



# **Risk Control** BULLETIN

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## PERSONAL PROTECTIVE EQUIPMENT

When engineering and administrative controls are not feasible or effective in reducing exposure to hazards to acceptable levels, the use of personal protective equipment (PPE) may offer desired protection. PPE includes all clothing and accessories designed to protect against safety and health hazards.

If PPE is to be used, a PPE program should be implemented. This program should address the hazards present; and the selection, maintenance, and use of PPE. In addition, attend to the training of employees and monitoring of the program to ensure its ongoing effectiveness. PPE is categorized by the area of the body protected, the type of hazard, and by the type of garment or accessory needed for adequate protection.

**Head Protection** — If you work in locations where there are risks of receiving head injuries, wearing approved head protection is highly recommended. Hard hats/helmets are the most common type of head PPE. They have a hard outer shell and a shock absorbing lining that incorporates a headband and straps that suspend away from the head. This design provides shock absorption during an impact and ventilation during normal wear. In general, protective helmets or hard hats are designed to:

- Protect your head from falling or flying objects.
- Cushion the blow if you hit your head on something.

- Insulate you from burns and electric shocks (if it's a non-conductive type).
- Prevent your hair from being tangled in machinery or equipment.



Photo source: Cal/OSHA

Inspection and maintenance of your hard hat should never be ignored. If your hard hat is going to provide you with maximum protection, it must be in good condition. Inspect it regularly and replace any part or the entire helmet if necessary. Never take a chance with your safety. Hard hat straps/suspension should be replaced after no more than twelve months, and the entire helmet replaced after five years of use.

**Hand Protection** — Potential hand hazards include: skin absorption of harmful substances, chemical or thermal burns, electrical dangers, bruises, abrasions, cuts, punctures, fractures, and amputations. Gloves are important, but they are not all the same. It is important that the proper glove is selected for the job as follows:

- Use **wire mesh gloves** if there is an extreme danger of cuts.
- Use **insulated rubber gloves** (with canvas or leather outer gloves) for electrical work.
- Use **non-flammable gloves** when welding.
- Only special **chemical resistant gloves** will protect you from chemicals. Different types stop different chemicals from getting through to your skin. The package should tell you which chemicals the glove is designed for.

Inspect protective gloves before each use to ensure that they are not torn, punctured, or made ineffective in any way. A visual inspection will help detect cuts or tears, but a more thorough inspection by filling the gloves with water and tightly rolling the cuff towards the fingers will help reveal any pinhole leaks. Gloves that are discolored or stiff may also indicate deficiencies caused by excessive use or degradation from chemical exposure.

Any gloves with impaired protective ability should be discarded and replaced. A decision to reuse chemically-exposed gloves should take into consideration the toxicity of the chemicals involved; and factors such as duration of exposure, storage, and temperature.



Photo source: elcosh

**Eye Protection** — Wearing improper or poorly fitting eye protection, or not wearing eye protection, accounts for most occupational eye injuries. It is very important that you wear appropriate eye protection that meets American National Standards Institute (ANSI) standards and fits properly. You should protect your eyes at all times on the job. Like all safety devices, eye protection is there for you and your eyes. Examples of tasks that often lead to eye injuries include: lawn mowing, weed eating, welding, grinding, cutting, filing, sawing, chipping, hammering, chiseling, and even sun exposure, to name just a few. The use of safety glasses, goggles, special lens, or a face shield can help minimize these risks.

Depending on the particular hazard, you may need safety glasses with **side shields**, **goggles**, or a **full face shield**. If you wear goggles, there are several types. With acids and some other chemicals, you may need special **splash resistant goggles**. With lasers, use **laser safety goggles**.

**Hearing Protection** — Noise levels above 85 decibels can permanently damage hearing. There are numerous work operations that can produce noise levels dramatically above that threshold including: weed eating, grinders, routers, saws, hammers, and other impact devices such as jack hammers, to name just a few. A good rule of thumb is if you must raise your voice to another person who is two feet

away, you probably need hearing protection. The use of high quality ear plugs or ear muffs will likely minimize noise threats. Hearing protection is only effective if properly worn.

Fitting instructions for disposable earplugs:

- Hold the earplug between your thumb and forefinger.
- Roll and compress the entire earplug to a small, crease-free cylinder.
- While still rolling, use your other hand to reach over your head and pull up and back on your outer ear. This straightens the ear canal, making way for a snug fit.
- Insert the earplug and hold for 20 to 30 seconds. This allows the earplug to expand and fill your ear canal.
- Test the fit. In a noisy environment and with earplugs inserted, cup both hands over your ears and release. You should

not notice a significant difference in the noise level. If the noise seems to lessen when your hands are cupped over your ears, your earplugs are probably not fitted properly. Remove and refit following instructions.

