

Occupational Health

Dangers, Precautions, and Work Invention

Potential hazards in factories and workshops

Occupational Health: Occupational health is the science that deals with the identification, evaluation and control of various working conditions that may lead to injury to workers and endanger their health.

Occupational health professionals use environmental measurements and analytical methods to determine the extent to which workers are exposed to occupational hazards and then use various control methods to control these hazards and prevent workers from being exposed to them.

Occupational Safety and Health Objectives

1. Help protect workers from any harm that may befall them.
2. Protect the environment surrounding workers.
3. Protect facilities, equipment, and devices used in the workplace from damage.
4. Increase production capacity, prevent disruption to the production cycle, and enhance worker efficiency.
5. Make workers feel reassured and secure in their work.
6. Striving to improve the standards of companies and factories.
7. Working to attract a new workforce.

Recognition:

Knowing and understanding the different types of hazards in the workplace and the impact of these hazards on worker health.

Occupational hazards are divided into four groups:

Chemical hazards

Natural hazards

Biological hazards

Engineering risks

(1) Chemical Hazards:

Most health hazards result from inhaling chemicals in the form of vapors, gases, dust, fumes, or sprays, or from skin contact with these substances.

The severity of exposure to chemicals depends on the concentration of the substance and the duration of exposure.

Chemicals enter the human body through four routes:

Inhalation

Absorption through the skin and eyes

Swallowing

Accidental injection



Inhalation is considered the fastest way for harmful chemicals to enter the human body.

(2) Natural Hazards:

These, in turn, are divided into damages resulting from exposure to:

1- Heat, its relationship to humidity and air speed.

2- Light

3- Noise

4- Radiation

5- Atmospheric pressure

6- Vibrations

(3) Biological Hazards

Arise from bacteria and viruses entering the body, and wounds facilitate their entry.

Workers most exposed to biological hazards include those working in laboratories, food processing plants, and farms.

(4) Engineering Hazards

These are divided into:

1- Mechanical Hazards resulting from the operation of tools, machines, and equipment.

2- Electrical Hazards resulting from electrical connections and other factors.

3- Ergonomic Hazards, which arise from unsuitable working conditions for workers.

Evaluation:

After identifying the various factors present in the work environment, these factors and the extent of the workers' exposure to them are determined.

The existing control measures are also evaluated to determine whether they are adequate.

Samples are taken and sorted according to specifications.

Control:

The control pyramid system is followed in descending order to control and manage these risks, as follows:

1- Elimination

2- Exposure

3- Isolation

4- Engineering Control

5- Administrative Control

6- Use of Personal Protective Equipment

Safety in Industrial Facilities

The technological advancements the world is witnessing today, along with the accompanying development of industries, have created numerous hazards that people should be aware of and be cautious of. No one wants to suffer an accident that would deprive them of the health, well-being, and safety of their organs.

A person may be injured due to a lack of attention or neglect, even for a few moments, which can be enough to cause them pain for long periods, possibly years. Workplaces, such as workshops, factories, and laboratories, are unnatural environments, characterized by high temperatures, rotating machinery, sensitive equipment, rapid reactions, toxic materials, and so on. They are also a reservoir of gases, liquids, and solids.