

ATOMIC OXYGEN AT THE SURFACE OF FRESHLY CRUSHED SILICA. W. A. WEYL, Transactions Bull. 14, Industrial Hygiene Foundation, Pittsburgh, 1949.

It has been shown experimentally that freshly broken silica carries at the surfaces exposed some oxygen atoms having a high oxidation potential.

Weyl does not claim that this interesting observation explains the etiology of silicosis but suggests that it is worth experimental testing along physiological lines.

PHILIP DRINKER, Boston.

REVIEW OF LITERATURE ON HEALTH HAZARDS OF BERYLLIUM AND ITS COMPOUNDS. G. G. MORRIS and J. J. FORBES, United States Department of the Interior, Bureau of Mines, Information Circ. 7574, July, 1950.

This monograph presents an excellent bibliography of the literature to date on the industrial health problem caused by the use of beryllium. In addition, there is a review of this literature, describing the nature, the occurrence, and the uses of beryllium as well as the nature and the dangers of industrial exposure.

Berylliosis is divided, for discussion, into its dermatologic and respiratory components. Dermatologic manifestations include contact dermatitis, skin ulcers, spontaneously arising skin granulomas in those with pulmonary beryllium intoxication, and subcutaneous granulomas in persons who have cut themselves on fragments of broken fluorescent lamps. Instructions for disposing of used fluorescent lamps made partly of beryllium are quoted from the *Industrial Hygiene Newsletter* of June, 1949.

Respiratory manifestations, which are said to be far more serious than the dermatologic ones, are divided into acute pneumonitis and chronic pulmonary granulomatosis. These forms of the disease occur in workers exposed to dusts, fumes, and mists of beryllium compounds.

In addition to a characteristic clinical picture, roentgenologic signs, and clinical and chemical laboratory findings consistent with berylliosis, and occupational history of significant exposure is necessary before a diagnosis can be made.

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FURTHER OBSERVATIONS ON THE PATHOLOGICAL PHYSIOLOGY OF CHRONIC GRANULOMATOSIS ASSOCIATED WITH BERYLLIUM WORKERS. ROBERT A. BRUCE, FRANK W. LOVEJOY JR., NAN GAN YU, and RAYMOND PEARSON, UR-118, 33 pages, May 18, 1950.

Three more cases of chronic pulmonary granulomatosis associated with beryllium compounds have been studied with reference to pulmonary and circulatory functional capacity. Despite obvious variations in clinical patterns of disease between patients, certain nonspecific general trends of functional disturbance appear common to most of these patients. They are restricted complemental air volume, increased mid-capacity-arterial oxygen gradient, hypoxemia, and hyperventilation on exertion. The complexity of factors contributing to the widened oxygen gradient are discussed. A general quantitative estimate of disability in relation to moderate exercise is expressed in terms of the physical fitness index. Untoward responses to continuous oxygen therapy are recorded.

AUTHORS' SUMMARY [NUCLEAR SC. ABST.].

BIOCHEMICAL CHANGES IN ACUTE BERYLLIUM POISONING. W. N. ALDRIDGE, J. M. BARNES and F. A. DENZ, Brit. J. Exper. Path. **31**:473 (Aug.) 1950.

Aldridge and co-workers have previously reported on the pathological changes found in animals who died of acute poisoning as a result of intravenous injection of soluble beryllium salts. The most conspicuous lesion was necrosis of the liver, apparently initiated by sinusoidal accumulation of a large part of the injected beryllium. Some damage to the kidney tubules was noted, and there were changes in the white blood cells. In rabbits there is progressive fall of the blood sugar level until hypoglycemic convulsions develop just before death. At an earlier stage the rate at which injected glucose and lactate are removed from the blood is impaired. The levels of blood calcium, urea and nonprotein nitrogen are not seriously affected. The serum alkaline phosphatase rises, with increasing bilirubinemia. The hepatic concentration of phosphatase also rises. On the other hand, the hepatic potassium and arginase levels fall