Industrial Hygiene Digest

INDUSTRIAL HEALTH NEWS

LITERATURE ABSTRACTS

MEDICAL

ENGINEERING

CHEMICAL

TOXICOLOGICAL

LEGAL - - - decisions and trends

SEPTEMBER, 1954
(Vol. 18, No. 9)

INDUSTRIAL HYGIENE FOUNDATION
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INDUSTRIAL HYGIENE FOUNDATION

FOUNDATION FACTS

Foundation Facts is a monthly news-letter issued to industrial concerns holding membership in Industrial Hygiene Foundation. The Foundation is a nonprofit association of industries for the advancement of healthful working conditions.

Volume 16 | September, 1954 | No. 9

TECHNICAL CONFERENCES IMPORTANT PART OF ANNUAL MEETING

Constand changes in the nature of materials and methods of processing create new health hazards. Industrial health specialists must be prepared to cope with these problems when they arise.

The technical conferences to be held on the first day of Industrial Hygiene Foundation's 19th Annual Meeting, November 17, have been planned with this need in mind. For the most part, topics have been selected to help those specialists whose job it is to safeguard the health of the worker, to anticipate the problems that lie ahead and to tackle the unfamiliar hazards as they arise.

The Medical Conference, in particular, is designed to "forecast" coming events in the field of industrial medicine rather than to review problems or achievements of the past. Included on the program are papers on new hazards introduced by the use of radioactive materials in industry, newer concepts of physiology in relation to the industrial environment, and a re-evaluation of the present methods and scope of physical examinations.

The Engineering Conference will bring to the attention of plant engineers new developments and ideas on engineering measures that may have effects on the working environment. Included are developments in the catalytic combustion of organics; a new method of physicochemical dust suppression in final products; and specific instances of measures taken to control temperature, ventilation, and noise. Another paper will deal with the pros and cons of open plant construction.

The Chemical-Toxicological Conference will consist of discussions of the relationships among environmental health and several new processes and materials which have recently come into use in industry. Among the subjects to be considered fully are the vinyl plastics and resins bonded with glass fibers, vanadium and vanadium compounds, and some of the newer techniques in welding.

The legal aspects of industrial health problems will be taken up at the Legal Conference. Topics include a legislative review of workmen's compensation, a discussion of the medical and legal aspects of the causal relationship between occupational exposure and the incidence of compensable dermatitis, and papers on current developments in compensation for impairment of hearing and on the legal responsibility of employers for the prevention of occupational injuries.

The Medical-Legal Conference will encompass the administration of workmen's compensation laws, with representatives of management, government, medicine, law, and industrial hygiene participating in a panel discussion.

Invitations and preliminary programs for the conferences and the management meeting will be mailed in the near future, so be sure to keep open the dates, November 17 and 18.

Foremost in disabling silicosis, emphysema stands out as the cause. Emphysema alone with its shortness of breath may lead to a condition simulating asthma and has no specific association with silicosis. In a silicotic patient with emphysema, a coexisting bronchitis may exaggerate the emphysema and thus further the total disturbances. On an organic basis, exposure to silica will not be more harmful to an asthmatic person than to any other worker. On a psychogenic basis, the asthmatic person is prone to react unfavorably to any dust and therefore on an emotional basis may not get along well in the presence of silica dust. The correspondent is referred to the report of the Third Symposium on Silicosis at Saranac Lake, 1937 for a fuller discussion.

021 Distribution of Mineral Particles and Fibers in the Lung after Exposure to Asbestos Dust. J. F. Knox and J. Beattie. Arch. Ind. Hyg. & Occ. Med. 10, 30-36 (July 1954).

The particle-size distributions in the incombustible and acid-insoluble residues from the lungs of 27 persons who had been exposed to asbestos dust were determined. The number of particles with greatest lengths in excess of 26 microns was considerable up to the eighth year after the last exposure to asbestos dust and then sharply fell. The number of particles within the size ranges of five microns and less and between five and 15 microns remained constant over a very long period in those cases which showed no sign of asbestosis or minimal fibrotic change. The cases of severe asbestosis showed a significant rise in the numbers of such particles.

It is considered that the mechanism which is concerned with the production of human asbestosis is not the same as that which is responsible for the production of asbestotic changes in experimental animals exposed to high concentrations of asbestos dust. The appearance of such changes seems to be related to the breakdown of asbestosis bodies which may liberate some fibrogenic agent.

-- Authors' summary

022 Mineral Content of the Lungs after Exposure to Asbestos Dust. J. F. Knox and J. Beattie. Arch. Ind. Hyg. & Occ. Med. 10, 23-29 (July 1954).

The mineral content of the lung parenchyma, the lung hilar region, and the tissues of the pleural and subpleural regions of the lung has been determined in lungs from 27 workers in the asbestos-textile industry. The exposure time varied from five to 33 years, and the time interval between the last exposure to dust and death (survival time) was from less than one year to 21 years. There was an indication that the mineral material found in the lungs increased in amount as the exposure time lengthened. The amount so accumulated varied considerably from person to person. As the survival time increased, the mineral content of the lung tended to decline but again at a very variable rate. The severity of the asbestotic lesions in the lungs found at death was related not to the mineral content but to the sum of the exposure and survival times.

-- Authors' summary