

and carbon tetrachloride are synergistic in the production of their nephrotoxic and hepatotoxic effects.

The interval between exposure and death varied from four to 18 days, thus affording an excellent opportunity to study the morphologic changes at various stages of development. There was a definite correlation between the length of survival and the pathologic changes at autopsy, particularly in the liver and the kidney. The hepatic lesions in persons dying soon after exposure were extensive. The severity of the hepatic lesion diminished with longer periods of survival. This is believed to be due to two factors, namely, less severe injury initially and rapid regeneration following injury. The renal lesions in persons dying within a few days after exposure were relatively slight and involved primarily the proximal convoluted tubules. The renal morphologic changes became progressively more pronounced with longer periods of survival. An inverse relationship was noted between the severity of the hepatic lesions and the severity of the renal lesions. Pulmonary edema was present consistently and was greater in those who survived longer.

A MEDICAL VIEW OF THE LEAD PROBLEM. W. C. WILENTZ, *Am. Pract. & Digest. Treat.* 1:1248 (Dec.) 1950.

According to Wilentz, despite a progressive decline of the incidence of fatal lead poisoning in the last 40 years, there are still many cases of temporary disability.

It is not believed possible at present to eliminate all the toxic effects of lead dusts and other forms of lead, but it is felt that it is possible to alter a process so as to lessen the employee exposure and therefore the hazard. Practically every type of lead material utilized in, or resulting from, industrial processes can be handled and controlled with safety if proper and adequate modern equipment is provided and used for the protection of the health of the industrial worker.

Industries must continue to provide funds willingly for this purpose, thus making substantial contributions to health and welfare and at the same time increasing profits and managerial efficiency.

Medical supervision is as necessary as ever and must be extended to include every person who works with lead. Medical orders relating to exposure of employees must take precedence over all others.

Persons undergoing lead absorption and intoxication should recover with no resulting disability on application of modern methods of treatment. The entire therapeutic regimen should be directed toward overcoming the intestinal colic and the resultant anemia, making the patient symptom-free, with no disability, and returning him to a remunerative job as soon as possible. All these requirements can be fulfilled with a calcium immobilization regimen which is simple and safe, which shortens hospitalization and the period of disability and which provides results that are certain.

TOXICOLOGICAL AND METABOLIC EFFECTS OF FLUORINE-CONTAINING COMPOUNDS. JOSEPH LARNER, *Indust. Med.* 19:535-539 (Nov.) 1950.

This article reviews the acute and chronic toxicity of fluorine-containing compounds and the mechanism of their action. Acute poisoning of humans results in symptoms mainly concerned with the gastrointestinal tract and the central nervous system. Animal experiments parallel case reports. The well defined syndrome of fluorosis results when small amounts of fluorides are taken into the body over a long period. Fluorine has an affinity for hard structures, such as bones and teeth. About 1 p.p.m. fluorine in the drinking water seems to aid in the prevention of dental caries. Since the war, several new, extremely toxic organic fluorides have been investigated. The state of our knowledge of the mechanism of action of the various types of fluorine compounds is reviewed (103 references).

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