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Abstracts from Current Literature

Occupational Diseases and Hazards

CURRENT CONCEPTS OF BERYLLIUM POISONING. H. S. VAN ORDSTRAND, Ann. Int. Med. **35**:1203-1217 (Dec.) 1951.

A summary is presented of research work on Be poisoning being carried out in various parts of this country and elsewhere. There are 23 references. NUCLEAR SC. ABST.

INDUSTRIAL CANCER OF THE LUNGS. MAY R. MAYERS, Compens. Med. **1**:11 (March-May) 1952.

The field of environmental cancer holds special promise, because it deals with a few specific chemical and physical agents which can produce cancer at specific primary sites of predilection. Though little is known of mechanisms of action, the opportunity to study them is unusually good. Laboratory studies confirm the carcinogenicity of some 200 chemical agents for appropriate animal species, but species-specificity prevents a routine extrapolation to man.

Many agents are suspected of influencing the development of cancer of the respiratory tract, but few are known to be the cause of primary carcinoma of the lung. The incidence of lung cancer has been steadily rising at a rate beyond that observed for cancer of other sites. This coincides with present-day technological advances, when increasing numbers of industrial workers are exposed to a greater quantitative and qualitative variety of chemical and physical agents. Hence there has been a special interest in air contaminants and their geographical distribution. Lung cancer in industry presents a real challenge to industrial hygiene workers.

Inhalation of toxic agents may result in injury to anatomic sites far removed from the point of entry. For instance, inhalation of carbon tetrachloride affects the liver and kidneys; carbon disulfide affects the central nervous system; benzol injures the hematopoietic system, and betanaphthylamine, the urinary bladder. Lead does not produce lung pathology, and there is no definite evidence that inhalation of arsenic is capable of causing lung cancer. The pneumoconioses vary in their association with lung cancer; silicosis is not apparently associated with or productive of lung cancer, but asbestosis probably is.

The full importance of acute and chronic irritation upon exposure to air contaminants in the form of solvents, their role as sensitizing agents resulting in allergies or as acute irritants responsible for local tissue damage, cannot be fully appraised at this time.

Synergistic action of chemicals and the individual differences in the susceptibility of humans should not be overlooked. The need for continued adjustment in safe standards and the prevention of long-term cumulative effects in industrial workers are self-evident, but it may take many years to develop these to an optimum point.

Known and suspected carcinogens are reviewed under the headings of inorganic and organic chemicals and of radiation. The role of research is emphasized in the total perspective of industrial health.

L. S. SNEGIREFF, Boston.

DIFFERENTIAL DIAGNOSIS OF SIDEROSIS AND SILICOSIS. L. E. HAMLIN, Indust. Med. **21**:1 (Jan.) 1952.

Siderosis is a form of benign pneumoconiosis which results when inert iron dust is deposited in the lungs without fibrosis or disability of any kind. Silicosis is a disease of the lungs caused by breathing air containing uncombined silicon dioxide dust, with generalized nodular fibrotic changes in the lungs. Because the two conditions resemble each other so closely from a radiological aspect, diagnosis should be based upon the following: the character and components of the dust; a quantitative determination of harmful substances present; an estimation of the size of the dust particles, since only those below 3 μ are believed to be retained by the alveoli; the length of exposure; the constancy of such exposure.