

- Experimental Asbestosis. Studies on the Progressiveness of the Pulmonary Fibrosis Caused by Chrysotile Dust. P. Gross and R. T. P. deTreville. Arch. Environmental Health 15, 638-643 (Nov., 1967). (Reprints available from Industrial Hygiene Foundation, 4400 Fifth Avenue, Pittsburgh, Pennsylvania 15213.)

Rats, hamsters, and guinea pigs were given various lung dust burdens of chrysotile asbestos; some, by inhalation and others, by intratracheal injection. For the rat, chrysotile has about the same order of pathogenicity as quartz dust, insofar as a single intratracheal injection of between 1 and 5 mg of either dust will produce minimal lesions in rats. Evidence for the nonprogressiveness of chrysotile asbestosis in rats consists of the observations that the minimal asbestotic lesion is limited to the wall of the respiratory bronchiole and of the adjoining alveolar ducts and does not extend into adjoining normal alveoli and that the minimal asbestotic lesions heal by becoming collagenized and hypocellular. In hamsters, the asbestotic lesions are not delimited. They are diffuse, cellular, and do not collagenize. These lesions are therefore progressive. The early chrysotile asbestotic lesion in guinea pigs resembles that of rats. The progressiveness of the chrysotile asbestotic lesion in hamsters is ascribed to a less effective pulmonary clearance mechanism and to a greater reactivity of the pulmonary tissue than exist in rats. The efficiency of the clearance mechanism of man approximates more that of the rat than that of the hamster. Man's lung tissue reactivity also more closely resembles that of the rat, being characterized by the ability to heal.

-- Cond. from author's summary.

- Asbestos Bodies in Routine Necropsies on Tyneside. T. Ashcroft. Brit. Med. J. 1, 614-617 (March 9, 1968).

Smears prepared from an incision in the base of the right lung in a series of 311 routine necropsies in patients over 15 years of age were examined microscopically for asbestos bodies. In cases giving a positive smear 6µ-histological sections of lung were also examined. The occupational history was obtained by questionnaire or by interviewing the relatives. Asbestos bodies were found in 20.3% of cases (25.5% of 196 males; 11.3% of 115 females). Histological sections of lung revealed bodies in less than half of the cases examined. Minimal asbestosis was found in patients dying from gastrointestinal or lung carcinoma. Positive smears were more common in patients from urban areas. Where information was available, definite, or probably occupational exposure of asbestos occurred in over half the cases with positive smears. A significantly higher incidence of bodies was found in histological sections of lung from 23 cases of diffuse mesothelioma of pleura or peritoneum than in the series of routine cases.

-- J. Am. Med. Assn. References & Reviews

- Airborne Fibrous Glass Particles. Chest Roentgenograms of Persons With Prolonged Exposure. G. W. Wright. Arch. Environmental Health 10, 175-181 (Feb., 1968).

The effect, as revealed in the chest roentgenogram, of ten to twenty-five years of exposure in an environment containing airborne particles of fibrous glass has been studied. No unusual pattern of radiologic densities was observed. The frequency of various radiologic appearances known to occur in the general population was no higher in those with greatest exposure than in those with the least. Two references are given.

-- Author's summary

- The Evaluation of the Performance of an Electrostatic Precipitator Using a Pollak-Nolan Nucleus Counter. G. McCreevy. Atmospheric Environ. 1, 37-45 (March, 1967).

When an electrostatic precipitator was employed to sample a heterogeneous aerosol, there was a bias in favor of both small and large particles. The results were independent of the original charged condition of the aerosol entering the precipitator and of the concentration of the nuclei in the aerosol. There are 16 references.

-- Public Health Eng. Absts.

- Rapid Method for Evaluating Dust Collectors. W. O. Bianconi. J. Health Res. (Ottawa) 13, No. 1-2, 31-32 (1967).

A method utilizing particle size data is suggested for the rapid determination of dust collector efficiency at low cost and good accuracy. Two comparisons with conventional volumetric technique on a large electrostatic precipitator are reported.

-- Author's abstr.