



Personal Protective Equipment

TALKING POINTS

What is Personal Protective Equipment (PPE)?

Personal protective equipment refers to the types of equipment most commonly used to protect the head, torso, arms, hands and feet. Hearing and vision protection also falls into this category.

PPE should always be worn when the job hazard requires it. PPE is not always the best way to protect against job hazards. Removing the hazard is a better alternative. But when this isn't possible, PPE must be used.

According to OSHA, employers should try to prevent employee exposure to potential machine or work environment hazards with an *engineering control*. If employees can be removed from exposure by changing the way they do their jobs, then the hazard can be eliminated with a *work practice* or *administrative control*.

When engineering or administrative controls are not feasible or don't provide sufficient protection, employers must implement a PPE program, provide personal protective equipment to their workers and ensure its proper use. Employers are also required to train each worker who is required to use personal protective equipment to know:

- When using PPE is necessary.
- What kind of PPE is necessary.
- How to properly put it on, adjust, wear and take it off.
- The limitations of the equipment.
- Proper care, maintenance, useful life, and disposal of the equipment.

What are most important things to know about PPE?

Whatever type of personal protective equipment you need for your job, remember these three key points:

- You must have the right type of equipment.
- The PPE must fit you correctly.
- You must wear your PPE whenever it's needed.

Here are some of the most commonly used kinds of personal protective equipment.

Hearing Protection

When noise exceeds OSHA's allowable limits, the employer must provide and require use of properly fitted ear plugs, ear muffs or other acceptable devices.



What factors determine when hearing protection must be used?

- How loud is the noise, as measured in decibels?
- What is the duration of each employee's exposure to the noise?
- Do employees move between separate work areas with different noise levels?
- Is noise generated from one source or multiple sources?

Generally, the louder the noise, the shorter the exposure time before the employer must provide hearing protection. For instance, employees exposed to a noise level of 85 decibels or higher for an 8-hour work day must have hearing protection made available to them. At 90 decibels, they *must* be worn. Workers using hearing protection must be able to hear or see emergency notification alarms.

What kinds of hearing protection is available?

- Single-use earplugs – self forming and, when properly inserted, work as well as most molded earplugs.
- Pre-formed or molded earplugs – disposable or reusable, must be individually fitted by a professional.
- Earmuffs – require a perfect seal around the ear.

Make sure hearing protection fits well. If not adjusted properly, it will not provide the rated protection. It is very important that hearing protection be kept clean – especially if in-the-ear types are used. The PPE should be cleaned according to the manufacturer's instructions, and stored in a clean container until needed.

Vision Protection

Eyes are particularly vulnerable. Many jobs require eye protection. Even minor injuries can result in sight loss. Safety goggles must be worn to protect against splashes and fragments. Institute 100% compliance in areas where work requires eye protection. Depending on the job, you may need special goggles, spectacles with side shields, or face shields. Regular eyeglasses or sunglasses are not PPE.

Eye protection must protect against the specific hazard encountered in the workplace. It must be reasonably comfortable to wear, not restrict vision or movement, be durable and easy to clean and disinfect, and must not interfere with the function of any other required PPE. Some common eye protection:

- Safety spectacles — eyeglasses with safety frames made of metal or plastic and impact-resistant lenses; some accommodate side shields or prescription lenses.
- Goggles — tight-fitting, completely covers eyes, eye sockets and area immediately surrounding the eyes.
- Welding shields — vulcanized fiber or fiberglass with filtered lens; protect against burns, flying sparks, metal spatter, slag chips; lenses have a shade number appropriate to specific light radiation hazards.
- Face shields — transparent plastic extends across entire face from eyebrows to below chin; protect against nuisance dusts and sprays of hazardous liquids.



Skin

Exposure to chemicals or pollutants requires proper body protection. As with all protective equipment, protective clothing is available to protect against specific hazards.

You need to provide personal protective equipment for the parts of the body exposed to possible injury. Depending upon hazards in your workplace, you may need to wear one or more of the following:

- Gloves
- Vests
- Aprons
- Coveralls
- Jackets

Always wear the correct glove for the job. Carefully choose the type that protect against the specific chemical or physical hazard you face.

Hands

Handling heavy, rough or sharp materials requires gloves. Use nonconductive gloves for high voltages, metal gloves for cutting and chemical-resistant gloves for a variety of industrial exposures.

Gloves made from a wide variety of materials are designed for virtually every workplace hazard. In general, they are divided into four groups:

- Durable work gloves made of metal mesh, leather, or canvas
- Fabric and coated fabric gloves
- Chemical and liquid resistant gloves
- Insulated rubber gloves

Face

Grinding and chipping operators, welders and employees exposed to many other hazards, require facial protection. Some examples of facial protection are face shields, goggles and welding shields (see Vision Protection above).

Head

Mandate use of approved hard hats for any work that has an overhead hazard. Don't use metallic hats near electrical hazards. Hard hats are divided into three industrial classes:

- Class G - These helmets are for general service. They provide good impact protection but limited voltage protection. They are used mainly in mining, building construction and manufacturing.
- Class E - These helmets should be used if your employees are engaged in electrical work. They protect against falling objects and high-voltage shock and burns.
- Class C - These helmets are comfortable, lightweight and offer limited protection. They do not protect against falling objects or electric shock.



Look at the inside of any protective helmet you are considering for your employees, and you should see a label showing the manufacturer's name, the ANSI standard it meets and its class.

Feet

Safety shoes suited to the hazard sharply reduce injuries to toes and feet. Where puncture wounds to the foot are a hazard, as in construction/demolition, use stainless steel insoles. Sneakers, open-toed or worn-down shoes increase accident potential.

Consider non-slip shoes when slipping hazards exist.

Some pointers on the use of PPE:

- Everyone who needs to wear PPE should be convinced of the need for safety equipment. Supervisors should set the example by wearing their own PPE every time it's required.
- Protection should cover all exposed areas. For example, unless a hazard is strictly frontal, goggles should have side shields. Provide appropriate face shields for jobs involving flying particles, exposure to chemicals, heat, molten metals, or hot solutions.
- Durability is important – Safety equipment that deteriorates during use can be very dangerous.
- Comfort – Uncomfortable protective equipment reduces productivity, and workers will avoid wearing it.
- Worker acceptance – Obtained through proper safety training and enforcement of work rules.
- All PPE should comply with all applicable American National Standards Institute (ANSI) standards.

What must employers do when implementing a PPE program?

- Assess the workplace for hazards.
- Use engineering and work practice controls to eliminate or reduce hazards before using PPE.
- Select appropriate PPE to protect employees from hazards that cannot be eliminated.
- Inform employees why the PPE is necessary and when it must be worn.
- Train employees how to use and care for their PPE and how to recognize deterioration and failure.
- Require employees to wear selected PPE in the workplace.