

Personal Protective Equipment

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Personal Protective Equipment (PPE) is some of the most common safety equipment, but also the most ignored or misused. Most PPE is very easy to use and is designed to protect us from a wide range of hazards, but many workers choose not to wear their PPE and many injuries occur as a result. Let's look at some types of PPE:

Eye Protection

The eyes are very important in our lives, allowing us to see the world around us. There are two main types of eye protection; safety glasses and safety goggles. Both must meet the ANSI Z87 Standard. Safety glasses are impact resistant and must be designed to provide protection to the eyes from the front and the sides. Safety glasses do not provide protection from liquids and fine dusts. For this level of protection, you need safety goggles. Most workers are exposed to eye hazards nearly every minute they are at work, so eye protection, in most cases, should be the first PPE put on in the morning and left on till the end of the work day. Also remember that face shields are designed to protect the face, not the eyes. So when wearing a face shield, you must wear safety glasses or goggles underneath.

Gloves

There are many different types of gloves, each designed to protect against a different hazard. Leather and canvas gloves are designed to protect the worker from rough material and minor cuts and abrasions. Rubber or plastic type gloves are for protection against biological hazards and chemicals. Chemical protective gloves are made out of many different materials, each designed to protect against specific chemicals. For example, gloves designed to provide protection from solvents may dissolve when exposed to caustics. There are also specialty gloves on the market, some made of chain to protect against knives while others provide protection from needle sticks. So make sure you match the glove, or combination of gloves, to the type of hazards you'll be facing.

Hard Hats

Hard hats are designed to protect your head. There are three classifications of hard hat: Class G, Class E and Class C. Class G, or General, is the most common type of hard hat, designed for impact protection and for electrical protection up to 2,200 volts. Class E, Electrical, provides up to 20,000 volts of electrical protection. Class C, Conductive, are lightweight hats which provide no electrical and only limited impact protection. All hard hats must meet the ANSI Z89 Standard and must be worn properly in order to provide the correct protection. Many workers wear their hard hats backwards, but unless the manufacturer specifically allows it, this should not be allowed.

Hearing

Your hearing can be damaged by exposure to loud noises. This can occur suddenly or over a period of time, but once the damage occurs it cannot be repaired. Hearing protection is designed to lower the noise decibels to



safe levels while still allowing the worker to communicate and to hear what is going on around him. There are two main types of hearing protection: ear plugs and ear muffs. Ear plugs are designed to be inserted into the ear canal to block some of the noise. There are many different designs, but all work essentially the same way. Ear muffs are designed to be worn over the ears to block some of the noise. Employers must consider hearing protection for their workers whenever the noise levels reach 85 decibels, and must provide protection at 90 decibels and over. All hearing protection has a Noise Reduction Rating (NRR) which tells how much noise is filtered out. Pick a NRR which will lower the decibels entering your ears to safe levels. When using ear plugs, make sure your hands are clean before inserting them into your ears as any dirt or other foreign material may cause an ear infection.

Footwear

The type of protective footwear used is very dependent on the hazard you are facing. Working in water or chemicals may require waterproof or chemical resistant boots. Outdoor work may require a leather shoe or boot with puncture resistant soles and reinforced toe. Reinforced toe shoes provide protection against things dropped on the toes – which account for 60% of all foot injuries.

High Visibility Clothing

There are three classifications of high visibility clothing, all based on the posted speed of the traffic. Class 1 is designed for speeds of under 25 mph, and are mainly used by parking lot attendants. Class 2 is for 25 mph to 50 mph, and is the most common among municipal workers. Class 3 is for speeds over 50 mph and/or in poor visibility conditions. The difference in the classes is the amount of reflective material on the clothing. Class 3 has much more reflective material than Class 1. Color is not part of the classification, but you should pick the color, or combination of colors, that will best allow your workers to be seen. For example if you use orange traffic cones you probably should pick a color other than orange so that workers don't look like large cones to motorists passing through the workzone. Again high visibility clothing must be worn to be effective.

Respiratory

Inhalation is the quickest and easiest way for hazardous materials to enter the body. Respirators provide protection by either supplying us with breathable air, or by filtering out the hazardous material before it enters our lungs. Self Contained Breathing Apparatus (SCBA) provides clean air to the worker from a tank which he/she carries. Fire fighters commonly use this equipment when entering a smoke filled building. Air purifying respirators filter the air as we breath and come in several different types. Full face respirators cover the entire face and provide eye protection as well. Half face respirators only cover the mouth and nose, while some respirators (N95 for example) resemble a simple dust mask. All respirators require a written plan, medical evaluations and annual training and fit testing to ensure that workers are wearing the equipment correctly and that it is fitting them and providing adequate protection.

In order to choose the correct PPE, the employer must first conduct a hazard assessment to determine what hazards are present and how the workers can be protected from those hazards. Engineering and/or Administrative Controls must be used if feasible to eliminate the hazard as PPE is really the last line of defense. Employers must supply PPE to their employees free of charge (there are some different rules regarding protective footwear), replace it when damaged or lost, provide training on the PPE and must ensure that the PPE is being worn properly and when necessary.

Personal Protective Equipment is your last line of defense against the common hazards found in the workplace. But it's only effective when worn properly and whenever necessary. Take care of your PPE, put it on when arriving at your work location and take it off at the end of the day or when the hazards are no longer present. Properly wearing the correct PPE can eliminate up to 100% of the injuries associated with some hazards – so wear your PPE.

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