

- 158 Sodium in Drinking Water. Pitfall in Maintenance of Low Sodium Diet. G. E. Garrison and O. L. Ader. *Arch. Environmental Health* 13, 551-553 (Nov. 1966).

It is well established and widely accepted that restriction of dietary sodium is an important component of therapy in chronic congestive heart failure, hypertension, certain types of renal disease, advanced cirrhosis of the liver, and during a large percentage of pregnancies. The sodium content of most foods has been determined, and this information is widely utilized in sodium restricted diets. On the other hand, less attention has been given to the concentration of sodium in water that is ingested. Available information indicates that water supplies contain marked variations in sodium concentration; some supplies have sodium concentrations that make even mild sodium restricted diets impossible to follow if the usual water is used. It is, therefore, extremely important to know the concentration of sodium in the water that is consumed by a patient on a sodium-restricted diet. Data are presented on the sodium concentration in water from the municipal supply and from selected wells in a county (Durham) in North Carolina; in addition, information is provided on the increase in the sodium concentration produced by hard water softeners. There are four references.

-- Authors' introduction

- 159 Limits of Detection of Beryllium in Tissues by Microemission Spectrography. S. F. Brookes et al. *Am. Ind. Hyg. Assn. J.* 27, 496-500 (Nov.-Dec. 1966).

The metal beryllium has been successfully and unequivocally demonstrated by microemission spectrography on a semiquantitative basis in tissue sections 50 microns thick. The beryllium was localized in individual pulmonary granulomas in dogs exposed to beryllium. The determination of the lower limit of detection could indicate the threshold level of beryllium in tissue that can induce injury. Beryllium acetylacetonate dissolved in technical-grade xylene was used to prepare a series of working standards. Initial results indicate that as little as 1.48×10^{-12} gm. of beryllium in a sample of paraffin weighing about 2.91×10^{-8} gm. has been detected. Similar or greater quantities of beryllium have been demonstrated in similar-size samples of embedded lung tissue from dogs exposed to beryllium.

-- Authors' abstract

- 160 Hypertension in Rats from Injection of Cadmium. H. A. Schroeder, et al. *Arch. Environmental Health* 13, 788-789 (Dec. 1966).

Cadmium acetate was injected into rats at dosages of 2 mg/kg. Arterial hypertension resulted at incidences similar to or exceeding those resulting from partial constriction of one renal artery. Six references are given.

-- Authors' summary

- 161 Determination of Cobalt in Air and Biological Material. D. M. Hubbard, F. M. Creech, and J. Cholak. *Arch. Environmental Health* 13, 190-194 (Aug. 1966).

A procedure combining various ideas obtained from the literature was developed for the determination of cobalt in a variety of biologic materials, such as urine, blood, and tissue. The method involves the removal of iron by treating the solutions of the ashed sample with cupferron, followed by complexing the cobalt with sodium diethyldithiocarbamate and extracting the metal complex into chloroform. Cobalt in the chloroform extract is then determined colorimetrically by forming the cobalt-Nitroso-R-Salt complex. It was found that the levels of concentration of cobalt in the urine and blood were extremely low, varying from 1 microgram to 7 micrograms per liter of urine and less than 0.25 microgram/100 gm of blood. There are ten references.

-- Authors' summary

- 162 Acute Iron Intoxication. A Case Treated by Chelation. G. Whelan, V. Fazio, and J. C. Biggs. *Am. J. Med.* 41, 626-628 (Oct. 1966).

Iron salts, usually regarded as harmless and of proved therapeutic value in iron deficiency, can lead to death when taken in excessive quantities by young children. Fatal iron poisoning accounts for a significant proportion of the deaths in this age group from accidental ingestion of potentially lethal substances. Aldrich reviewed the literature in 1958 and found that the overall mortality in reported cases of iron intoxication. Ferrous sulfate was usually implicated and the fatal doses ranged from 3 to 18 gm. Survival has been reported after ingestion of 15 gm. of ferrous sulfate. This paper gives a description of a two-year-old girl who ingested an ordinarily fatal dose of ferrous sulfate (20 gm). The early oral and parenteral administration of an iron-chelating agent (desferrioxamine) undoubtedly had a favorable influence on the ultimate outcome, which was early and complete recovery.

03122415