

FOCUS ON OCCUPATIONAL HEALTH

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Occupational Health is defined as

“The promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations – total health of all at work”

(ILO /WHO)

"Occupational health should aim at: the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations; the prevention amongst workers of departures from health caused by their working conditions; the protection of workers in their employment from risks resulting from factors adverse to health; the placing and maintenance of the worker in an occupational environment adapted to his physiological and psychological capabilities; and, to summarize, the adaptation of work to man and of each man to his job”.

Occupational Hazard is defined as:

“Source or situation with a potential for harm in terms of injury or ill health, damage to property, damage to the workplace environment, or a combination of these”

Each year around 2 million people suffer from occupational ill health and injuries. Many fatalities occur due to occupational health illnesses and the figures are alarming for developing nations where the laws pertaining to Occupational Health and Safety are present but are not effectively implemented.

Pakistan is a signatory to the ILO convention 155 on Occupational Health and Safety. The provisions for Occupational Health are present in the Factories Act 1934 Chapter III and Manual of Factories Law revised 1993 and Sindh Factories Rule 1975.

Occupational health includes studies on all factors relating to:

- Work
- Working methods
- Conditions of work and
- The working environment

Occupational health implies not only health protection but also health promotion

The Occupational health hazards at the workplace are:

- A. Physical**
- B. Chemical**
- C. Biological**
- D. Mechanical**
- E. Psychosocial**

Details of the Occupational Health Hazards are as follows:

A Physical Hazard

The following are the various physical hazards:

- Temperature (Heat/Cold)
- Illumination
- Noise
- Vibration
- Radiation'
- Atmospheric pressure

Diseases due to physical agents are:

Heat - Heat hyperpyrexia, Heat Exhaustion , , Heat Cramps, burns, Prickly heat

Cold - Frost bite,

Light – Occupational Cataract,

Atmospheric-pressure- Caisson disease, air embolism, explosion.

Noise - Occupational deafness,

Radiation-Cancer, Leukemia, aplastic anemia,

Extensive use of computers and other equipment involving VDU give rise many occupational illnesses due to poor workstation design.

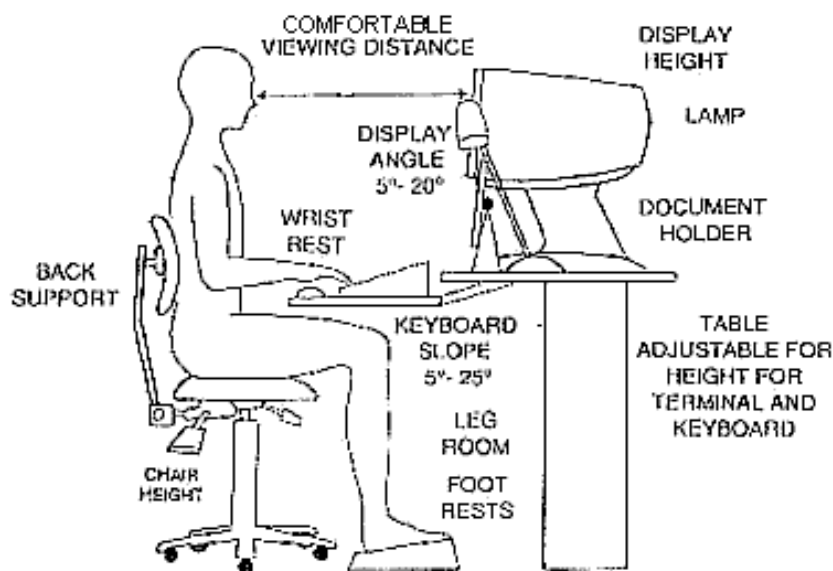


Diagram from "Ergonomics and VDT Use," flyer prepared by the Library of Congress Collections Services VDT Ergonomics Committee, 1991-92.

Poor ergonomic design of work areas and incorrect manual handling may cause cumulative trauma disorders.



Basic Cumulative Trauma Disorders (CTD's) are:

- Muscular Disorders
 - Tension Neck Syndrome, Low Back Pain
- Tendon Disorders
 - Tendonitis, Tenosynovitis, Epicondylitis, De Quervain's Disease, Trigger Finger
- Nerve Disorders
 - Carpal Tunnel Syndrome, Thoracic Outlet Syndrome
- Neurovascular Disorders
 - Vibration White Finger Disease

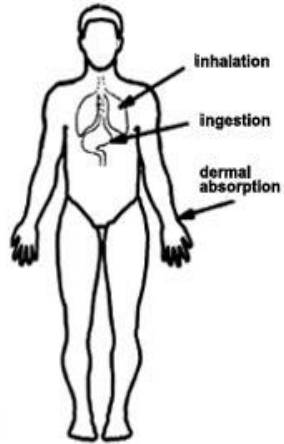
B Chemical Hazard

Chemical Hazards arise from exposure to chemical agents in the form of dust, mist, vapour, fumes and gases.

Chemical agents can be classified as :

- Metals
- Aromatic Hydrocarbons
- Aliphatic Hydrocarbons
- Gases

The routes of entry are inhalation, absorption, ingestion, injection and mucous membranes.



SMOKE rises from a heap of waste being burnt in the open.—White Star



TWO men walk past burning garbage.—White Star



Photos by Fahim Siddiq/White Star

Chemical Exposures

The Factories Act 1934 Chapter III deals with Occupational Health Hazards in the following sections

- Section 15 Ventilation & Temperature:
 - Section 16 Dust & Fumes:
 - Section 18 -19 Over Crowding & Lighting:
 - Section 33-F Excessive Weight:
 - Section 33-G Protection of Eyes:
 - Section 33-K Protection against Dangerous Fumes:
 - Section 33-L Explosive or Inflammable Dust, Gas etc.:
 - Section 33-P Hazardous Operations:
 - Control on Noise and Air Pollution (PEPA 1997) and NEQS Motor Vehicles:
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- Chapter-III of Factories Act 1934
 - Punjab Factories Rules 1978
 - Sind Factories Rules 1975
 - West Pakistan Hazardous Occupations Rules 1963
 - Mines Act 1923
 - Provincial Employees Social Security (Occupational Diseases) Regulations 1967
 - Workmen's Compensation Act 1923 and Rules 1961
 - Dock Labourers Act 1934

Industrial hygiene is the science of anticipating, recognizing, evaluating, and controlling workplace conditions that may cause workers' injury or illness. Industrial hygienists use environmental monitoring and analytical methods to detect the extent of worker exposure and employ engineering, work practice controls, and other methods to control potential health hazards.

An effective Occupational Health and Industrial Hygiene programme should be present in all industries based on the occupational health hazards to protect employees' health. Exposure to hazardous chemicals and dust from natural and synthetic fibres and food grains causes respiratory diseases like lung cancer and dermal sensitization. Lack of control during handling and disposal of hazardous waste, despite the existence of environmental laws expose people to many health hazards.

Cases of noise induced hearing loss are on the rise at workplaces and in urban areas due to heavy traffic on the roads. Besides respiratory diseases at workplace due to exposure to hazardous chemicals, asthma cases are on the rise amongst general public due to high level of pollution caused by motor vehicle exhaust fumes and indiscriminate burning of garbage which releases hazardous toxic fumes into the atmosphere

It is the duty of all employers and the government to ensure the protection of health of all employees by providing effective controls at the workplace in particular and the environment in general. Programs to monitor the effectiveness of the controls are to be in place. Effective Health Surveillance and Exposure monitoring programs – Industrial Hygiene programs and regular auditing of these programs will ensure a robust Occupational Health Management System which would be in compliance with legal requirements and OHSAS 18001 requirements.