gesundheitsforschung, Gesundheitsschutz. 2013;56(1):148-58.

Abou-Donia MB, Hu ZH, Lapadula DM, Gupta RP. Mechanisms of joint neurotoxicity of n-hexane, methyl isobutyl ketone and O-ethyl O-4-nitrophenyl phenylphosphonothioate in hens. The Journal of pharmacology and experimental therapeutics. 1991;257(1):282-9.

Abou-Donia MB, Lapadula DM, Campbell G, Timmons PR. The synergism of n-hexane-induced neurotoxicity by methyl isobutyl ketone following subchronic (90 days) inhalation in hens: induction of hepatic microsomal cytochrome P-450. Toxicology and applied pharmacology. 1985;81(1):1-16.

AuBuchon J, Robins HI, Viseskul C. Peripheral neuropathy after exposure to methyl-isobutyl ketone in spray paint. Lancet (London, England). 1979;2(8138):363-4.

Bennett JS, Marlow DA, Nourian F, Breay J, Hammond D. Hexavalent chromium and isocyanate exposures during military aircraft painting under crossflow ventilation. Journal of occupational and environmental hygiene. 2016;13(5):356-71.

Bennett J, Marlow D, Nourian F, Breay J, Feng A, Methner M. Effect of ventilation velocity on hexavalent chromium and isocyanate exposures in aircraft paint spraying. Journal of occupational and environmental hygiene. 2018;15(3):167-81.

Borghoff SJ, Poet TS, Green S, Davis J, Hughes B, Mensing T, et al. Methyl isobutyl ketone exposure-related increases in specific measures of alpha2u-globulin (alpha2u) nephropathy in male rats along with in vitro evidence of reversible protein binding. Toxicology. 2015;333:1-13.

David RM, Bernard LG, Banton MI, Tyler TR, Topping DC, Gill MW, et al. The effect of repeated methyl iso-butyl ketone vapor exposure on schedule-controlled operant behavior in rats. Neurotoxicology. 1999;20(4):583-93.

Dick RB, Krieg EF, Jr., Setzer J, Taylor B. Neurobehavioral effects from acute exposures to methyl isobutyl ketone and methyl ethyl ketone. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1992;19(3):453-73.

Duguay AB, Plaa GL. Plasma concentrations in methyl isobutyl ketone-potentiated experimental cholestasis after inhalation or oral administration. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1993;21(2):222-7.

Duguay AB, Plaa GL. Tissue concentrations of methyl isobutyl ketone, methyl n-butyl ketone and their metabolites after oral or inhalation exposure. Toxicology letters. 1995;75(1-3):51-8.

Duguay AB, Plaa GL. Ketone potentiation of intrahepatic cholestasis: effect of two aliphatic isomers. Journal of toxicology and environmental health. 1997;50(1):41-52.

Duguay A, Plaa GL. Altered cholesterol synthesis as a mechanism involved in methyl isobutyl ketone-potentiated experimental cholestasis. Toxicology and applied pharmacology. 1997;147(2):281-8.

Gagnon P, Mergler D, Lapare S. Olfactory adaptation, threshold shift and recovery at low levels of exposure to methyl isobutyl ketone (MIBK). Neurotoxicology. 1994;15(3):637-42.

Geller I, Gause E, Kaplan H, Hartmann RJ. Effects of acetone, methyl ethyl ketone and methyl isobutyl ketone on a match-to-sample task in the baboon. Pharmacology, biochemistry, and behavior. 1979;11(4):401-6.

Gingell R, Regnier J-F, Wilson DM, Guillaumat P-O, Appelqvist T. Comparative metabolism of methyl isobutyl carbinol and methyl isobutyl ketone in male rats. Toxicology letters. 2003;136(3):199-204.

Grober E, Schaumburg HH. Occupational exposure to methyl isobutyl ketone causes lasting impairment in working memory. Neurology. 2000;54(9):1853-5.

Hjelm EW, Hagberg M, Iregren A, Lof A. Exposure to methyl isobutyl ketone: toxicokinetics and occurrence of irritative and CNS symptoms in man. International archives of occupational and environmental health. 1990;62(1):19-26.

Hughes BJ, Thomas J, Lynch AM, Borghoff SJ, Green S, Mensing T, et al. Methyl isobutyl ketone-induced hepatocellular carcinogenesis in B6C3F1 mice: A constitutive androstane receptor (CAR)-mediated mode of action. Regulatory toxicology and pharmacology : RTP. 2016;81:421-9.

Iregren A, Tesarz M, Wigaeus-Hjelm E. Human experimental MIBK exposure: effects on heart rate, performance, and symptoms. Environmental research. 1993;63(1):101-8.

Johnson W, Jr. Safety assessment of MIBK (methyl isobutyl ketone). International journal of toxicology. 2004;23 Suppl 1:29-57.

Kawai T, Zhang ZW, Takeuchi A, Miyama Y, Sakamoto K, Higashikawa K, et al. Methyl isobutyl ketone and methyl ethyl ketone in urine as biological markers of occupational exposure to these solvents at low levels. International archives of occupational and environmental health. 2003;76(1):17-23.

