

commercial product and considering the distinct variations in carcinogenic potency resulting therefrom, it is most unwise to draw any definite conclusions as to the safety of this product for the human consumer, especially since it is not only a primary carcinogen but appears to exert also an injurious effect upon the gastric mucosa and liver. -- Authors' summary

- 432 Test for Hypersusceptibility to Hemolytic Chemicals. H. E. Stokinger and J. T. Mountain. Arch. Environmental Health 9, 495-502 (Apr. 1963).

The authors have suggested that a predictive test defining abnormal human susceptibility of the red blood cell to hemolytic drugs be extended and applied to detect similar hypersusceptibility among workers exposed to industrial chemicals known to affect the red blood cells. Hypersusceptibility to hemolytic chemicals has been shown to reside in a hereditarily transmissible defect of the red blood cells. This defect is manifested by a fault in the glucose metabolism of the red cell that can be readily detected by a simple, visual methemoglobin reduction test. Although the incidence of the defect varies widely according to race and subgroup, it is known to be 12% for the American Negro male and about 0.1% for the American white male; other racial groups possess the defect to varying degrees up to 60%. Industries handling chemicals that affect the red blood cell might well wish to explore the practicability of this test in the preplacement medical examination in order to screen those individuals with predicted hypersusceptibility to hemolytic chemicals before job assignment. Approximately 1,000,000,000 workers are involved in the manufacture of industrial chemicals; a number several times that are exposed to chemicals through handling and use. -- Authors' summary

- 433 Functional Testing for Behavioral Toxicity: A Missing Dimension in Experimental Environmental Toxicology. J. B. Ruffin. J. Occ. Med. 5, 117-121 (Mar. 1963).

There are several dimensions to the question of toxicity testing. A crucial, and for the most part undeveloped, dimension is that of behavioral toxicity. It is suggested (1) that the subject of behavioral toxicity be accorded its proper status (close to the top the author thinks) in the hierarchy of toxicity study criteria, and, if genuine progress is to be made, (2) that at least a few environmental toxicologists consider evolving into psychotoxicologists, just as pharmacologists have in some instances been successful in becoming competent psychopharmacologists; or in any event, that studies of behavioral activity attempted by toxicological research groups be accomplished by integrated teams of experimental psychologists and those with traditional experience. A review of any monograph dealing with the complex behavioral effects of drugs, the various and multiplying techniques existing for their assessment, and the conclusions to be drawn from such data, will readily convince the progressive toxicologist that worthwhile work is not likely to be accomplished in this dynamic field without the active participation of the well trained experimental psychologist. -- Cond. from author's conclusion

- 434 Alterations of Blood Coagulation in Some Industrial Intoxications. L. Salamone. Med. lavoro 53, 36-44 (Jan. 1962). Italian.

This investigation consists of a survey of published work. Starting with phosphorus and chloroform and early work on prothrombin, it goes into some detail on the changes which occur during poisoning in the complex range of factors concerned in blood clotting—dealing especially with carbon tetrachloride among poisons and with modification of thromboplastin and prothrombin activities among coagulation tests. Reduced coagulation power is described from carbon tetrachloride, paradichlorobenzene, benzol, lead, arsenic, and carbon disulfide. (Trilene, methyl chloride, methyl bromide, paraphenylenediamine, mercury and cadmium are among poisons briefly mentioned). An increased clotting tendency results from asphyxia from, for example, smoke. A biphasic reaction occurs in cyanide poisoning (also in acute carbon tetrachloride poisoning). This brings the discussion to the effects of shock. Such biphasic reactions vary according to the stimulus and are fleeting. Variables such as age and the state of health and many others may limit the value of results of some factors. The alterations in blood coagulation which are described are considered to be due to a specific action of the toxic substance on liver and marrow and also to a non-specific stress reaction and there is the possibility of differentiating between the two mechanisms by an evaluation of some of the chief coagulation tests. -- Cond. from Bull. Hyg.

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