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LITERATURE ABSTRACTS

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INDUSTRIAL HYGIENE FOUNDATION
MELLON INSTITUTE
4400 FIFTH AVENUE -:- PITTSBURGH, PA. 15213

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bone marrow had been adequately excluded. The findings correlate with the histopathological changes which are reported to occur in the lungs of silicotic patients; they indicate a high degree of stimulation of the reticulo-endothelial system. If these changes are considered together with the industrial history and clinical and laboratory data, they may provide a clue to the diagnosis of silicosis and help in the differential diagnosis from other diffuse pulmonary lesions. -- Auth. abst.

71 Mesothelioma of Pleura and Peritoneum Following Exposure to Asbestos in the London Area. Muriel L. Newhouse and Hilda Thompson. Brit. J. Ind. Med. 22, 261-269 (Oct. 1965).

A series of 83 patients from the London Hospital with a diagnosis of mesothelioma confirmed by necropsy or biopsy has been studied for possible exposure to asbestos. The series consisted of 41 men and 42 women; 27 of the patients had peritoneal and 56 pleural tumors. The earliest death recorded was in 1917, but only ten of the series died before 1950 and 40 (48%) between 1960 and 1964. In 76 of the series full occupational and residential histories were obtained. Forty (52.6%) gave a history of occupational or domestic (living in the same house as an asbestos worker) exposure to asbestos compared with nine (11.8%) out of 76 patients from the same hospital suffering from other diseases ($P < 0.001$). None of the 17 suspected cases of mesothelioma, rejected on pathological grounds, was found to have had any exposure to asbestos. There was also evidence that neighborhood exposures may be important. Among those with no evidence of occupational or domestic exposures, 30.6% of the mesothelioma patients and 7.6% of the in-patients with other diseases lived within half a mile of an asbestos factory ($P < 0.01$). Out of the 31 patients with occupational exposures only ten were in jobs scheduled under the Asbestos Regulations of 1931. The interval between the first exposure and the development of the terminal illness of mesothelioma ranged between 16 and 55 years. In 47 patients in the mesothelioma series, lung tissue or sputum was available for examination. In 30 (62.5%) either asbestosis or asbestos bodies were present. -- Auth. abst.

72 Diffuse Mesothelioma of the Pleura and Asbestos. P. C. Elmes, W. T. E. McCaughey, and O. L. Wade. Brit. Med. J. 1, 350 (Feb. 6, 1965).

Mesothelioma of the pleura is an uncommon tumor and, in recent years, studies have indicated a relationship of this tumor to exposure to asbestos. The occupational histories of 42 patients with diagnosed mesothelioma were contrasted to 42 control patients with regard to their exposure to asbestos. Thirty-two of the 42 patients with diagnosed mesothelioma had a history of exposure to asbestos which was considered to be heavy exposure in eight and a light exposure in 24. In the 42 control patients there was a history of exposure in only nine, and in two of these it was considered heavy. The difference between these two groups was highly significant. In another study it was shown that the finding of asbestos bodies in lung tissue was significantly related to the history of industrial exposure to asbestos. When the lungs of 24 patients with diagnosed mesothelioma were examined for the presence of asbestos bodies, 21 of the 24 patients showed this finding. In contrast, asbestos bodies were found in only six of the 24 controls, a highly significant difference. The occupational histories of these patients revealed that the interval between the first exposure to asbestos and the diagnoses of mesothelioma was often long and in some cases exceeded 40 years. Exposure to asbestos, even though many years before and transient, is an important factor in the development of mesothelioma of the pleura. -- J. Occ. Med. Absts.

73 Relation Between Exposure to Asbestos and Mesothelioma. I. J. Selikoff, J. Churg, and E. C. Hammond. New Engl. J. Med. 272, 560 (March 18, 1965).