Krishnan K, Brodeur J, Plaa GL, Charbonneau M. Modulation of hexachlorobenzene-induced hepatic porphyria by methyl isobutyl ketone in the rat. Toxicology letters. 1992;61(2-3):167-74.

Lapadula DM, Habig C, Gupta RP, Abou-Donia MB. Induction of cytochrome P450 isozymes by simultaneous inhalation exposure of hens to n-hexane and methyl iso-butyl ketone (MiBK). Biochemical pharmacology. 1991;41(6-7):877-83.

Malysheva MV. Effect of the methods of cutaneous administration of methyl isobutyl ketone on its toxicity. Gigiena i sanitariia. 1988(10):79-80.

Nagano M, Harada K, Misumi J, Nomura S. Effects of methyl isobutyl ketone on methyl n-butyl ketone neurotoxicity in rats. Sangyo igaku Japanese journal of industrial health. 1988;30(1):50-1.

National Toxicology P. Toxicology and carcinogenesis studies of methyl isobutyl ketone (Cas No. 108-10-1) in F344/N rats and B6C3F1 mice (inhalation studies). National Toxicology Program technical report series. 2007(538):1-236.

Nemec MD, Pitt JA, Topping DC, Gingell R, Pavkov KL, Rauckman EJ, et al. Inhalation two-generation reproductive toxicity study of methyl isobutyl ketone in rats. International journal of toxicology. 2004;23(2):127-43.

O'Donoghue JL, Haworth SR, Curren RD, Kirby PE, Lawlor T, Moran EJ, et al. Mutagenicity studies on ketone solvents: methyl ethyl ketone, methyl isobutyl ketone, and isophorone. Mutation research. 1988;206(2):149-61.

Phillips RD, Moran EJ, Dodd DE, Fowler EH, Kary CD, O'Donoghue J. A 14-week vapor inhalation toxicity study of methyl isobutyl ketone. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1987;9(3):380-8.

Raymond P, Plaa GL. Ketone potentiation of haloalkane-induced hepato- and nephrotoxicity. I. Dose-response relationships. Journal of toxicology and environmental health. 1995;45(4):465-80.

Raymond P, Plaa GL. Ketone potentiation of haloalkane-induced hepato- and nephrotoxicity. II. Implication of monooxygenases. Journal of toxicology and environmental health. 1995;46(3):317-28.

Saghir SA, Rick DL. Simulation of repeated dose kinetics of methyl isobutyl ketone in humans from experimental single-dose inhalation exposure. Regulatory toxicology and pharmacology : RTP. 2008;52(2):180-8.

Selkoe DJ, Luckenbill-Edds L, Shelanski ML. Effects of neurotoxic industrial solvents on cultured neuroblastoma cells: methyl n-butyl ketone, n-hexane and derivatives. Journal of neuropathology and experimental neurology. 1978;37(6):768-89.

Stout MD, Herbert RA, Kissling GE, Suarez F, Roycroft JH, Chhabra RS, et al. Toxicity and carcinogenicity of methyl isobutyl ketone in F344N rats and B6C3F1 mice following 2-year inhalation exposure. Toxicology. 2008;244(2-3):209-19.

Tyl RW, France KA, Fisher LC, Pritts IM, Tyler TR, Phillips RD, et al. Developmental toxicity evaluation of inhaled methyl isobutyl ketone in Fischer 344 rats and CD-1 mice. Fundamental and applied toxicology : official journal of the Society of Toxicology. 1987;8(3):310-27.

Tyrer FH. Peripheral neuropathy after exposure to methyl-isobutyl ketone in spray paint. Lancet (London, England). 1979;2(8139):424.

Vezina M, Kobusch AB, du Souich P, Greselin E, Plaa GL. Potentiation of chloroform-induced hepatotoxicity by methyl isobutyl ketone and two metabolites. Canadian journal of physiology and pharmacology. 1990;68(8):1055-61.

Wang W, Yang K, Sierra JM, Zhang X, Yuan S, Hu Z. Potential impact of methyl isobutyl ketone (MIBK) on phenols degradation in an UASB reactor and its degradation properties. Journal of hazardous materials. 2017;333:73-9.

AUTHOR BIO

Received a Ph. D. in Aerospace and Mechanical Sciences from Princeton University in 1967, and subsequently worked for:

- Bell Laboratories,
- Department of Energy,
- Office of Naval Research, and
- MITRE Corp.

Presently, Research Affiliate at Georgia Institute of Technology.

Published over 200 peer-reviewed articles, served as Guest Editor of four journal Special Issues since 1994, and obtained two text mining system patents. Published on numerous medical topics in the peer-reviewed literature, including:

- potential treatments for Multiple Sclerosis, Parkinson's Disease, Raynaud's Phenomenon, Cataracts, SARS, Vitreous Restoration, and Chronic Kidney Disease;
- potential causes of Chronic Kidney Disease and Alzheimer's Disease;
- potential treatment protocol for prevention and reversal of Alzheimer's Disease;
- potential impact of toxin combinations on determining exposure limits;
- potential impacts of Electromagnetic Fields on health.

Listed in:

- Who's Who in America, 60th Edition (2006);
- Who's Who in Science and Engineering, 9th Edition (2006); and
- 2000 Outstanding Intellectuals of the 21st Century, 4th Edition, (2006).