

samples were taken at 13 points around the quarries. A second survey was made between June 25—November 29, 1963. The results of these surveys are presented and are available upon request.

- 394 Certain Immunobiological Shifts in Asbestosis. F.M. Kogan, A.A. Gerasimenko, and G.I. Bunimovich. *Gigiena i Sanit.* 30, 34-40 (May, 1965). Russian.

Long-term inhalation of asbestos dust brought about a fall of the immunobiological reactivity of the body and, probably, its allergic responses. There was a most distinct inhibition of complement titer. The changes of the complement titer preceded the onset of clinical and x-ray symptoms of pneumoconiosis. The study of the immunobiological reactivity of persons sick with asbestosis, caused by the inhalation of chrysotile-asbestos and anthophyllite—asbestos showed that in the first case the reactivity was inhibited to a greater extent. This was noted in the clinical course of asbestosis as well. Persons sick with asbestosis and those work under conditions of high dust content of the air presented lesions peculiar to auto-immunologic disease: rise in the alpha-globulin content and anti-complement activity of the serum.

-- APCA Abstr

- 395 Electron Microscope Studies of Asbestos in Man and Animals. J.M.G. Davis. *Med. lavoro* 56, 521-529 (June-July 1965).

In both guinea pig and human lung material the formation of asbestos bodies has been shown to be an intracellular process. The first sign of asbestos body formation is the accumulation of dense granules approximately 60 Å in diameter around the asbestos fiber. It is suggested that these granules represent ferritin material. Usually the asbestos body coating consists of a single dense layer of ferritin, but often a whole series of layers of varying density is present. The outermost zone of these bodies often consists of an irregular layer of radially arranged fibrous material but occasionally the whole body coat consists of these fibers which have a diameter of 50-60 Å. From the evidence of this study it would appear that the well known segmentation of asbestos bodies can be of two types. In one the segmented appearance is due to the deposition of the body coating in separate globules, and in the other it is due to the splitting of a previously smooth coat.

-- APCA Abstr

PHYSICAL ASPECTS OF THE ENVIRONMENT

- 396 Recent Findings in the Pathogenesis of Decompression Sickness (Dysbarism). A.T.K. Cockett, R.M. Nakamura, and J.J. Franks. *Surgery* 58, 384-389 (Aug. 1965).

A recent review of human decompression sickness pointed out that one-third of the reported cases suffered from hemoconcentration. This prompted the authors to document this apparent loss of plasma volume by measuring intravascular fluid shifts in experimental animals before and after decompression. Mongrel dogs were used as experimental animals. After suitable catheters had been placed in the animals, they were placed in the overcompression decompression chamber and were overcompressed to six atmospheres absolute. The increase in barometric pressure was seven pounds (psi) per minute. After a stabilization period of 60 minutes the animals were decompressed at a rate of seven pounds (psi) per minute. The plasma volume decreased from four to 38% up to 5-1/2 hours after removal of seven dogs from the decompression chamber. The role of the bubble formation with progressive reduction in blood pressure is discussed in the slower deaths of ten animals. Bone marrow emboli were found on routine histologic sections of all the animals who were autopsied. Nevertheless, the exact pathophysiologic mechanism of dysbarism remains obscure according to the authors.

-- Cond. from Am. Rev. Resp. Dis. Abstrs

- 397 The Effect of Joint Action of Noise and Vibration on the Vibration Sensitivity of Adolescents. A.I. Tsysar. *Gigiena i Sanit.* 30, No. 6, 30-36 (1965). Russian.

The authors studied the effect produced from work with electric and pneumatic instruments on the vibration sensitivity of adolescents and the extent of the noxious effect produced by various parameters of vibration. The adolescents were highly sensitive to the action of noise and vibration factors: a rise in the threshold value of the vibration sensitivity was noted in case of a comparably short service record and a short term of work with the instruments. In the course of a work day, changes of the vibration sensitivity occurred mainly in insignificant and moderate rises of its threshold values, which are evidently connected with changes in the functional state of the vibration analyzer.

-- Public Health Eng. Abstrs