

PPE – Eyes Quiz



QUESTION

What are the employers responsibilities to the employees with respect to exposure of potential eye injuries'

ANSWER

- Know the eye safety dangers in the workplace.
- Eliminate hazards before starting work by using machine guards, work screens or other engineering controls.
- Use proper eye protection.
- Keep your safety eyewear in good condition and have it replaced if it becomes damaged.

WHY IS IT RIGHT

HOW TO PROTECT EYES OF WORKERS

The **first step** is to assess work areas for accidents that can be caused by impact, heat, chemicals, dust, glare and optical radiation. The **second** is to have a good, sound safety program in place that mandates that 100 percent of employees, managers and visitors follow eye safety rules.

Workers Acquire Eye Diseases

Eye diseases are often transmitted through the mucous membranes of the eye as a result of direct exposure to things like blood splashes, and droplets from coughing or sneezing or from touching the eyes with a contaminated finger or object. Eye diseases can result in minor reddening or soreness of the eye or in a life threatening disease such as HIV, hepatitis B virus, or avian influenza.

Each day about 2000 U.S. workers sustain a job-related eye injury that requires medical treatment. About one third of the injuries are treated in hospital emergency departments, and more than 100 of these injuries result in one or more days away from work.

How Workers get Eye Injuries

- **Striking or scraping:** The majority of eye injuries result from small

particles or objects striking or scraping the eye, such as: dust, cement chips, metal slivers, and wood chips. These materials are often ejected by tools, windblown, or fall from above a worker. Large objects may also strike the eye or face, or a worker may run into an object causing blunt-force trauma to the eyeball or eye socket.

- **Penetration:** Objects like nails, staples, or slivers of wood or metal can go through the eyeball and result in a permanent loss of vision.
- **Chemical and thermal burns:** Industrial chemicals or cleaning products are common causes of chemical burns to one or both eyes. Thermal burns to the eye also occur, often among welders. These burns routinely damage workers' eyes and surrounding tissue.

How Workers Prevent Eye Injury and Disease

Wear personal protective eyewear, such as goggles, face shields, safety glasses, or full face respirators.

The eye protection chosen for specific work situations depends upon the nature and extent of the hazard, the circumstances of exposure, other protective equipment used, and personal vision needs. Eye protection should be fit to an individual or adjustable to provide appropriate coverage. It should be comfortable and allow for sufficient peripheral vision.

Types of Eye Protection

The eye protection chosen for specific work situations depends upon the circumstances of exposure, other PPE used, and personal vision needs. There is wide variety in the types of protective eyewear, and appropriate selection should be based on a number of factors, the most important of which is the nature and extent of the hazard. Eye protection must be comfortable and allow for sufficient peripheral vision and must be adjustable to ensure a secure fit. It may be necessary to provide several different types, styles, and sizes. Selection of protective eyewear appropriate for a given task should be made from an evaluation of each activity, including regulatory requirements when applicable. These hazard assessments require a clear understanding of the work tasks, including knowledge of the potential routes of exposure and the opportunities for exposure in the task assessed (nature and extent of worker contact). Exposure incident reports should be reviewed to identify those incidents (whether or not infection occurred) that could have been prevented by the proper use of protective eyewear.

Common Types of Eye Protection

• Goggles

Appropriately fitted, indirectly-vented goggles* with a manufacturer's anti-fog coating provide the most reliable practical eye protection from splashes, sprays, and respiratory droplets. Newer styles of goggles may provide better indirect airflow properties to reduce fogging, as well as better peripheral vision and more size options for fitting goggles to different workers. Many styles of goggles fit adequately over prescription glasses with minimal gaps.

However, to be efficacious, goggles must fit snugly, particularly from the corners of the eye across the brow. While highly effective as eye protection, goggles do not provide splash or spray protection to other parts of the face.

Directly-vented goggles may allow penetration by splashes or sprays; therefore, indirectly-vented or non-vented goggles are preferred for infection control.

- **Face Shields**

Face shields are commonly used as an infection control alternative to goggles. ** As opposed to goggles, a face shield can also provide protection to other facial areas. To provide better face and eye protection from splashes and sprays, a face shield should have crown and chin protection and wrap around the face to the point of the ear, which reduces the likelihood that a splash could go around the edge of the shield and reach the eyes. Disposable face shields for medical personnel made of light weight films that are attached to a surgical mask or fit loosely around the face should not be relied upon as optimal protection.

In a chemical exposure or industrial setting, face shields should be used in addition to goggles, not as a substitute for goggles (ANSI Z87.1-2003 Practice for occupational and educational eye and face protection).

