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CA FILE SEARCH RESULTS - S071175P

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PAGE 9

L21 ANSWER 8 OF 26

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AN CA110(18):159713w
TI Delayed effects of vinyl chloride occupational poisoning
AU Antonyuzhenko, V. A.
CS Inst. Gig. Tr. Profzabol.
LO Gorkiy, USSR
SO Gig. Tr. Prof. Zabol., (2), 39-41
SC 59-5 (Air Pollution and Industrial Hygiene)
SX 4, 45
DT J
CO GTPZAB
IS 0016-9919
PY 1989
LA Russ
AN CA110(18):159713w

BC 11/1/89
4929-931

AB Anal. of clin. data on 102 patients (52 males and 50 females) followed up for 7-26 yr after occupational poisoning with vinyl chloride (I) revealed a specific role of the nervous system in the development of the clin. manifestations of poisoning. Occupational exposure to even low concns. of I can cause pathol. changes of the nervous system, which can lead later to organ pathol. such as heart diseases and neoplasms of brain and stomach.

L21 ANSWER 9 OF 26

AN CA110(18):159708y
TI Fire and explosion hazards of methylchloroform
AU Denisenko, I. S.; Bondar, T. I.; Krivulin, V. N.; Kudryavtsev, E. A.; Frolov, Yu. E.; Evlanov, S. F.; Bratolyubov, A. S.
LO USSR
SO Khim. Prom-st. (Moscow), (1), 22-3
SC 59-5 (Air Pollution and Industrial Hygiene)
SX 50
DT J
CO KPRMAW
IS 0023-110X
PY 1989
LA Russ
AN CA110(18):159708y
AB The vapor pressure and flammability limits of pure MeCCl_3 and its stabilized com. forms are compared.

DIALOG File 154: MEDLINE 83-89/SEP (890902)

06965567 89267567

Biochemical effects of three carcinogenic chlorinated methanes in rat liver.

Kitchin KT; Brown JL
 Environmental Toxicology Division, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27211.

Teratogenesis Carcinog Mutagen (UNITED STATES) 1989, 9 (1) p61-9, ISSN 0270-3211 Journal Code: VM9

Languages: ENGLISH

Three chlorinated methanes, carbon tetrachloride, chloroform, and methylene chloride, known to cause liver tumors in rodents, were given by oral gavage to adult female rats both 21 h and 4 h before sacrifice. Then hepatic DNA damage, ornithine decarboxylase (ODC), cytochrome P-450, glutathione content, and serum alanine aminotransferase (SGPT) activity assays were performed. Carbon tetrachloride increased rat hepatic ODC activity and decreased cytochrome P-450 content at doses both below and above cytotoxicity (as measured by increased SGPT activity). At 54 and 160 mg/kg, chloroform increased hepatic ODC activity with minimal or no elevation in SGPT activity. At 480 mg/kg chloroform increased hepatic ODC and SGPT activity. A dose of 1,275 mg/kg methylene chloride caused a small, but significant amount of hepatic DNA damage. When these three compounds are compared on either an equimolar or equitoxic (1/5 LD50) basis, their ability to induce hepatic ODC or increase SGPT activity was carbon tetrachloride greater than chloroform greater than methylene chloride. The results of this biochemical study are interpreted with respect to the ability of chemicals to cause hepatic cancer by either genetic or epigenetic mechanisms.

06985227 89267227

[Fluorine toxicity in fluoride prophylaxis]

Considerazioni sulla tossicità del fluoro in fluoroprofilassi.

Zabarra G; Cicciu D; Verzi P; Leonardi R
 Stomatol Mediterr (ITALY) Jul-Sep 1987, 7 (3) p387-95, Journal Code: UZI

Languages: ITALIAN Summary Languages: ENGLISH

Document Type: English Abstract; Review (19 Refs.)

06984052 89268052

The effect of ammonia infusion on brain monoamine metabolism in portacaval-shunted rats.

Bugge M; Bengtsson F; Nobin A; Jeppsson B; Miltberg B; Jnng T; Herlin P

Dept. of Surgery, Lund University, Sweden.
 Res Exp Med (Berl) (GERMANY, WEST) 1989, 189 (2) p101-11, ISSN 0300-9130 Journal Code: R67

Languages: ENGLISH

The effect of ammonia infusion on monoamine metabolism was studied in the rat brain. Seven days after portocaval shunt (PCS) or sham operation animals were infused with ammonia or

saline. Brain metabolism of serotonin and norepinephrine was studied after injection of a decarboxylase inhibitor (m-hydroxybenzylhydrazine, NSD 1015) which blocks the conversion of 5-hydroxytryptophan to serotonin and dihydroxyphenylalanine to dopamine. Neurologic testing was conducted before killing. Plasma and brain amino acids were measured. PCS animals infused with ammonia were in deep coma after 6 h infusion, whereas sham-operated animals were virtually unaffected. Brain amino acid analyses demonstrated increased concentrations of the aromatic amino acids and a tenfold increase in glutamine. Serotonin metabolism was diminished after 6 h. Dopamine synthesis was normal, but norepinephrine levels were low after 6h. The study suggests that hyperammonemia in PCS rats results in a depression of the serotonin synthesis rate in accordance with two previous studies but in contrast to previous hypotheses on the regulation of serotonin metabolism.

06962953 89264953

Conjugated diene production after airway acid aspiration.

Stoohart JC Jr; Basadre JO; Herndon D; Traber L; Traber D
 Department of Surgery, University of Texas Medical Branch, Galveston 77550.

Prog Clin Biol Res (UNITED STATES) 1989, 299 p69-74, ISSN 0361-7742 Journal Code: P25

Languages: ENGLISH

06960484 89262484

[Effect of vinyl chloride and its polymers on the nervous system]

Wplyw chlorku winylu i jego polimerow na uklad nerwowy.
 Kurzbauer H
 Instytut Medycyny Pracy w Przemysle Węglowym i Hutniczym w Sosnowcu.

Neurol Neurochir Pol (POLAND) Sep-Oct 1988, 22 (5) p404-9, -9 ISSN 0028-3843 Journal Code: NYF

Languages: POLISH Summary Languages: ENGLISH

Document Type: English Abstract

The study was undertaken for assessment of the effect of vinyl chloride and its polymers on the nervous system. A group of 200 patients working in the production of VC were studied. The group comprised 155 men and 45 women aged 19-46 years (mean 40). The duration of employment was over 5 years in most workers (85.5%), and 26% worked over 20 years (mean duration 14 years). On the basis of neurological examinations clinical groups were isolated: without neurological changes (58 workers), with symptoms (54), with organic signs (88). The studied groups were not different with respect to age. The shortest duration of employment was in workers without neurological abnormalities. In the complex of symptoms tension headaches, irritability and sleep disturbances prevailed. Organic signs manifested themselves most frequently with pyramidal abnormalities (52), cerebellar (40), sensory (cont. next page)

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ASI 00004930

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DIALOG File 154: MEDLINE 83-89/DEC (891202)

p26-50, ISSN 0273-2300 Journal Code: RBH

Languages: ENGLISH

Document Type: Review

A methodology for using physiologically based pharmacokinetic (PBPK) models to derive predicted safe concentrations of noncarcinogens in drinking water for humans based on experimentally determined no observed adverse effect levels (NOAELs) in animals is presented and applied to the case of 1,1,1-trichloroethane (methyl chloroform, MC). For each toxic endpoint and lowest corresponding NOAEL identified for MC, we considered a set of toxicologically plausible options regarding the presumed toxic agent and the metric for effective dose to target tissue. A four-compartment PBPK model for rodents was used to estimate corresponding effective doses to the animals used to obtain the experimental NOAELs. A five-compartment PBPK model was then applied, in conjunction with a multiroute (inhalation, ingestion and dermal) human-exposure scenario, to calculate alternative concentrations of MC in drinking water predicted to result in corresponding effective doses to the same target tissues in humans. In the case of MC, the PBPK approach to interspecies and interroute extrapolation of toxicity data resulted in lower drinking water concentrations predicted to be nontoxic to humans than corresponding concentrations obtained using a traditional method for determining safe levels. (67 Refs.)

07065534 89367534

[Occupational angioneurotic disorders provoked by vinyl monochloride and vibration]

Troubles angioneurotiques professionnels provoques par le monochlorure de vinyle et par les vibrations.

Letourneux M; Paris C; Gournay M

Institut de Medecine du Travail de Basse-Normandie, Faculte de Medecine, Caen.

Phlebologie (FRANCE) Apr-Jun 1989, 42 (2) p233-43, ISSN 0031-8280 Journal Code: P66

Languages: FRENCH Summary Languages: ENGLISH

Document Type: English Abstract

Microcirculatory disorders of the extremities may have an occupational origin, which it is desirable to specify. Exposure to vinyl monochloride results in a chemical nuisance which also proved to be carcinogenic in man. Strict preventive measures are therefore enforced in the industry and angioneurotic disorders should no longer be observed. Use of vibrating tools results in a microvascular response to a physical nuisance which is difficult to prevent completely. In both cases the physiopathology is not well-known, but compensation is possible as occupational diseases. Repeated trauma of the ulnar artery, and/or its superficial palmar branch are, on the contrary, the main explanation for hypothenar hammer syndrome, which is easily prevented by mere adjustment of the work position and occupational movements: the conditions for medico-legal compensation for this particular syndrome, which is still not listed among occupational diseases, will be in effect in the very near future.

07064978 89366978

[Experimental models of multiple sclerosis]

Doswiadczalne modele twardziny uogolnionej.

Sierakowski SJ; Kucharz EJ

Postepy Hig Med Dosw (POLAND) Nov-Dec 1988, 42 (6) p619-4,

ISSN 0032-5449 Journal Code: PEU

Languages: POLISH Summary Languages: ENGLISH

Document Type: English Abstract; Review
(91 Refs.)

07064429 89366429

Carbamyl phosphate synthetase and ornithine transcarbamylase activities in enzyme-deficient human liver measured by radiochromatography and correlated with outcome.

Tuchman M; Tsai MY; Holzknecht RA; Brusilow SW

Department of Pediatrics, University of Minnesota, Minneapolis 55455.

Pediatr Res (UNITED STATES) Jul 1989, 26 (1) p77-82,

ISSN 0031-3998 Journal Code: OWL

Contract/Grant No.: N01-DK-6-2274; HD 11134

Languages: ENGLISH

Sensitive and specific radiochromatographic methods to measure enzymatic activities of carbamyl phosphate synthetase I (CPS I) and ornithine transcarbamylase (OTC) were developed. The activities of these enzymes were assayed in frozen liver tissue obtained from 23 individuals with hyperammonemia caused by CPS I (five patients) and OTC deficiency (18 patients). In addition, livers of one aborted fetus with OTC deficiency and four normal individuals were studied. The assays used radioactive ornithine as a substrate followed by separation of citrulline formed in the reactions by HPLC and quantitation of the radioactivity in both amino acids by a radiactivity flow monitor or by a scintillation counter. Both CPS I and OTC assays were linear with respect to length of incubation time and concentration of tissue homogenate. The sensitivity of the methods allowed measurements of CPS I and OTC activities as low as 0.1 $\mu\text{mol/g/min}$ on 5 mg of liver tissue and the diagnosis of CPS I or OTC deficiency could be established on as low as 0.5 and 0.05 mg of tissue, respectively. CPS I activity in different sections of four normal livers was $3.01 \pm 0.16 \mu\text{mol/g/min}$ (mean $\pm$ SEM, $n = 19$) and OTC activity was 93.4 ± 6.3 (mean $\pm$ SEM, $n = 19$). Residual enzymatic activity could be detected and measured in the liver tissues of one of the five subjects with CPS I deficiency and in 14 of 19 subjects with OTC deficiency. OTC/CPS I activity ratio in normal liver tissue was 31.2 ± 1.3 (mean $\pm$ SEM, $n = 19$), whereas this ratio ranged from 343 to greater than 5000 in CPS I deficient livers and from less than 0.02 to 1.55 in OTC deficient livers. (ABSTRACT TRUNCATED AT 250 WORDS)

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ASI 00004931