



**PRACTICE  
OCCUPATIONAL  
HEALTH AND  
SAFETY**

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# OCCUPATIONAL HEALTH AND SAFETY

- Occupational health and safety is the field of public health that studies trends in illnesses and injuries in the worker population and proposes and implements strategies and regulations to prevent them.
- Its scope is broad, encompassing a wide variety of disciplines—from toxicology and epidemiology to ergonomics and violence prevention.



## **Objectives of Occupational Health and Safety**

- The prime objective of OHS at a global level is to ensure that health and safety is accessible to every worker employed in any sector. The World Health Organization (WHO) since its inception has included elements of occupational health in its policy. The need to protect the worker from occupational health hazards and promote safety of all at the workplace has been emphasized in key documents of WHO.



# responsibilities of workers

- using personal protection and safety equipment as required by the employer
- following safe work procedures
- knowing and complying with all regulations
- reporting any injury or illness immediately
- reporting unsafe acts and unsafe conditions
- participating in joint health and safety committees



## **responsibilities of first-line supervisors?**

- instructing workers to follow safe work practices
- enforcing health and safety regulations
- correcting unsafe acts and unsafe conditions
- ensuring that only authorized, adequately trained workers operate equipment
- reporting and investigating all accidents/incidents
- inspecting own area and taking remedial action to minimize or eliminate hazards
- ensuring equipment is properly maintained
- promoting safety awareness in workers




# responsibilities of management?

- providing a safe and healthful workplace
- establishing and maintaining a health and safety program
- ensuring workers are trained or certified, as required
- providing medical and first aid facilities
- ensuring personal protective equipment is available
- providing workers with health and safety information
- supporting supervisors in their health and safety activities



# Occupational Hazards and Hygiene

## ○ Occupational Hazards

- An occupational hazard can be defined as any condition that may adversely affect the well-being or health of the exposed persons. Identification of hazardous agents and groups of workers potentially exposed to these hazards are essential to characterize a workplace involving any occupational activity.
  - Occupational hazards can be divided into two categories: *safety hazards* that cause accidents that physically injure workers, and *health hazards* that result in the developing of a disease. It is important to note that a “hazard” only represents the potential to cause harm. Whether it actually does harm will depend on circumstances, such as the number of workers exposed and the degree and duration of exposure. The occurrence or severity of occupational disease is related to the exposure to factors on the job or in the work environment. Such factors can be:
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- Physical – heat, noise, radiation, vibration, cold
- Chemical – solvents, pesticides, heavy metals, dust
- Biological – Tuberculosis, hepatitis B virus, HIV
- Psychosocial stressors – lack of control over work, inadequate personal support
- Mechanical – causes of work accidents and injuries





# Ergonomics

- Ergonomics is the application of scientific information concerning humans to the design of objects, systems and environment for human use. The aim is to ensure that the job must fit the person in all respects and the work situation should not compromise human capabilities and limitations. So, ergonomics comes into everything that involves people. Work systems, sports and leisure, health and safety should all embody ergonomic principles, if well designed.



# Occupational Health and Safety in Developing Countries

- Health and safety innovations in the workplace, with low-cost and locally relevant solutions, have been initiated in several developing countries. However, occupational health remains neglected in most developing countries under the pressure of overwhelming social, economic, and political challenges.
- In developing countries across the world, OHS issues are not being addressed seriously. The American Journal of Public Health puts forth that the current deficiencies related to occupational health in developing nations of the world, such as Bangladesh, Central America, Lebanon, South Africa and Thailand are due to “a lack of government interest in occupational health, poor data and data collection systems, and weak enforcement of health and safety regulations.”