Ten deaths due to mesothelioma were found in a study of 307 consecutive deaths among asbestos-insulation workers in New York and New Jersey. There were four pleural mesotheliomas (1.3%) and six peritoneal mesotheliomas (1.9%). This is probably an underestimate of the true incidence since, of the remaining 297 deaths, only 110 cases were autopsied. These figures can be contrasted to a prospective study of the American Cancer Society in which only three deaths due to mesothelioma were noted in 31,652 deaths of patients between 30 and 89 years of age. In an autopsy series of 2,500 deaths, asbestosis was found in 26. There were four mesotheliomas of the pleura, three mesotheliomas of the peritoneum, and seven bronchogenic carcinomas recorded in the patients with asbestosis. No mesotheliomas were found in the absence of asbestosis. Cases of diagnosed mesothelioma from the files of the Armed Forces Institute of Pathology were reviewed and in all cases where lung tissue was available it was examined for asbestos fibers. Asbestos fibers were found in five of the 19 pleural mesotheliomas and in 17 of the 26 peritoneal mesothel-

omas. This is probably an underestimate of the true incidence of asbestosis among cases of mesothelioma in the United States since very little lung tissue was available for review and only asbestos bodies and not asbestos fibers were looked for. Mesothelioma should be added to the neoplastic risks of exposure to asbestos along with cancer of the lung (53 of 307 deaths) and probably cancer of the stomach (34 of 307 deaths). -- J. Occ. Med. Absts.

PHYSICAL ASPECTS OF THE ENVIRONMENT

Safe Practices for Industrial SCUBA Diving. P. A. Brevsse.
Ind. Med. & Surg. 34, 870-873 (Nov. 1965).

Recognizing that SCUBA (self-contained underwater breathing apparatus) divers are subject to many potential hazards and that they must be physically and mentally fit, be adequately trained in the use of SCUBA and possess the necessary mechanical skills to perform their prescribed functions satisfactorily; and that their safety and well-being depends to a large degree upon equipment being in good working order and upon an air supply essentially free from contamination; the Safety Division, Washington State Department of Labor and Industries, appointed a committee to assist the Code Engineer in the completion of SCUBA Diving Safety Standards. This committee was composed of representatives of both labor and management and other interested groups, a large number of which had considerable experience in SCUBA diving activities and diving medicine. These standards should provide a better awareness of the hazards involved in diving, in addition to minimum requirements for diving safety; recognizing that diving can be safe provided it is practiced by well-trained, equipped and informed individuals. -- Auth. sum.

Decompression Sickness Following Repeated Breath-hold Dives. P. Paulev.
J. Appl. Physiol. 20, 1028-1031 (Sept. 1965).

A report is given on a case of apparent decompression sickness after repetitive breath-hold dives to depths of 50-66 ft. (15-20m.). Three similar cases in Norwegian Navy escape-training-tank instructors are also discussed. A parallel is drawn between the Scandinavian cases and the "pearl diver disease" (taravana), found in the Tuamotu Archipelago in the South Pacific. Symptoms and signs in these conditions are consistent with the diagnosis of decompression sickness. It is emphasized that in such cases immediate recompression is the treatment of choice. Consideration of various depths and patterns of breath-hold diving in terms of nitrogen uptake and elimination permits the relative risk of decompression sickness to be predicted with the help of decompression tables. -- J. Am. Med. Assn. Ref. & Rev.

Altitude and Maximum Performance in Work and Sports Activity. B. Balke, F. J. Nagle, and J. Daniels. J. Am. Med. Assn. 194, 646-649 (Nov. 8, 1965).

Experimental evidence obtained from these investigations has confirmed the hypothetical assumption that, at an altitude of around 2,000 meters (6,560 ft.): (1) physical performances requiring the utilization of maximum aerobic capacity are comparatively worse than under conditions of normal barometric pressure; (2) physical performances requiring almost exclusively maximum anaerobic capacity remain nearly unaltered; (3) training and acclimation can bring back "normal" capacity for maximum aerobic work. Possibly, training at elevations higher than 2,000 meters will be more effective in this respect; (4) within one week after return from this altitude, performances in the longer sprint-type events tend to be slightly better than before, while those in the endurance-type events show considerable improvement; and (5) physiologically, these improvements are apparently based on an augmentation of the heart's capacity to move a maximum volume of blood as well as on an increased amount of oxygen carried by the arterial blood. -- Cond. auth. com.

Prevention of Heat Illness in Football Players. R. J. Murphy and W. F. Ashe.
J. Am. Med. Assn. 194, 651-654 (Nov. 8, 1965).

Football practice in high schools and colleges begins in late summer when the effects of heat are of major concern. To determine when conditions exist on the field which contribute to heat exhaustion and heat stroke, the dry-bulb and wet-bulb temperatures recorded during the first three weeks of practice of the Ohio State University football team were correlated with weight loss encountered. From this, a practical guide was developed with suggestions for preventive measures relative to the two clinical entities. There are 15 references. -- Auth. sum.