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do not inhibit the development of fibrotic nodules in the tracheobronchial lymph-nodes of mice. The tissue of these nodes, therefore, reacts differently from the ng tissue of rabbits. -- Author's summary.

67 Contribution to the Diagnosis of Pulmonary Silicosis by the Investigation of Silica in the Blood and Sputum. H. Oyanguren and E. Bartholin. Rev. med. de Chile, 71, 464 (May, 1943)
The diagnosis of silicosis has been confirmed by demonstration of silica in the sputum and blood of 40 individuals. Silica which is conveyed to the lungs by inhalation is taken up in greater part by the lymphatics and the remainder is expectorated. Silica interferes with the lymphatic circulation, producing a fibrous proliferation which eventually results in the inclusion of the particles themselves. But before this occurs the silica which is inhaled passes through the blood and may be excreted in the urine. Silica may normally be found in the blood but if the quantity is less than 8 mg. percent as determined by the colorimetric method, it is believed to be of no clinical significance. Quantities from 12 to 20 mg. percent are expressed as 1 plus, from 20 to 50 mg. percent 2 plus, and above 50 mg. percent 3 plus. Positive chemical reactions for silica in the sputum may be obtained in all cases of silicosis. The positive reactions in the blood correspond to the amounts of silica contained in the sputum and positive chemical reactions are found only in those individuals who have been exposed to silica-bearing dust. The specific chemical reaction used is that described by Oberhauser and depends on the reaction obtained with nitromolybdonate of ammonia. This may be used equally on the blood and sputum and is a more certain test than the spectrographic methods. -- Am. Rev. Tuberc.

68 The Asbestos Corn. H.S. Alden and W.M. Howell. Arch. Dermat. and Syph., 49, 312 (May, 1944)
The author describes corns or warts peculiar to asbestos workers, first noticed by Derwitz in 1930. They have no relation to asbestos of the lungs. One characteristic is that they appear and feel as if a foreign body were present, none is ever found. It is probable, however, that one is present in the very early stages.

69 Asbestosis and Pulmonary Carcinoma. H.W. Wedler. Deut. med. Wochschr., 69, 575-576 (Aug. 6, 1943) German.
The author has collected the published autopsy records on asbestosis from various countries and finds that there have been 14 instances of malignant disease of the lungs and pleura in 92 post-mortem examinations (16 percent). This is in excess of the proportion of lung carcinomata in autopsies generally (2-6 percent). Carcinoma as a complication of asbestosis occurred most frequently in males between 35 and 41 and was generally in the part of the lung most affected with asbestosis. Development of the lesion was slow but corresponded with the length and intensity of the exposure (12-42 years). There was often a long interval between the cessation of exposure and the development of the cancer, which, in the author's view, must now be regarded as an occupational cancer. -- Bull. Hyg.

Skin Diseases and Burns

70 New Protective Cream. J.G. Downing, L.M. Ohmart and M.J. Stoklosa. Arch. Dermat. and Syph., 49, 436 (June, 1944)
In industries where workers are exposed, to dermatologic irritants, and where it is impracticable to wear gloves, protective creams help to minimize cutaneous irritations. Many protective creams are on the market under trade names, and should

INDUSTRIAL HYGIENE FOUNDATION

FOUNDATION FACTS

Industrial Hygiene Foundation. The Foundation is a non-profit association of industries for the advancement of healthful working conditions.

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Practical Data on Employing the Veteran

The panel discussion on "Putting the Disabled Veteran Back to Work," a high-point of the Foundation's last annual meeting, is being published separately from the meeting Proceedings and will be sent to member companies in a few days. This will speed up distribution of practical data which becomes more important daily with the increasing demobilization of service men. One source says veterans are being mustered out at the rate of 70,000 per month. The forthcoming report should be of specific assistance to companies in dealing with this grave problem. Those who have questions regarding the rehabilitation of service men may send them to the Foundation.

Results of Women in Industry Study Released

Copies of the Foundation's plant-to-plant investigation of "Health Problems of Women in Industry," were sent to members recently. The report presents factual data collected by Dr. C.O. Sappington in visits to 54 war plants throughout the East and Mid West. The study if receiving national publicity in the press and radio.

