soot or carbon black. Progressive massive fibrosis was most likely the result of the physical presence of large amounts of carbon interfering with the normal pulmonary drainage mechanism aggravated by repeated episodes of infection. There are 36 references.
NOTE: The following appears in the authors' acknowledgment: "We also gratefully acknowledge the assistance of Dr. Paul Gross, Director of the Research Laboratory, Industrial Hygiene Foundation of America, Inc., at the Mellon Institute who interpreted some of the microscopic sections and who prepared for us the special slides illustrated in Figure 11."

178 The Deposition of Unipolar Charged Particles in the Lungs of Animals. D.A. Fraser. Arch. Environmental Health 13, 152-157 (Aug. 1966).

This investigation has shown that the degree of retention of particles in the respiratory tracts of animals could be doubled by placing a charge of 1,000 electrons per particle on these aerosols. A qualitative analysis of the mechanisms which account for the deposition of airborne particles in the respiratory tract indicates that, in each case, the effect of placing a unipolar electrical charge on the particles would be to increase the rate of deposition of the particles. A quantitative analysis, to predict the magnitude of this effect, is impractical because of the complexity of the respiratory tract and the fact that such physical properties of the particles as density, size, shape, and dielectric constant, will differ with every dust and so influence the results. The qualitative prediction, however, is in agreement with the experimental observations. The increase in retention in the entire respiratory tract does not appear to be related to the size of the particles inhaled, within the limits of size investigated. This would suggest that the image force of attraction which is induced between the charged particle and the vessel wall is the most significant factor contributing to the increased rate of deposition for charged particles. It was originally thought that the existence of electrical charges on either naturally occurring aerosols or those produced in industry might have a significant effect on the retention of these particles in the lungs. Under normal circumstances, however, these particles would not acquire charges of more than ten or perhaps 20 electrons per particle. It has been demonstrated that the increase in the deposition of particles bearing charges of this magnitude could not amount to more than 1% or 2%. Such an increase would not ordinarily have any significance. There are 20 references.
-- Cond. from author's conclusions

179 Identification of Vehicle Tire Rubber in Roadway Dust. R.N. Thompson, C.A. Nau, and C.H. Lawrence. Am. Ind. Hyg. Assn. J. 27, 488-495 (Nov.-Dec. 1966).

A technique combining pyrolysis and chromatography for the detection of vehicle tire abrasion products in roadway dust is described. Samples of elastomers used in tire formulations were volatilized and separated by gas-liquid chromatography to provide characteristic chromatograms. These identifying patterns appeared consistently in the chromatographic separations of the pyrolyzates of compounded tire rubber and various roadway dusts. To confirm the technique two chromatographic procedures were used for the identification of specific components of the thermal degradation products of raw elastomers, compounded rubbers, and roadway dusts. There are eight references.
-- Authors' abst.

180 Thesaurosis. Pulmonary Function Studies in Beauticians. O.P. Sharma and M.H. Williams, Jr. Arch. Environmental Health 13, 616-618 (Nov. 1966).

Pulmonary function studies were done in 62 beauticians and 33 controls. Although a wide range of values for lung volumes and diffusing capacity was encountered, there was no significant difference between the two groups. Part of this variation was due to smoking habits among the beauticians, and cigarette smoking was associated with significant reduction of diffusing capacity and duration of work as a beautician, and the authors conclude that there is little evidence for the concept that exposure to hairspray is associated with significant impairment of pulmonary function or disease. There are 16 references.
-- Authors' summary

181 Fiberglass Conjunctivitis and Keratitis. E.O. Longley and R.C. Jones. Arch. Environmental Health 13, 790-793 (Dec. 1966).

Fiberglass dust is suggested as a probable cause of conjunctivitis and keratitis. There appears to have been a clear relationship between exposure to fiberglass and development of symptoms on a number of occasions. Four other employees who did the same work as the patient reported here all wore glasses, and none was affected by irritation of the eyes although all had experienced fiberglass skin irritation. In the light of this experience, it appears reasonable to suggest that protective goggles should be worn if employees handling fiberglass develop sorness of the eyes, as keratitis is always a serious condition often resulting in corneal scarring. The authors would be interested to hear of other cases of keratitis in which fiberglass might be implicated.
-- Authors' comment

03122420