

**PPE:**  
***Your Last Layer Of Protection***

This easy-to-use Leader's Guide is provided to assist in conducting a successful presentation. Featured are:

**INTRODUCTION:** A brief description of the program and the subject that it addresses.

**PROGRAM OUTLINE:** Summarizes the program content. If the program outline is discussed before the video is presented, the entire program will be more meaningful and successful.

**PREPARING FOR AND CONDUCTING THE PRESENTATION:** These sections will help you set up the training environment, help you relate the program to site-specific incidents, and provide program objectives for focusing your presentation.

**REVIEW QUESTIONS AND ANSWERS:** Questions may be copied and given to participants to document how well they understood the information that was presented. Answers to the review questions are provided separately.

**INTRODUCTION**

Most of us already know that personal protective equipment, or PPE, is required for the various jobs we perform and the many areas in the plant into which we enter. Yet thousands of injuries occur each year to employees who are either not wearing any protective equipment at all; or are not wearing the appropriate protection for their job task or work environment. This program discusses the proper selection and use of common types of personal protective equipment and features some worker testimonials that provide valuable lessons about the importance of wearing your PPE.

Topics include eye and face protection, hardhats, foot protection, gloves and hearing protection.

**PROGRAM OUTLINE**

**BACKGROUND**

- To ensure the proper protection of workers from hazards, your company has thoroughly examined the job tasks and work environments at your facility and has assessed any hazards that may exist.
- Employees are protected from those hazards in a variety of ways, including engineering controls such as machine guarding or administrative controls such as restricted access.
- If a hazard cannot be eliminated or controlled by other means, then employees must be protected from that hazard by wearing appropriate personal protective equipment, PPE. This means that your PPE is your last line of defense against injury.
- When PPE is necessary, the company will generally provide it to you free of charge; however, you may be required to purchase some items such as safety shoes or prescription safety glasses on your own.

**TRAINING & RESPONSIBILITY TO WEAR PPE**

- Before being asked to perform any task which requires protective equipment, you will be trained on the proper selection and use of the particular equipment to be worn.
- You must then be able to demonstrate that you understand how this equipment is to be used and what situations require its use.
- If you have any questions about your protective equipment, ask your supervisor before beginning a job task. Keep in mind that wearing the required personal protective equipment is one of the required duties of your job.

- Remember that PPE is your last layer of protection and may be the only thing between you and a traumatic or disabling injury. There is simply no valid excuse for not wearing it.

### **EYE AND FACE PROTECTION**

- Standard safety glasses are designed to provide the most basic protection for our eyes from various workplace hazards.
- Many facilities require safety glasses with side shields as the minimum level of mandatory eye protection for all workers.
- Safety glasses with side shields do not provide enough protection for all situations. Work which generates an abundance of small particles or work that may lead to the splashing or spraying of hazardous liquids will require safety goggles for additional eye protection.
- Many jobs which generate eye hazards also create hazards to our face as well, but keep in mind that eye protection is not designed to protect your face and face protection is not designed to protect your eyes. Anytime face protection is required, you must also wear eye protection.
- Complete face protection is necessary when performing jobs such as chipping and grinding. Face protection is also required when performing jobs which place you at risk of being splashed or sprayed with a hazardous liquid or chemical.
- When face protection is required, choosing a face shield that extends below the chin provides maximum protection.
- Again, always wear eye protection in conjunction with a face shield.

### **LASER & WELDING EYEWEAR**

- Workers whose jobs involve the use of lasers or those who perform welding operations must be protected from ultraviolet light.
- Laser operators must match their eye protection to the wavelength of the specific laser beam being used. Be aware that safety eyewear for lasers looks similar to other safety eyewear; make certain you have selected the proper eye protection for the laser you plan to use.
- Before performing welding operations, select a lens appropriate for the intensity of the light to be produced. You should choose the darkest shade that still allows adequate vision for the job.
- Be aware that lenses lose their effectiveness over time and should be changed periodically.
- If auto-darkening lenses are used, make sure you fully understand how to adjust and operate your lens before use.
- Eye hazards are everywhere and many eye injuries occur to workers and pedestrians who are simply passing through a work area and are not wearing appropriate protection. Always wear the appropriate eye protection for any area into which you enter.

### **HARDHATS**

- You must wear a hardhat in any situation where there is the potential for a head injury from falling or moving objects, there is a risk of striking the head or there is potential to contact exposed live electrical parts.
- Standard hardhats must be able to withstand a 40 foot-pound impact, which is the equivalent of a one pound hammer falling 40 feet.

- To do this, a hardhat consists of two parts: the outer shell and the inner suspension system.
- The suspension system is designed to absorb the impact of a striking object. The effectiveness of the suspension system is reduced if objects are placed between it and the outer-shell.
- The hardhat is designed to be worn forward at all times, with the bill of the hat in front to provide additional protection to the nose and face. Turning it backwards can reduce its effectiveness.
- Hardhats are divided into types and classes. Hardhats rated Type I are designed to protect against a direct impact to the top of the hardhat; hardhats rated Type II are designed to protect both top and side impacts.
- Workers who perform electrical work should understand that a Class G hardhat is rated for up to 2,200 volts while a hardhat rated Class E is rated up to 20,000 volts.
- Hardhats rated as Class C offer no electrical protection and should not be used near energized parts.
- You should keep your hardhat as clean as possible and inspect it for damage frequently.
- Look for cracks, brittleness, fading or a chalky appearance. These are indications of damage from excessive exposure to sunlight or chemicals. If this type of damage is found, the hat must be removed from service and replaced.
- Also inspect the suspension system. Inspect the webbing and other parts for damage as well as proper installation. Replace damaged parts if possible or get another hat if it cannot be repaired.
- The most important thing to remember about hardhats is to wear them. If hardhats are required at your facility, make it a habit to wear it all the time. This is the only way to ensure you have it on at the moment it's needed most.

## **FOOT PROTECTION**

- Foot protection starts with the selection of proper footwear. Open-toe shoes such as sandals or shoes made of lightweight fabrics such as running shoes do not provide any protection from typical workplace hazards and should not be worn.
- At a minimum, workplace shoes should consist of a sole which provides good traction, an enclosed toe box and is constructed of solid leather sides and uppers.
- This type of shoe provides protection from the minor bumps and impacts which can occur in the workplace.
- Many industrial and manufacturing operations will require additional foot protection in the form of safety shoes and boots with a reinforced toe box and puncture-resistant soles.
- A reinforced toe box helps protect the toes from being crushed from impacts, while puncture-resistant soles can prevent sharp objects from penetrating the bottom of our foot.
- In some environments, protection of the top of the foot, the metatarsal area, may be required. Some safety boots and shoes provide this protection in the form of metatarsal guards.
- Many safety shoes do not outwardly appear to be much different than our regular shoes, but never forget that safety shoes provide protection from punctures and impacts while regular shoes do not.

## **GLOVES**

- Our hands are our greatest tool. They are also the body part that we expose to the most hazards.

- To protect our hands, we must make sure to select the proper type of glove for the job at hand and we must keep in mind that no single glove is effective for all tasks.
- To help select the proper glove for the job, check the glove manufacturer's recommendations to determine if the glove you are considering will protect you against the hazards of a particular job.
- When working with chemicals, you can also refer to section eight of the substance's Safety Data Sheet to see which type of glove is required when handling the chemical.
- Protection against corrosive chemicals is generally provided by gloves made of rubber, vinyl or neoprene.
- Cloth gloves can protect our hands from minor hazards and help prevent scrapes, scratches, blisters and rashes.
- Heavy leather gloves are good for handling materials with sharp edges, burrs, splintering wood and similar objects which pose both cutting and puncture hazards.
- Various types of cut-resistant gloves are available for handling sharp objects such as sheet metal and also provide protection while cutting with knives. Keep in mind that cut-resistant gloves do not provide much protection from punctures.
- Heavy leather gloves such as those used by welders provide some protection from heat and sparks, but these gloves are not intended for direct contact with extremely hot materials.
- Heat-resistant gloves of aluminized fabric or other materials can protect against flames and intense heat.
- Disposable rubber, latex or plastic gloves are used to protect against exposure to infectious materials and bloodborne pathogens.
- There are a wide variety of gloves, each designed for a specific use. It's critical to select the proper glove for the job and you must remember to change gloves when switching between jobs.
- No matter which type of glove you use, they should be inspected frequently for damage. Keep an eye out for rips, holes and other defects in your gloves. If you notice any damage that compromises their protective qualities, replace them.
- It's important to select gloves which fit comfortably. Uncomfortable gloves are frequently removed, leaving hands unprotected.
- Gloves that are too big make it hard to hold and grip objects and may pose a hazard around moving machinery.

### **HEARING PROTECTION**

- Another hazard from which we must protect ourselves is noise. Because noise is an unseen hazard, many employees don't take it seriously; however, noise exposure is a serious issue and can cause permanent hearing loss if protection is not used.
- Hearing loss occurs gradually and the damage is permanent. If you want to be able to hear, say 10 or 20 years down the road, do yourself a favor; always wear your earmuffs or earplugs when you work in noisy areas.
- The most common type of hearing protection comes in the form of earplugs or canal caps. Earplugs are available in a variety of sizes and may be disposable or reusable.
- Earplugs are designed to be inserted into the ear canal. Earplugs must fit correctly and be installed properly in order to provide their rated protection.

- To properly install disposable earplugs first make sure your hands are clean. Then roll the plug in your fingers to compress it; then insert the plug into your ear canal.
- Some people find that pulling up on the top of their ear helps align the ear canal and makes it easier to insert the plug.
- Once inserted, hold your finger tip on the end of the plug for a few seconds while the plug expands to fill your ear canal. Then repeat on the opposite ear.
- Canal caps have flexible tips on a molded headband and only cover the entrance to the ear canal.
- Canal caps generally provide less noise reduction than earplugs can and may not be appropriate for high noise areas; however, they are easier to install properly.
- Canal caps are ideal for jobs in which hearing protection must be put on and taken off frequently.
- Earmuffs cover the ears completely and consist of a pair of cups connected by a headband.
- Some earmuffs are designed for use with other PPE such as hardhats.
- Some people find earmuffs to be more comfortable than earplugs or canal caps.
- In very loud environments, earplugs can be worn in combination with earmuffs for increased noise reduction.
- The Noise Reduction Rating of hearing protection is an indication of its effectiveness. Make sure you select hearing protection that is appropriate for the noise levels in your work area.
- Of course, hearing loss can just as easily occur off the job, as can eye, face and foot injuries. Be sure to protect yourself from hazards at home just as vigorously as you protect yourself at work.

## **PREPARE FOR THE SAFETY MEETING**

Review each section of this Leader's Guide as well as the program. Here are a few suggestions for using the program:

Make everyone aware of the importance the company places on health and safety and how each person must be an active member of the safety team.

Introduce the program. Play it without interruption. Review the program content by presenting the information in the program outline.

Copy the review questions included in this Leader's Guide and ask each participant to complete them.

Make an attendance record and have each participant sign the form. Maintain the attendance record and each participant's test paper as written documentation of the training performed.

Here are some suggestions for preparing your video equipment and the room or area you use:

Check the room or area for quietness, adequate ventilation and temperature, lighting and unobstructed access.

Check the seating arrangement and the audiovisual equipment to ensure that all participants will be able to see and hear the program.

## **CONDUCTING THE PRESENTATION**

Begin the meeting by welcoming the participants. Introduce yourself and give each person the opportunity to become acquainted if there are new people joining the training session.

Explain that the primary purpose of the program is to review the proper selection and use of common types of personal protective equipment and to stress the importance of always wearing the appropriate PPE when required.

Introduce the program. Play it without interruption. Review the program content by presenting the information in the program outline.

Lead discussions about specific job tasks at your workplace that require PPE and the importance of always wearing the proper protective devices when performing these tasks.

After watching the program, the viewer will be able to explain the following:

- Which types of eye and face protection are required for various hazards;
- What types and classes of hardhats are available and the protection each one provides;
- Why safety shoes and boots must be worn in areas where impact and puncture hazards exist;
- Which types of gloves protect against specific hazards and the importance of wearing the proper glove for the job;
- What types of hearing protection may be used to protect against hazardous noise;
- Why it is the employee's responsibility to wear the appropriate PPE in all situations in which it is required.

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**REVIEW QUIZ**

Name \_\_\_\_\_ Date \_\_\_\_\_

*The following questions are provided to check how well you understand the information presented during this program.*

1. Wearing the required personal protective equipment is one of the required duties of your job.
  - a. true
  - b. false
  
2. As long as a face shield covers your eyes, you aren't required to wear eye protection.
  - a. true
  - b. false
  
3. When selecting a lens for welding, you should choose the darkest shade that allows adequate vision for the job.
  - a. true
  - b. false
  
4. Which type of hardhat is rated for up to 20,000 volts of electricity?
  - a. Class C
  - b. Class E
  - c. Class G
  
5. Sandals and running shoes provide protection from most workplace hazards.
  - a. true
  - b. false
  
6. Which body parts are exposed to the most hazards in the workplace?
  - a. your eyes
  - b. your feet
  - c. your hands
  
7. There is no single work glove that is effective for all tasks.
  - a. true
  - b. false
  
8. Cut-resistant gloves do not provide much protection from punctures.
  - a. true
  - b. false
  
9. Canal caps generally provide \_\_\_\_\_ noise reduction than earplugs.
  - a. more
  - b. less

*ANSWERS TO THE REVIEW QUESTIONS*

1. a

2. b

3. a

4. b

5. b

6. c

7. a

8. a

9. b