Personal Protective Equipment

CFR 1910.132

- Personal protective equipment includes all clothing and other workplace accessories designed to create a barrier against workplace hazards.

The University of Tennessee
Office of Environmental Health & Safety
The standard specifically covers personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, protective shields and barriers.
Employer Responsibilities

The standard requires that the employer assess the workplace to determine if hazards that require the use of personal protective equipment are present or are likely to be present.
If hazards or the likelihood of hazards are found, employers must select and have affected employees use properly fitted personal protective equipment suitable for protection from existing hazards.
Employee Responsibility

- Using personal protective equipment requires hazard awareness and training on the part of the user.
- Employees must be aware that the equipment does not eliminate the hazard.
- If the equipment fails, exposure will occur.
Employee Responsibility, Cont.

- To reduce the possibility of failure, equipment must be properly fitted and maintained in a clean and serviceable condition.

- Both employer and employee must understand the equipment’s purpose and its limitations.
Quiz Time!

1. Personal protective equipment is designed to create a:
   a. positive atmosphere within the workplace
   b. barrier against workplace hazards
   c. a false sense of security

1. Using personal protective equipment requires hazard awareness and training on part of the user.
   a. True
   b. False
Identifying Hazards To Your Body

- Impact
- Penetration
- Compression (roll-over)
- Chemicals
- Heat
- Harmful dust
- Light radiation
Eye and Face Protection

General Requirements

- Each affected employee shall use appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.
Eye and Face Protection, Cont.

- **PPE:**
  - Safety Glasses
  - Goggles
  - Face Shields

- **Protection from:**
  - Flying particles
  - Light
  - Dust, Mist, Vapors
  - Splash hazards
  - Chemical Exposure
Head Protection
General Requirements

- All head protection is designed to provide protection from impact and penetration hazards caused by falling objects.
- The employer shall ensure that each affected employee wears a protective helmet when working in areas where there is a potential for injury to the head from falling objects.
Head Protection, Cont.

- **PPE:**
  - Hard Hats (Electrical & Non-electrical rated)
  - Welding helmets

- **Protection from:**
  - Falling objects
  - Impact
  - Welding radiation & By-products
Foot Protection

General Requirements

- The employer shall ensure that each affected employee uses protective footwear when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, and where such employee’s feet are exposed to electrical hazards.
Foot Protection, Cont.

- **PPE:**
  - Steel Toe
  - Grip Tread
  - Puncture Proof
  - Electrically rated
  - Chemical rating

- **Protection from:**
  - Roll over
  - Impact
  - Puncture
  - Electrical Shock
  - Chemical exposure
Hand Protection

General Requirements

- Employers shall select and require employees to use appropriate hand protection when employees’ hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes.
Hand Protection, Cont.

- **PPE:**
  - Thermal protection (Hot/Cold)
  - Cut resistant / Cut Proof
  - Electrically rated
  - Chemical Rated

- **Protection from:**
  - Cuts
  - Abrasions
  - Burn / Freeze
  - Chemical contact
1. Head protection can provide protection from radiation and by products.
   a. True
   b. False

2. The employer must ensure that each employee, whose feet are exposed to electrical hazards, uses protective footwear.
   a. True
   b. False
Engineering Controls

- Personal protective equipment should not be used as a substitute for engineering, work practice, and/or administrative controls. PPE should be used in conjunction with these controls to provide for employee safety and health in the workplace.
Training

General Requirements

- The employer shall provide training to each employee who is required by this section to use PPE.
- Each such employee shall be trained to know at least the following:
Training, Cont.

- When PPE is necessary;
- What PPE is necessary;
- How to properly don, remove, adjust, and wear PPE;
- The limitations of the PPE;
- The proper care, maintenance, useful life and disposal of the PPE.
Training, Cont.

- Each affected employee shall demonstrate an understanding of the training specified in paragraph (f)(1) of the General Requirements section,

- and the ability to use PPE properly, before being allowed to perform work requiring the use of PPE.
Employee-Owned Equipment

- Where employees provide their own protective equipment, the employer shall be responsible to assure its adequacy, including proper maintenance, and sanitation of such equipment.
Retraining

When the employer has reason to believe that any affected employee who has already been trained does not have the understanding and skill required by paragraph (f)(2) of the General requirements section, the employer shall retrain each such employee.
Retraining Is Required, But Not Limited To:

- Changes in the workplace render training obsolete;
- Changes in the types of PPE to be used render training obsolete;
- Inadequacies in an affected employee’s knowledge or use of assigned PPE indicate that the employee has not retained the requisite understanding or skill.
Employers are required to certify in writing that training has been carried out and that employees understand it. Each written certification shall contain the name of each employee trained, the dates(s) of training, and identify the subject certified.
PPE - Where In The Standard?

- General requirements  
  CFR 1910.132
- Eye and Face protection  
  CFR 1910.133
- Respiratory protection  
  CFR 1910.134
- Head protection  
  CFR 1910.135
- Electrical protective devices  
  CFR 1910.137
- Hand protection  
  CFR 1910.138
- Non-mandatory guidelines  
  CFR 1910 Subpart I App A&B
Remember!

- PPE devices alone should not be relied on to provide protection against hazards, but should be used in conjunction with guards, engineering controls, and sound manufacturing practice.
Any Questions?
1. Personal protective equipment should never be used in conjunction with engineering or administrative controls.

   a. True
   b. False

2. Where the employees provide their own protective equipment:

   a. The employer is relieved of all responsibility for the employees safety
   b. The employer must compensate the employee for the cost of the equipment
   c. The employer shall be responsible to assure equipment adequacy, including maintenance, and sanitation.