**Respiratory Protection** — Breathing toxic gases, fumes, and particulate matter are all hazards that must be protected against. Persons with allergies and other respiratory ailments can also be hypersensitive to respiratory risks. Activities like mowing, weed eating, grinding, welding, and working around chemicals can cause respiratory injuries.

Respirators protect the user in two basic ways:

1. By removing contaminants from the air (particulate respirators that filter out airborne particles, and air-purifying respirators that filter out chemicals and gases).
2. By supplying clean respirable air from another source (e.g., airline respirators that use compressed air from a remote source, and self-contained breathing apparatus (SCBA) that include their own air supply).

# Fall Protection

Falls are the third leading cause of unintentional death in the U.S., accounting for nearly 32,000 deaths in 2014, according to the National Safety Council (NSC). The risk of falling rises with age. In homes and communities, more than 31,000 people died in a fall in 2014. In the workplace, nearly 600 people died and 47,000 were injured in 2013.

Consult a safety data sheet (SDS) and manufacturer instructions for the appropriate respirator, as not all respirators are designed the same. Employees may be able to use respiratory protection on a voluntary basis when not exposed to hazards exceeding permissible exposure levels (PELs), but must follow the OSHA requirements for voluntary use of respiratory protection as outlined in the employer's respiratory protection program.

**Foot Protection** — Foot injuries can occur for a variety of reasons. The use of boots or steel-toed shoes instead of tennis shoes, sandals, or flip flops can help prevent foot injuries. Possible foot or leg injuries could result from falling, electric hazards, rolling objects, crushing, or penetrating materials. It is strongly recommended that you wear OSHA approved foot gear while working in the field. If your job function includes exposure to electrical hazards, non-conductive footwear should be worn. On the other hand, workplace exposure to static electricity may necessitate the use of conductive footwear, so be sure you have the right PPE for the job.

Common features of protective footwear/gear are:

- Steel-toed footwear and puncture-resistant soles and uppers for workers handling heavy materials or using rotating machinery near their feet.
- Rubber-soled shoes for electricians, construction workers, and others who work near live electrical conductors.
- Slip-resistant shoes (usually rubber-soled with a grip pattern) for anyone who works in wet environments.

If you are ever in doubt about the use, inspection, or maintenance of your PPE, contact the manufacturer directly, or your industrial health and safety officer or representative for instructions and recommendations. Your PPE will take care of you in direct proportion of how well you take care of it. Properly maintaining your PPE and performing detailed inspections prior to each use are well worth the effort.

## Additional Resources

<https://www.osha.gov/Publications/osha3151.pdf>  
<https://www.osha.gov/SLTC/personalprotectiveequipment/>  
[https://www.osha.gov/SLTC/personalprotectiveequipment/hazards\\_solutions.html](https://www.osha.gov/SLTC/personalprotectiveequipment/hazards_solutions.html)  
<https://www.cdc.gov/niosh/ppe/>

## Fall Prevention Tips

- Clean up all spills immediately.
- Stay off freshly mopped floors.
- Secure electrical and phone cords out of traffic areas.
- Remove small throw rugs or use non-skid mats to keep them from slipping.
- Keep frequently used items in easily reachable areas.
- Wear shoes with good support and slip-resistant soles. Arrange furniture to provide open walking pathways.
- Keep drawers and cabinet doors closed at all times.
- Install handrails on all staircases on both sides.
- Remove tripping hazards (paper, boxes, books, clothes, toys, shoes) from stairs and walkways.
- Ensure adequate lighting both indoors and outdoors.
- Remove debris from exterior walkways.

## Ladder Safety

- Always keep at least three points of contact with the ladder (i.e. two hands and one foot or two feet and one hand).
- Place the base on a firm, solid surface.
- A straight or extension ladder should be placed 1 foot away from the surface it rests against for every 4 feet of ladder height.
- When you climb, always face the ladder and grip the rungs, not the side rails.
- Climb down a ladder one rung at a time.



Photo: thehillsareburning.blogspot.com

# What's Wrong With This Picture?

Look at the photo below to identify what is wrong in the picture. You may want to review this picture during your next safety meeting.



## H.R. LA BOUNTY SAFETY AWARDS PROGRAM

Cut off date:  
October 16, 2017

[http://www.acwajpia.com/  
filecabinet/rmnopw/  
Safety\\_Awards\\_Nomination.pdf](http://www.acwajpia.com/filecabinet/rmnopw/Safety_Awards_Nomination.pdf)

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# Answer - What's Wrong With This Picture?

### Risk Management Staff

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Terry Lofing, Administrative Assistant II  
Lee Patton, Senior Risk Management Advisor  
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Answer:

- Little to no upstream taper
- Traffic control devices have chevrons (slanted stripes) facing incorrect direction. The chevrons should be sloped down toward the traffic lane, not toward the work zone.
- While the 29-inch cone with two retro-reflective stripes is approved by the MUTCD for nighttime work, the lack of uniformly with traffic control devices can further confuse road users.