IN RE: ABRAMS November 1992

CHEMICAL HAZARDS

762 Glue Sniffing and Heroin Abuse. J. Merry.
Brit. Med. J. 2, 360-364 (May 6, 1967).

The first report of a case of glue sniffing addiction in Great Britain was published in 1962. T same patient was followed up in 1967; his history revealed a typical progression in drug abus such as experimentation with amphetamines, marihuana, and finally with heroin. Glue sniffi is not a problem in Great Britain, and this is, apparently, the only case. It is noted that in t United States glue sniffing is a common prelude to later use of heroin among young people and that glue sniffing may become more common in Great Britain as an experimental experience p ceding heroin addiction. -- J. Am. Med. Assn. References & Review:

763 Organic Nitrate Poisoning at an Explosives Factory. Plethysmographic Study.
Y. Morikawa, et al. Arch. Environmental Health 14, 614-621 (April, 1967).

The explosives factory where this investigation was undertaken used the so-called German type of dynamite production. The initial process of production consisted of nitration of glycerin an glycol, washing of nitrated products, gelatinization, transportation of gelatinized materials to the kneading house, and kneading. The kneaded matter was then made into either gelatin dynamite or semigelatine dynamite through several additional processes. The pulse waves of workers in the plant were examined by a reflection type of plethysmograph with the following results: A total of 1,446 examinations was made. In 143 instances abnormal pulse waves we noted. The occurrence of such waves varied greatly from workshop to workshop. Of the abnormal pulse waves observed 82% were in the poisoning category "slight", while the remainin were "moderate". At the workshops with automatic machines such as "extruding type", "roll and "biazzi", the occurrence of abnormal pulse waves was very low. The concentration of organic nitrates in the air at the workshops was very low, the highest average concentration being 0.066 ppm. No positive correlation between occurrence of abnormal pulse waves and atmospheric gas concentration was observed. Even when ethylene nitrate was not used for the production of semigelatine dynamite in summer, the workers at the semiautomatic machine ho showed abnormal pulse waves at a very high rate (40%). The significance of the percutaneous absorption of the organic nitrates retained in the used surgical rubber gloves worn by the work ers is emphasized. There are 8 references.

764 Effects of Chlorine Gas Upon Respiratory Function. T.A. Kowitz, et al.
Arch. Environmental Health 14, 545-558 (April, 1967).

On March 28, 1961, approximately 150 longshoremen were accidentally exposed to chlorine ga Eleven subjects who were hospitalized because of respiratory distress were evaluated serially with respiratory function tests on four occasions during the ensuing two- to three-year period. Fifty nine subjects, including the 11 mentioned above, and a complete clinical and respiratory function evaluation between two and three years following the incident. The mean acute respir tory function changes of the 11 subjects were compatible with an alveolocapillary injury. This was followed by continuing repair over the ensuing two to three years with an increase in airway resistance. A decrease in lung volume and diffusing capacity remained. Studies in the 59 subjects suggested that a decreased vital capacity, an increased elastic work of breathing, and a decreased diffusing capacity resulted from the exposure. Except for their more gradual appearance these changes were felt to be compatible with the findings in controlled animal exposure studies reported in the literature. -- Authors' summary

765 The Biological Effects of Ozone on Man and Animals. L.S. Jaffe.
Am. Ind. Hyg. Assn. J. 28, 267-277 (May-June, 1967).

Recent literature on the effects of ozone exposures on man and animals is reviewed, with emphasis on the effects at low concentrations of ozone (0.05 to 0.20 ppm). Irritation of the mucous membranes of the upper respiratory tract, a decrease in visual acuity and other changes in ocular parameters, an enhancement in mortality of respiratory infected test animals, the sphering of red blood cells, structural changes in the nuclei of myocardial tissue, and an increase in mortality of newborn animals have been reported within this range. At higher concentrations (0.6 to 0.8 ppm for 2 hours), ozone will interfere with lung function for the duration of exposure and beyond. Other effects of ozone include distinct respiratory distress, coughing, choking and severe fatigue, which occur at concentrations at or below 1.0 ppm (the maximum level of ozone ever measured in dense atmospheric photochemical air pollution). There are 75 references. -- Author's abst.

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