

carborundum for sanding in the shoe industry; and slate or chalk for stone-dusting in or mines. Quartz sands have been prohibited since 1938 in grinding of glass, and exposure has been regulated. The higher cost of artificial abrasives in the glass and ceramic industries is offset by higher working speed.

-- Cond. from Bull. Hyg

- 503 Respiratory Symptoms and Pulmonary Disability in an Industrial Town. Survey of a Random Sample of the Population. I. T. T. Higgins, P. D. Oldham, A. L. Cochran, and J. C. Gilson. *Brit. Med. J.* 2, 904-910 (Oct. 20, 1956).

In 1954 the Pneumoconiosis Research Unit of the Medical Research Council carried out a survey of the male population aged 55-64 of Leigh in Lancashire, in order to compare the prevalence of respiratory symptoms and disability in miners with that found in men who had worked only in other occupations. The random sample consisted of 135 miners and ex-miners and 85 non-miners. Pneumoconiosis was found in 23% of the miners and ex-miners. Chronic bronchitis was found in 10.7% of the non-miners, in 26.7% of the miners without pneumoconiosis, and in 12.9% of the miners with evidence of pneumoconiosis. Some of the conclusions are: (1) miners and ex-miners had significantly more chronic bronchitis, a lower ventilatory capacity, and more respiratory symptoms than men who had never worked in mines; (2) miners without pneumoconiosis were on the average more disabled than those with early simple pneumoconiosis; and (3) the differences between miners and non-miners could not be ascribed to differences in social class or smoking habits, and in the miners there was no obvious relationship between length of exposure to dust and bronchitis.

-- Cond. from Bull. Hyg.

- 504 The Influence of the Shape of Dust Particles on the Rate of Phagocytosis in Vitro. A. Lengerova, V. J. Lenger, M. Esslova, R. Tuscany, and M. Volfova. *Brit. J. Ind. Med.* 14, 43-46 (Jan. 1957).

The rate of phagocytosis of two shapes of dust particles—"long" and "round"—was studied in an investigation in vitro in cultures of macrophages from the spleen of chicken embryos. The round particles were phagocytosed preferentially. This result is discussed from the standpoint of existing theories of phagocytosis as well as from that of the relation of the rate of phagocytosis and the harmfulness of different kinds of dusts.

-- Authors' summary

- 505 The Prevalence of Tuberculosis at Necropsy in Progressive Massive Fibrosis of Coalworkers. D. Rivers, W. R. L. James, D. G. Davies, and S. Thomson. *Brit. J. Ind. Med.* 14, 39-42 (Jan. 1957).

One hundred fifty-three cases of coalworkers' pneumoconiosis were examined at necropsy for the presence of tubercle bacilli both by culture and by animal inoculation. The series contained 118 cases of progressive massive fibrosis which were the special object of this study. Tubercle bacilli were isolated from 41 cases (35%) of massive fibrosis, and in 31 (28%) of these naked-eye or histological evidence of tuberculosis was recognized pathologically. The pathological observations, therefore, correlated well with the bacteriological results. There is a marked difference between the prevalence of tuberculous infection found in a post-mortem series and that found in life in cases of progressive massive fibrosis. During life the observed prevalence is only 1.1%. The authors found tubercle bacilli in the bronchi at necropsy, in 28%. Thus open tuberculosis is, in most cases, a late complication of massive fibrosis. Whether tuberculous infection occurs early or late cannot be deduced from this study.

-- Authors' summary

- 506 Pulmonary Tumors in Mice Exposed to Asbestos Dust. K. M. Lynch, F. A. McIver, and J. R. Cain. *Arch. Ind. Health* 15, 207-214 (Mar. 1957).

Mice of a selected strain (AC F<sub>1</sub>) were exposed to a dusty atmosphere containing asbestos floats of a type used by others experimentally, at 150 to 500 million particles per cubic foot. The largest single experimental group consisted of 127 animals killed at 19 months after exposure for 17 months. This group was compared with 222 control animals. Primary lung tumors were demonstrated microscopically in 46% of the dusted mice and in