



## Personal Protective Equipment

Personal protective equipment, or PPE, is designed to protect workers from serious workplace injuries or illnesses resulting from contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards. Besides face shields, safety glasses, hard hats, and safety shoes, protective equipment includes a variety of

### Employer Responsibilities

OSHA's primary personal protective equipment standards are in Title 29 of the Code of Federal Regulations (CFR), Part 1910 Subpart I, and equivalent regulations in states with OSHA approved state plans, but you can find protective equipment requirements elsewhere in the General Industry Standards. For example, 29 CFR 1910.156, OSHA's Fire Brigades Standard, has requirements for firefighting gear. In addition, 29 CFR 1926.95-106 covers the construction industry. OSHA's general personal protective equipment requirements mandate that employers conduct a hazard assessment of their workplaces to determine what hazards are present that require the use of protective equipment, provide workers with appropriate protective equipment, and require them to use and maintain it in sanitary and reliable condition.

Using personal protective equipment is often essential, but it is generally the last line of defense after engineering controls, work practices, and administrative controls. Engineering controls involve physically changing a machine or work environment. Administrative controls involve changing how or when workers do their jobs, such as scheduling work and rotating workers to reduce exposures. Work practices involve training workers how to perform tasks in ways that reduce their exposure to workplace hazards.

As an employer, you must assess your work-place to determine if hazards are present that require the use of personal protective equipment. If such hazards are present, you must select protective equipment and require workers to use it, communicate your protective equipment selection decisions to your workers, and select personal protective equipment that properly fits your workers.

You must also train workers who are required to wear personal protective equipment on how to do the following:

- Use protective equipment properly,
- Be aware of when personal protective equipment is necessary,
- Know what kind of protective equipment is necessary,
- Understand the limitations of personal protective equipment in protecting workers from injury,
- Put on, adjust, wear, and take off personal protective equipment, and
- Maintain protective equipment properly.

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# Personal Protective Equipment

## Protection from Head Injuries

Hard hats can protect your workers from head impact, penetration injuries, and electrical injuries such as those caused by falling or flying objects, fixed objects, or contact with electrical conductors. Also, OSHA regulations require employers to ensure that workers cover and protect long hair to prevent it from getting caught in machine parts such as belts and chains.



## Protection from Foot and Leg Injuries

In addition to foot guards and safety shoes, leggings (e.g., leather, aluminized rayon, or other appropriate material) can help prevent injuries by protecting workers from hazards such as falling or rolling objects, sharp objects, wet and slippery surfaces, molten metals, hot surfaces, and electrical hazards.



## Protection from Eye and Face Injuries

Besides spectacles and goggles, personal protective equipment such as special helmets or shields, spectacles with side shields, and faceshields can protect workers from the hazards of flying fragments, large chips, hot sparks, optical radiation, splashes from molten metals, as well as objects, particles, sand, dirt, mists, dusts, and glare.



## Protection from Hearing Loss

Wearing earplugs or earmuffs can help prevent damage to hearing. Exposure to high noise levels can cause irreversible hearing loss or impairment as well as physical and psychological stress. Earplugs made from foam, waxed cotton, or fiberglass wool are self-forming and usually fit well. A professional should fit your workers individually for molded or preformed earplugs. Clean earplugs regularly, and replace those you cannot clean.



## Protection from Body Injury

In some cases workers must shield most or all of their bodies against hazards in the work-place, such as exposure to heat and radiation as well as hot metals, scalding liquids, body fluids, hazardous materials or waste, and other hazards. In addition to fire-retardant wool and fire retardant cotton, materials used in whole-body personal protective equipment include rubber, leather, synthetics, and plastic.



## When to Wear Respiratory Protection

When engineering controls are not feasible, workers must use appropriate respirators to protect against adverse health effects caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors. Respirators generally cover the nose and mouth or the entire face or head and help prevent illness and injury. A proper fit is essential, however, for respirators to be effective. Required respirators must be NIOSH-approved and medical evaluation and training must be provided before use.



**THINK**  
**SAFETY FIRST**  
**WEAR YOUR**  
**PPE**