

Occupational Safety and Health



Introduction

- According to the International Labour Organization (ILO):
- 2.3 million deaths/year due to occupational accidents and diseases.
- 337 million injuries annually.
- 160 million cases of work-related diseases.
- Many workplace accidents are unreported, and diseases are often undiagnosed.
- Economic impact: about 4% of GDP loss in countries.

Definition of Occupational Safety and Health

According to the World Health Organization (WHO) and ILO:

- Promote and maintain the highest level of physical, mental, and social well-being of workers.
- Prevent health problems caused by working conditions.
- Protect workers from work-related risks.
- Ensure workers are placed in environments suited to their physical and mental abilities.
- Adapt work to humans, not humans to work.

1. Mechanical Hazards

Sources

- Machines and machine parts
- Transport and aisles
- Floors and platforms
- Ladders and access tools
- **Poor housekeeping**

Effects

- Cuts and wounds
- Loss of fingers or hands
- Bruises, sprains, fractures
- Severe cases → death

A. Noise and Vibration

Effects:

- Temporary or permanent hearing loss
- Vibration diseases (e.g., VWF)

B. Electricity

Effects:

- Burns
- Electric shock
- Death

2. Physical Hazard

C. Temperature

Effects:

- Heat stress:
- Cramps
- Exhaustion
- Heat stroke

D. Lighting

Effects:

- Glare and eye strain
- Fatigue → increased risk of accidents

3. Ergonomic Hazards

Sources

- Poorly designed machinery and tools
- Improper seating/workstations
- Awkward postures
- Repetitive movements
- Heavy loads and excessive force

Don't confuse point one with point three

Effects

- Fatigue
- Repetitive Strain Injuries (RSI)
- Musculoskeletal Disorders (MSD)
- Lower back pain

4. Psycho-social Hazards

Sources

- Boring or monotonous work
- Poor workplace relationships
- Personal problems (family/marital issues)

Effects

- Stress
- Irritability and discomfort
- Mental health disorders