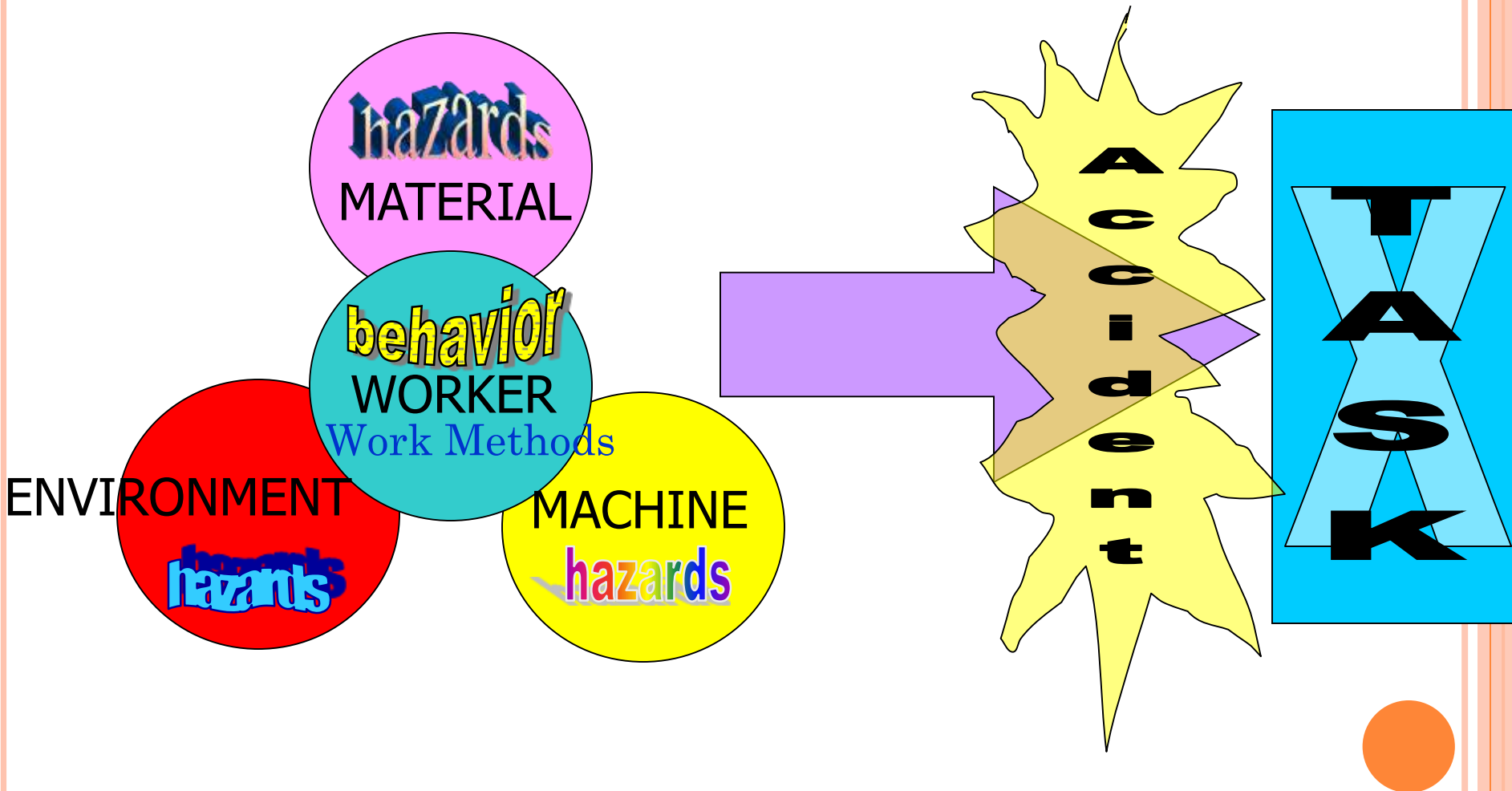




# Personal Protective Equipment



# ACCIDENT THEORY



# Personal Protective Equipment

Personal protective equipment are variety of devices and garments designed to serve as a barrier between workers and workplace hazards.



# Guidelines in Selecting PPE

- 1. Identify the hazard**
- 2. Understand the effect**
- 3. Recommend the proper equipment**
- 4. Train on proper usage and maintenance**



# Personal Protective Equipment: Worker's Last Line of Defense

**Head Protection**

**Hearing Protection**

**Hand & Arm Protection**

**Torso Protection**

**Eye & Face Protection**

**Respiratory Protection**

**Foot Protection**

**Fall Protection**



# HEAD PROTECTION





# HEAD PROTECTION

A rigid device that is worn to provide protection for the head and which is held in place by a suitable suspension.



# Eye & Face Protection

Protective eye and face equipment shall be required where there is a reasonable probability of injury that can be prevented by such equipment.



# Hearing Protection

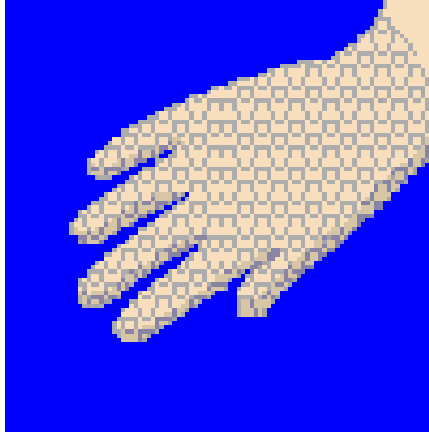


# The Need for Ear Protection and Prevention of Excessive Noise Exposure

Exposure to high noise levels can cause hearing loss or impairment. It can create physical and psychological stress.



# DIFFERENT KINDS OF GLOVES



**Metal mesh gloves resist sharp edges and prevent cuts**



**Leather gloves shield your hands from rough surfaces and heat**



**Vinyl & neoprene gloves protect your hands against toxic chemicals**



# GLOVES CONTINUED...



**Rubber gloves protect you when working around electricity.**



**Welder's gloves protect your hands from heat and flames**



# GLOVES CONTINUED...



**Latex disposable gloves are used to protect your hands from germs and bacteria**



**Lead-lined gloves are used to protect your hands from radiation sources.**



**Cotton gloves help grasp slippery objects and protect against slivers, dirt,, moderate heat or cold.**

# Foot and Leg Protection

## Hazards:

- β **Falling or rolling objects**
- β **Sharp objects**
- β **Hot surfaces**
- β **Wet, slippery surfaces**
- β **Live Electrical conductors**





# Safety Shoes and Boots



**VINYL** footwear  
resists solvents,  
acids, alkalies, salts,  
water, grease, and  
blood.



**NITRILE** footwear  
resists animal fats, oils,  
and chemicals.



# Safety Shoes and Boots



**ELECTROSTATIC  
DISSIPATING**  
footwear conducts  
static electricity to  
floors that are  
grounded.



**ELECTRICAL HAZARD**  
footwear are insulated  
with tough rubber to  
prevent shocks and burns  
from electricity



# LIMITATIONS OF PPE

1. The hazard still exists.
2. A defective PPE offers no protection
3. The PPE may introduce additional hazard.
4. Most PPE are not for continuous use.
5. Improper wearing may not give maximum protection.
6. It may transfer hazard to another location.

