

- 771 Short-Term Feeding Study With Diethylene Glycol Monoethyl Ether in Rats. D.E. Hall, et al. Food Cosmet. Toxic 4, 263 (June, 1966).

A study of the dietary administration of diethylene glycol monoethyl ether (DGME) to rats indicates that it is acceptable as a food additive. The test sample contained 0.4% ethylene glycol as an impurity. A no-effect level was established at 1% DGME for 90 days. The growth of male and female rats was significantly retarded at the 5% level and was associated with decreased food consumption. No hematological changes were seen at any dietary level. Raised levels of urinary glutamic oxaloacetic transaminase at the 5% level indicated slight impairment of the renal function; this was more pronounced in males, who also showed a high degree of proteinuria. One male rat in the 5% group died; the autopsy showed hydropic degeneration of the kidney tubules and liver.

-- J. Occ. Med. Absts

- 772 Mitoses in Bile Duct Epithelium Following Acute Carbon Tetrachloride Poisoning. P.M. Suttie and P. Juliette Spurgeon. Brit. J. Exptl. Pathol. 47, 545-549 (Dec. 1966).

Experiments investigating the possibility that the liver regeneration following acute carbon tetrachloride poisoning involves bile duct epithelium as well as parenchymal cells are described. Rats were given single doses of carbon tetrachloride to cause centrilobular hepatic necrosis. In the subsequent regeneration, mitoses occurred not only among the parenchymal cells but were also found in the bile duct cells of the portal tracts. Three references are given.

-- Authors' abst., Public Health Eng. Absts

- 773 Exposure of Workers to Pesticides. H.R. Wolfe, W.F. Durham, and J.F. Armstrong. Arch. Environmental Health 14, 622-633 (April, 1967).

Values for dermal and respiratory exposure and for total exposure in terms of fraction of toxic dose were determined for 31 different work activities involving ten different pesticides. There were wide ranges in exposure level for a given work activity with a specific pesticide, depending on environmental conditions, particularly wind and technique of the operator; but other factors could not be excluded. Also, for a given pesticide there was a significant variation in hazard depending upon the type of work activity involved. Various phases of an operation often produced different levels of exposure. Generally, the loading operation was the most hazardous part of the spraying or dusting cycle. Exposure also depended upon the method of application. Not only was the hazard related to the length of time worked, but the use of dusts or fine aerosols rather than sprays greatly increased respiratory exposure. As reported in previous exposure studies, the potential dermal exposure to each compound in every work situation studied was much greater than the potential respiratory exposure. The results indicate that, in general, workers using pesticides in agriculture and public health vector control are exposed to relatively small fractions of the toxic dose each day. These findings are consistent with the idea that pesticides can be used safely provided recommended precautions are followed. However, the relatively high exposure values associated with a few of the more toxic pesticides (such as endrin, parathion, and TEPP) indicate that even minor lapses in adherence to safety precautions might be sufficient to allow poisoning to occur. There are 58 references.

-- Cond. from authors' summary

INDUSTRIAL DUSTS

- 774 Dust Disease in Hemp Workers. A. Barbero and R. Flores. Arch. Environmental Health 14, 529-532 (April, 1967).

The importance of hemp workers' disease, from a social point of view, is that it leads to a progressive loss of working capacity and to premature death. After about 20 years' exposure the worker may be able to produce only at a rate of 25% to 40% of a young man's rate of production. Only rarely does an "initial intolerance" cause a worker to give up his job. Much more frequently the gradual development of disability, which requires many years to reach its peak, renders him totally disabled in middle or early old age. There are 8 references.

-- Authors' comments

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