3. Do you agree with the statement that carelessness is the most important element in accidents? Why?

4. What has been the effect of the safety campaigns in industry? In communities (with reference to automobile accidents)?

5. What do you understand by the term "human engineering" in industry?

6. Outline a program of "accident hygiene" for the purpose of controlling the personal element in an industrial plant having dangerous machine processes.

XII. CHEMICAL AGENTS AS CAUSES OF ILL HEALTH

Chemical agents have been recognized as important causes of ill health as a result of the frequency of poisoning in industry. The attempt to understand and solve this problem has been one of the influences which has brought about the development of Industrial Hygiene. Proper consideration of this branch of preventive medicine is given in the course on Group Hygiene. Consideration will be given here to the more important chemical causes of ill health.

Statistics

Chemical agents as causes of death are relatively infrequent (1577 Registration Area 1924). As a cause of acute or chronic ill health, they are of considerable importance on account of the rapid development of new chemical processes in industry.

Classification

These chemical agents may be conveniently classified as to the nature of the substance:

(a) Inorganic
(b) Organic

Inorganic Chemicals

The list of inorganic substances capable of causing injury to human beings is a long one. Only a few of the more important ones will be given consideration.

Lead is one of the most frequent, serious, and insidious of occupational poisons.

Lead is a typical cumulative poison. Frequently a comparatively large single dose may be taken without noticeable effect; but small quantities inhaled or ingested, are stored in the body, resulting in chronic poisoning and sometimes death. Practically all forms of lead are poisonous.

Sources

There is a long list of possible sources both in and out of industry. Some of the principal ones are: