

# **Eye Safety At Work**

## **Is Everyone's Business**

**Speaker's Guide**

# Eye Safety At Work

Is Everyone's Business.



## Introduction:

The PowerPoint presentation was created by the National Eye Institute (NEI), the National Institute for Occupational Safety and Health (NIOSH), and the National Safety Council (NSC) to illustrate the importance of practicing eye safety at work, preventing eye injury, and using protective eyewear. This speaker's guide includes discussion points and facts about protective eyewear that you can use to provide additional information and stimulate discussion among your employees as you are showing the presentation to them.

# Eye Safety in Your Workplace

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**Creating and maintaining a safe working environment is the responsibility of employers and employees. It is a team effort!**

- Employers are required to conduct an eye hazard assessment and use engineering controls to remove or minimize hazards where possible.
- Employers are required to provide properly fitting protective eyewear appropriate to the job when an eye hazard exists and to ensure that workers use the eyewear.
- Employers and employees should use protective eyewear when at the worksite or in an area with eye hazards.
- Everyone should be on the lookout for new eye hazards. If new hazards are identified or if appropriate protective eyewear is not available or is missing, notify your supervisor.
- When protective eyewear is a part of your job, make a habit of wearing it and encourage your coworkers to use it, too. Protective eyewear is an important tool of your trade.

**Eye Safety At Work Is Everyone's Business!**



**Prevent Injury. Use Protective Eyewear.**

## **Discussion points:**

- Discuss ways in which you can work to create and maintain an eye-safe working environment.
- Discuss any potential eye hazards in your workplace.

## Why Is Eye Safety Important?

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**Eye injuries impact everyone, not just the injured worker.**

- Why is eye safety important? It's the law! Occupational Safety and Health Administration (OSHA) regulations require that employers provide a safe work environment, which includes supplying the appropriate personal protective eyewear.
- For workers, eye injuries may lead to pain and discomfort, medical costs, lost work time, lost wages, and even permanent disability.
- For employers, eye injuries may impact productivity, worker morale, and compensation costs.
- An eye injury at work may severely impact daily living, family interactions, recreational activities, and one's enjoyment of life.



**Prevent Injury. Use Protective Eyewear.**

### **Discussion points:**

- Discuss your workplace eye safety policies, practices, and procedures.
- Discuss how these policies, practices, and procedures can help to minimize risk of eye injury.

## Workplace Eye Injury Facts

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**Each day, about 2,000 U.S. workers have a job-related eye injury that requires medical treatment.**

- Eye injuries are common in all industries, but workers in construction, mining, agriculture, and manufacturing have the highest rates of eye injuries on the job.
- Men have about 80 percent of work-related eye injuries. Among workers treated in an emergency department, men had an eye injury rate 4 times higher than women.
- Workers less than 45 years of age have an eye injury rate almost 3 times higher than older workers.
- Each day, more than 100 eye injuries result in a day or more of lost work time.



**Prevent Injury. Use Protective Eyewear.**

### **Discussion points:**

- Ask your employees about any eye injuries that occurred at your worksite. Ask them to describe what happened.
- Discuss how the injury could have been avoided.

## Common Causes of Eye Injuries

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The most prevalent sources of eye injuries include the following:

- Scrap materials, waste, and windblown dust
- Flying material particles or slivers from wood, metal, plastic, and cement
- Chemicals or chemical products
- Falling or misdirected objects
- UV light from welding torches



**Prevent Injury. Use Protective Eyewear.**

### Discussion points:

- Discuss the eye hazards in your workplace
- Ask about the most dangerous tasks or tools for eye injuries in your workplace
- Discuss the areas in your workplace that are most hazardous for eyes

## Types of Eye Protection

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The proper type of eye protection must be selected to match the type of hazard.

- The most common types of eye protection include the following:
  - Safety glasses with side protection/shields
  - Goggles
  - Faceshields
  - Welding helmets
  - Full-face respirators



**Prevent Injury. Use Protective Eyewear.**

### Discussion points:

- Have your employees identify the primary hazards for which they use protective eyewear.
- Ask about the types of eye protection your employees use.

## Types of Eye Protection

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- Safety glasses are designed to withstand impact from common workplace hazards and to provide the minimum level of protection required in the workplace.
- Safety glasses with side protection are required any time there are hazards from flying particles or objects such as minor dust or chips.
- Safety glasses are commonly used as protection against impact and low-intensity optical radiation from soldering and the sun.



**Prevent Injury. Use Protective Eyewear.**

### **Discuss the following facts with your employees:**

- Common tasks for which safety glasses are required include sawing, hammering, and drilling.
- Older styles of glasses used side shields. Now, many newer styles provide side protection in the form of wrap-around safety glasses.
- Some styles also have brow protection along the top of the glasses.
- Many eye injuries occurred because safety glasses did not provide adequate side protection or were improperly fitted, or particles from above fell inside as a result of overhead drilling.
- Tinted safety glasses used in torch soldering must have a shade number (1.5–3) on the lens. Safety glasses for gas or arc welding need shades 4 or higher. (The shade number is marked on the lens and shows how dark the lens is.)
- Typically, welding goggles with shade numbers 4–8 can be used for gas welding or cutting.
- Welding helmets are needed for all arc welding requiring shade numbers 10–14.
- Welding helmets should always be worn over safety glasses or goggles.



## Types of Eye Protection

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- Goggles are stronger than safety glasses and are used for protection from high impacts, particles, chemical splashes, and welding light.
- Faceshields are used for even higher impact tasks and protect the wearer's face and eyes from dangers such as critical chemicals and bloodborne hazards.
- Welding helmets protect the user from the intensity of welding light, which can cause severe burns to the eye and surrounding tissue.



**Prevent Injury. Use Protective Eyewear.**

### **Discuss the following facts with your employees:**

- Goggles with direct venting (a mesh of small holes around the sides) tend to fog less, but should not be used with liquid or fine dust hazards.
- Goggles for splash or high-dust protection should have indirect venting.
- Common tasks for which goggles are required include sawing, chipping, grinding, performing masonry work, pouring cement, and working with chemicals.
- When goggles are used for welding, make sure they are the proper shade number.
- Faceshields should always be worn over safety glasses or goggles.
- Particles or chemicals can easily go around a faceshield, and the curve of the faceshield can direct them into the eye.
- Faceshields are frequently lifted, leaving eyes that are unprotected by safety glasses or goggles exposed to the risk of injury.
- Common tasks for which faceshields are required include spraying, chipping, and grinding.

## Selecting Appropriate Protective Eyewear

- Per OSHA regulations, all protective eyewear must meet the ANSI Z87.1 Eye and Face Protection Standards.
- Safety eyewear must have "Z87" or "Z87+" marked on the frame and, in some cases, the lens.
- Safety eyewear with polycarbonate lenses affords the highest impact resistance and greater eye safety (marked Z87+).
- Protective eyewear should be properly fitted and comfortable to wear.
- When other personal protective equipment (PPE) such as a half-face respirator is required, protective eyewear must be selected to fit so that both types of PPE work properly.



**Prevent Injury. Use Protective Eyewear.**

### Discussion points:

- Ask your employees about how their protective eyewear fits
- Discuss the importance of properly fitted, comfortable protective eyewear

## Selecting Appropriate Protective Eyewear

- Glasses that are not snug against the face create gaps in protection. The biggest gaps are usually near the corners of the glasses and allow more exposure to hazards coming at an angle from above or below.
- Adjustable-temple glasses, eyewear retainers, and straps help hold the glasses in the proper position, close to the face.
- Safety glasses have hard or soft nose pieces, padded temples, and a variety of other features that improve comfort without adding great cost.



**Prevent Injury. Use Protective Eyewear.**

### **Discussion points:**

- Ask how many people use nose pieces and/or padded temples
- Ask if the nose pieces/padded temples make a difference

## Caring for Your Protective Eyewear

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- Care for your protective eyewear in a manner that will extend the life of your equipment and help to ensure that it provides the maximum protection when you need it the most!
- Use polycarbonate lenses with anti-scratch coating.
- Wear an eyewear retainer strap that will let the glasses hang around your neck when not in use.



**Prevent Injury. Use Protective Eyewear.**

### Discussion points:

- Ask your employees if they use retainers and/or straps. If so, discuss the type(s) used.
- Discuss some things that can be done to extend the life of protective eyewear.

## Caring for Your Protective Eyewear

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- Store protective eyewear in a case or an old sock before tossing them into a tool chest or the seat of a car or pickup.
- Clean your protective eyewear with eyeglass cleaning solutions, or wash and wipe them with a soft, clean cloth.
- Use anti-fog solutions to keep your lenses from fogging.



**Prevent Injury. Use Protective Eyewear.**

### Discussion points:

- Ask where your employees store their protective eyewear.
- Discuss the importance of and how frequently one should clean protective eyewear.

## Reducing Workplace Eye Injuries

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**Proper selection and use of eye and face protection will help prevent eye injuries. Other precautions that employers and employees can take to reduce the risk of eye injury include the following:**

- Ensure that the appropriate eye protection is available at the worksite.
- Keep bystanders out of work areas and/or behind protective barriers.
- Use your tools properly and keep them in good working order.
- Use caution flags to identify potential hazards, such as hanging or protruding objects.



**Prevent Injury. Use Protective Eyewear.**

### **Discussion points:**

- Discuss with your employees how you can work together to help prevent eye injuries at your worksite.
- Identify any areas in your workplace that need to be marked with caution flags.

## Reducing Workplace Eye Injuries

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- Do not remove your protective eyewear until you leave the site or are out of the hazard zone. After you have finished with a tool or specific task, there still may be hazardous materials around you from other workers.
- Consult your supervisor if you have any doubt about the type of eye protection needed for a job or specific location.
- Contact lens users should wear goggles or full-face respirators in dust-laden or chemical environments. If your contacts feel gritty or are irritating you, remove them immediately. Have a pair of prescription eyeglasses available if you need to remove your contacts while working.



**Prevent Injury. Use Protective Eyewear.**

### Discussion points:

- Ask if anyone wears contact lenses. If so, ask if they have a pair of prescription eyeglasses readily available in case they need to remove their contacts.
- Discuss other precautions that should be taken to prevent eye injuries.

## Caring for Eye Injuries

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**Knowing what to do in an emergency may save your vision and/or the vision of your coworkers.**

- Know the locations of eyewash stations in your workplace.
- Keep emergency sterile eyewash solutions accessible to you, your coworkers, and employees.
- Understand basic first-aid techniques.



**Prevent Injury. Use Protective Eyewear.**

### **Discussion points:**

- Discuss what should be done in the event of an eye injury.
- Discuss the locations of emergency sterile eyewash solutions/stations in your workplace. Ask if any additional stations are needed.



# Basic First-Aid Techniques

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Basic first-aid techniques include the following:

- **Specks in the eye**
  - Do not rub the eye
  - Flush the eye with a large amount of water
  - See a doctor if the speck does not wash out, or if pain or redness continues
- **Cuts, punctures, or objects stuck in the eye**
  - Do not wash out the eye
  - Do not try to remove an object stuck in the eye
  - See a doctor at once

*First-aid advice courtesy of Prevent Blindness America*



**Prevent Injury. Use Protective Eyewear.**

## Discussion points:

- Ask if anyone is trained in basic first-aid techniques
- Discuss which first-aid techniques would most likely be used in your workplace

## More First-Aid Techniques

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- **Chemical burns**
  - Flush the eye immediately with water or any drinkable liquid and continue flushing for at least 15 minutes. For caustic or basic solutions, continue flushing while en route to the doctor.
  - Flush the eye even if it has a contact lens. Flushing over the lens may dislodge it.
  - See a doctor at once.
- **Blows to the eye**
  - Apply a cold compress without pressure.
  - Tape a plastic bag containing crushed ice to the forehead and let it rest gently on the injured eye.
  - See a doctor at once in cases of continued pain, reduced vision, blood in the eye, or discoloration, which can mean internal eye damage.

*First-aid advice courtesy of Prevent Blindness America*



**Prevent Injury. Use Protective Eyewear.**

# Make Eye Safety

Your Business.



For more information, call 1-800-232-4636

