

injection in rats in doses of 0.5 LD₅₀ or greater produced changes in respiration. In a study of subacute toxicity rats given daily doses of 10, 16 or 40 mg. per kg. died after 1-4 days, whereas daily doses of 10 mg. per kg. were tolerated for 47-74 days before death supervened. The effect was considered to be cumulative. -- Bull. Hyg.

734 Characteristics of Trace Ions Released from Embedded Metal Implants in the Rabbit.

A. B. Ferguson, Jr., et al. J. Bone Joint Surg. 44A, 223 (Mar. 1962).

The fate of metal ions released by embedded implants of commonly used alloys was studied in rabbits. Spectrochemical analyses were done of the liver, spleen, kidney, lung, muscle immediately surrounding the implant, and skeletal muscle from elsewhere in the animal. The object of this experiment was to determine: (1) whether ions released from the implant circulated in the body, (2) what organs were toxic in terms of picking up the trace metal ions, and (3) what increase or decrease in concentrations of ions occurred over a 16-week period in the tissues analyzed. Vanadium, 316 stainless steel, Inconel, A-286 stainless steel, aluminum 2024-T3, titanium, zirconium, and carbon were imbedded in the skeletal muscles of albino rabbits—one alloy to any one animal. The spleen was found to be the most sensitive site of trace-ion storage. The other organs tended to get rid of an early increase in concentration. Cobalt and nickel were the most active ions in terms of their presence in the organs. -- J. Am. Med. Assoc. Reference and Reviews.

735 The Prevention of Manganese Poisoning. J. E. Wynter.

Ind. Med. & Surg. 21, 303-310 (July 1962).

Manganese is still a poison, even when the amounts absorbed are small. A long period of exposure may bring on poisoning with different initial symptomatology, and it is necessary to be on the alert to discover it. Analyses of the urine and blood for manganese must be made constantly of workers exposed to this element. It is also important to keep a detailed record of the minute quantities contained in the air. The results obtained from this study will be the subject of a later communication.

736 Acute Oral and Parenteral Toxicity of Four Titanate Compounds in the Rat. J. R. Brown and E. Mastromatteo.

Ind. Med. & Surg. 21, 332-364 (July 1962).

A study of the acute oral and intraperitoneal toxicity of barium titanate, bismuth titanate, calcium titanate, and lead titanate was carried out in white rats of the Wistar strain, each weighing about 250 grams. The acute oral LD₅₀ of these compounds in the rat exceeded 12 g./kg. The intraperitoneal LD₅₀ was found to range from 1.0 g./kg. for lead titanate to 9.3 g./kg. for calcium titanate. Repeated daily dosage of 100 mg. of these titanates to a small group of rats showed no evidence of cumulative effect over a 2 week period. In general, these compounds are relatively insoluble and chemically inert. They have a low order of acute oral and parenteral toxicity to the rat. It is felt, therefore, that the 4 titanates studied would present little industrial hygiene hazard in ordinary handling. Occupational exposures would occur chiefly by inhalation. Control measures should be based on the particular titanate in use; for example, the concentration of lead titanate in the air of the working environment should be based on its lead content. Authors' summary.

737 Corrosive Gastritis after Formaldehyde Ingestion. H. Roy, Jr., M. A. Calonge and R. Mouton.

New Eng. J. Med. 266, 1246-1247 (June 14, 1962).

A case of corrosive gastritis after formaldehyde ingestion (240 ml., 37% solution), believed to be the second of its kind reported in the American literature is presented. X-ray films taken before and after ingestion of formaldehyde are included, along with a brief comment about the agents responsible for corrosive gastritis. -- Authors' summary.