Annual Index of Digest; List of Publications

THE ANNUAL INDEX covering the monthly INDUSTRIAL HYGIENE DIGEST for 1943 is now being mimeographed and will be sent to members in the near future. Exactly 1163 separate items were reported during the year, exclusive of the November issue which is devoted to abstracts of most of the papers presented at the annual meeting. The list of the publications, and addresses, covered by the DIGEST, is being revised. This will also be sent to members in the near future so that they may order the text of articles abstracted in the DIGEST, when desired. Unless otherwise noted, the Foundation has no copies of original publications or reprints for distribution.

More New Members

Latest addition to the Foundation's membership is Allis-Chalmers Manufacturing Company. Other new members, not previously reported, are Ball Brothers Company and Firth Sterling Steel Company. Thirty-three new members joined in 1943.

Annual Meeting Comment: "The better the working conditions the better the point of view and the better the production!"

-- Charles F. Kettering.

Company Publications Welcome

A number of member companies send the Foundation their "house organs" or employee publications. The staff is glad to receive these journals since they are helpful in keeping us informed of a member's industrial operations. "The Hawley Reporter," publication of the Hawley Products Company, carries the following slogan:

"More Days of Work Mean Fewer Days of War."

75 Safety Measures for Use of Chlorinated Naphthalenes and Diphenyls in Industry. L. Greenburg. N.Y. State Dept. of Labor, Ind. Bull., 22, 403-406 (October, 1943).
Chlorinated naphthalenes and diphenyls are valuable industrial products, especially in the manufacture of electric condensers, insulation of wire and cable, and similar industries. They are made in this country by about 5 companies and are sold under varying trade names. They are in general highly toxic and must be used with extreme care. Many cases of dermatitis and a number of deaths from liver damage have occurred. Industrial hygienists should make every effort to see that exposures are controlled, insofar as humanly possible. The emphasis should be on a maximum of maintenance and engineering control, rather than on limiting atmospheric concentrations. Toxic exposures may be more readily controlled where the cold or solvent method of impregnating cable than where the hot process is used. All the evidence in the known cases of liver disease point to exposure to vapors or fumes as the cause; there is no clear evidence of systemic poisoning from skin absorption. Among the recommendations are: (1) the cold or solvent method of impregnation should be used; (2) general hygienic measures should be followed; (3) foremen should be apprised of the toxicity of the material and instructed in safe handling practice, and the information should be passed onto the men; (4) preemployment and periodic physical examinations should be given with especial attention to skin and liver conditions; (5) control measures should be checked with the insurance carrier, the State industrial hygiene agency and a competent consultant.

76 Some Dangerous Industrial Vapors. Anonymous. Chem. Age, 49, 387-8 (October 16, 1943). From Industrial Accident Prevention Bull., (March-May, 1943).
Two cases of poisoning are given, which emphasize the necessity of observing warnings and precautions that have been published. The first happened to workers who were cleaning a degreasing tank, and was due to lack of life belt and breathing apparatus. The second was caused by faulty installation of the flue from the burners in a trichlorethylene degreasing plant. The flue terminated about 10 feet from the floor instead of passing through the roof. None of the cases was fatal, but one man spent 10 days in the hospital. The greater toxicity of coal-tar naphtha as compared with petroleum naphtha is pointed out. A maximum concentration for the solvent variety is suggested, but the author maintains that such figures should be taken with extreme caution. He advises as a safe general rule that "where any organic solvent is used the general ventilation should be supplemented by localized exhaust as near as possible to the point of origin of the vapors." Either type of naphtha may cause dermatitis, and should be kept from contact with the skin. The article concerning ethylene chloride has been abstracted from the original source.

77 Creosote Burns. A.D. Jonas. J.Ind.Hyg. & Tox., 25, 412-420 (November, 1943).
Creosote-burns form an important industrial hazard in the erecting of wooden structures and very often seriously interfere with production. The dipping of sills in creosote solution and the sawing of creosoted lumber should be done by colored or dark-skinned workers. A thick coat of vaseline forms the best preventive. Thorough washing of the face and application of Feille-solution proved a very satisfactory way for treating creosote-burns.

