

# Personal protective equipment (PPE)

## PPE

- PPE means **personal protective equipment** or equipment you use to guarantee your (own) safety.
- It is gear or clothing used to protect the wearer from specific hazards and hazardous materials.
- PPE does not reduce or eliminate the hazard but only protects the wearer.

What's wrong with this picture?



## Types of PPE

**PPE can be considered in the following categories, based on the type of protection afforded by the equipment**

- Protective Clothing (lab coat)
- Eye and Face Protection
- Foot Protection
- Hand and Arm Protection
- Head Protection
- Hearing Protection
- Respiratory Protection
- PPE for Specific Workplaces

## Protective Clothing “Lab coat”

**Lab coats are an important part of PPE that serve to**

- Provide a **removable barrier** in the event of an incident involving a spill or splash of hazardous substances.
- Provide protection of skin and personal clothing from accidental contact.
- Prevent the spread of contamination outside the lab (provided they are not worn outside the lab).

## Reasons for wearing a lab coat

- Personal and, indirect, community protection.
- It is a legal requirement under The Personal Protective Equipment at Work Regulations 1992, USA.
- Serves as a simple uniform or a symbol of learning

## Eye and Face Protection

- Selecting the most suitable eye and face protection should take into consideration the following elements:
  - Ability to protect against specific workplace hazards
  - Should fit properly and be reasonably comfortable to wear
  - Should provide unrestricted vision and movement
  - Should allow unrestricted functioning of any other required PPE

## Types of Eye and Face Protection

- Safety Glasses
- Chemical Splash Goggles
- Dust Goggles
- Fluid Resistant Shields
- Face Shields



### Protection from

- Chemical, Biological materials and Radiation

## Foot and legs protection

Potential hazards which may lead to foot and leg injuries include falling or rolling objects, crushing or penetrating materials, hot, corrosive, poisonous or biohazardous substances, electrical hazards, static electricity, or slippery surfaces.

- Clothing must cover all exposed skin including legs

- Sandals, open toe and flip flops are **not appropriate**



## Hand and Arm Protection

- Potential hazards to hands and arms include skin absorption of harmful substances, biological materials, chemical or thermal burns, electrical dangers, bruises, cuts or punctures. Protective equipment includes gloves and arm coverings.

## Types of Protective Gloves

- **There are many types of gloves available today to protect against a wide variety of hazards.**

- **Latex (natural rubber):**
- Good for biological and water-based materials.
- Little chemical protection.
- Hard to detect puncture holes.
- Can cause or trigger latex allergies



## Respiratory protection

- Respirators are used in situations that pose a high-risk for exposure to **infectious aerosols**. The most commonly used respirator in the health care facility is the **N95 respirator**. In a microbiology laboratory, a respirator should be used when it is probable that **aerosols** might be released in the biosafety cabinet.



## Summary

- Personal Protective Equipment
  - Lab coat
  - Gloves
  - Goggles
  - Face mask
  - Foot protection