78 Examination of Workers in an Asbestos Factory. A. Bohme. Arch.f.Gewerbepath. u.Gewerbehyg., 11, 433-452 (November 10, 1942).
This is a record of clinical and radiological observations made in an asbestos factory during the years 1936-1937 and the year 1940. The factory handled raw asbestos and manufactured a variety of asbestos products. It employed up to 500 workers. Of 132 persons examined, 29% showed radiological evidence of asbestosis. Correlating these findings with exposure, it is stated that there were in workers with less than three years of exposure 6% of cases, in those with 3-6 years of

exposure 12%, in 5-10 years 56%, and in over 10 years 79%. Five cases of pulmonary tuberculosis were noted. The clinical histories of these are recorded.

79 Correlation of Disability with Roentgen and Clinical Findings in Silicosis.Part 1 Paul Soward. Radiology, 41, 11-12 (July, 1943).
Disability in industrial lung disease cannot be accurately estimated by roentgen examination alone. Uncomplicated silicosis may be associated with moderate fibrotic changes and a considerable degree of disability, whereas in other cases massive lesions may produce only a slight decrease in capacity for work. A considerable part of the dyspnoea in silicotics is due to fibrosis of the alveolus itself and not to the nodular fibrosis. When roentgen evidence of superimposed infection is present, disability should be anticipated; if there is roentgen evidence of a superimposed active pulmonary tuberculosis, it may be stated with confidence that disability is total and permanent. In absence of cavitation, diagnosis of tuberculosis in advanced silicosis is difficult, and should only be made when there is laboratory confirmation.

80 Correlation of Disability with Roentgen and Clinical Findings in Silicosis. Part2. J.E.G. Hannon. Radiology, 41, 13-17 (July, 1943).
Silica, by reason of its solubility, reacts to form silicic acid, which causes specific changes in monocytic cells. First, dust laden cells in the lymphatic channels elongate and reticulum appears in the intercellular spaces. Second, the cells elongate further and assume fibroblast shape and arrange themselves in concentric nodules. Third, the cells lose their nuclei, and the nodule becomes fibrous and undergoes hyaline degeneration. The degree of dysfunction of the lungs is not proportional to the change revealed by X-ray. Inhalation of silicon dioxide dust frequently decreases pulmonary function before the shadows of the silicotic nodule become visible on X-ray film. Disability is not primarily due to nodular fibrosis, but is caused by the thickening of the alveolar walls and associated emphysema with decreased elasticity of the lungs and interference with normal bronchioles and engorgement of the capillaries are added factors in disability. The degree of lung dysfunction in pulmonary fibrosis is best measured by respiratory function tests outlined in the article. A person with respiratory disability can increase his depth of breathing only to a very limited extent. When he requires more air, he is compelled to increase his respiratory rate.

81 Cancer in Relation to Occupation and Environment. W.C. Hueper. Bull. Am. Soc. Control Cancer, 25, (June, 1943).
Among the chemical and physical agents causing occupational cancer are heavy metals, nitrates, aromatic amino compounds, benzol, asbestos, mineral oil, soot, radioactive substances, ultraviolet radiation and X-rays. A recent addition to the list is coal tar, which may cause cancer of the urinary tract, most frequently in the aniline dye and related industries. The following suggestions are made to aid in prevention and control of occupational cancer: (1) An occupational history of every case of cancer; (2) Experimental investigation of the carcinogenous properties of substances now in industrial use; (3) State inspection of industrial plants; (4) Technical improvement in production methods to eliminate hazards, and the use of substitutes for substances known to be carcinogenic.

Methods of Detection and Determination

82 Simple Device for Preparing Vapor-Air Mixtures. Ind.& Eng.Chem., Anal.Ed., 15, 582 (1943).
A device is described by which the amount of chlorinated solvent aspirated through a combustion apparatus can be determined by measuring [illegible]