- **Safety Glasses**

Safety glasses provide impact protection but do not provide the same level of splash or droplet protection as goggles and generally should not be used for infection control purposes.

- **Full-face Respirators**

Full facepiece elastomeric respirators and powered air-purifying respirators (PAPRs) are designed and used for respiratory protection, but because of their design incidentally provide highly effective eye protection as well. Selection of this type of PPE should be based on an assessment of the respiratory hazard in an infection control situation, but will also provide, as an additional benefit, optimal eye protection.

EMPLOYERS RULE TO PREVENT WORKER EYE INJURY AND DISEASE

Employers can ensure engineering controls are used to reduce eye injuries and to protect against ocular infection exposures. Employers can also conduct a **hazard assessment** to determine the appropriate type of protective eyewear appropriate for a given task.

10 ways to prevent an eye injury in your workplace.

1. **ASSESS!** Look carefully at plant operations. Inspect all work areas, access routes, and equipment for hazards to eyes. Study eye accident and injury reports. Identify operations and areas that present eye hazards.
2. **TEST!** Uncorrected vision problems can cause accidents. Provide vision testing during routine employee physical exams.
3. **PROTECT!** Select protective eyewear that is designed for the specific duty or hazard. Protective eyewear must meet the current standards from the Occupational Safety and Health Act of 1970 and later revisions.
4. **PARTICIPATE!** Create a 100 percent mandatory program for eye protection in all operation areas of your plant. A broad program prevents more injuries and is easier to enforce than one that limits eye protection to certain departments, areas, or jobs.

5. **FIT!** Workers need protective eyewear that fits well and is comfortable. Have eyewear fitted by an eye care professional or someone trained to do this. Provide repairs for eyewear and require each worker to be in charge of his or her own gear.
6. **PLAN FOR AN EMERGENCY!** Set up first-aid procedures for eye injuries. Have eyewash stations that are easy to get to, especially where chemicals are used. Train workers in basic first-aid and identify those with more advanced training.
7. **EDUCATE!** Conduct ongoing educational programs to create, keep up, and highlight the need for protective eyewear. Add eye safety to your regular employee training programs and to new employee orientation.
8. **SUPPORT!** Management support is key to having a successful eye safety program. Management can show their support for the program by wearing protective eyewear whenever and wherever needed.
9. **REVIEW!** Regularly review and update your accident prevention policies. Your goal should be NO eye injuries or accidents!
10. **PUT IT IN WRITING!** Once your safety program is created, put it in writing. Display a copy of the policy in work and employee gathering areas. Include a review of the policy in new employee orientation.

WHY IS EVERYTHING ELSE WRONG

EMPLOYERS RESPONSIBILITIES

Employers must provide eye protection for employees whenever they are exposed to potential eye injuries during their work if work practice or engineering controls do not eliminate the risk of injury.

Employers must establish and implement a written eye and face protection program with worksite-specific procedures and elements for required eye and face protective equipment use. **The provisions of the program include procedures for selection, medical evaluation, fit testing, training, use and care of eye and face protection.**

Employers Must:

- Know the eye safety dangers at your work.
- Eliminate hazards before starting work by using machine guards, work screens or other engineering controls.
- Use proper eye protection.
- Keep your safety eyewear in good condition and have it replaced if it becomes damaged.

TRAINING

Training must be provided to employees who are required to use eye and face protection. The training must be comprehensive, understandable, and recur annually, and more often if necessary, and should be done before use:

- Why the eye and face protection is necessary and how improper fit, use, or maintenance can compromise its protective effect.
- Limitations and capabilities of the eye and face protection.
- Effective use in emergency situations.
- How to inspect, put on and remove.
- Maintenance and storage.

- Recognition of medical signs and symptoms that may limit or prevent effective use.
- General requirements of OSHA's eye and face protection standard. [29 CFR 1910.133]

Formal Eye and Face Protection Program

The eye and face protection program increases the chances of using equipment correctly. Eye and face Protection will only protect if it is used correctly. Also, OSHA requires a number of written elements for all PPE protection programs.

ADMINISTRATOR

The program must be administered by a trained program administrator who is qualified and knowledgeable in eye and face protection to run all aspects of the program.

METHODS/ACTIONS TO PREVENT EYE INJURIES

- Be aware of potential eye safety hazards at work and complete an eye hazard assessment.
- Appropriate safety glasses or goggles should be worn at all times whenever eye hazards are present.
- Be sure all safety eyewear is clearly marked 'ANSI Z87.'
- Workers should know the location of the nearest eye wash station and should be trained in its use.
- Employers should be notified immediately if safety hazards are discovered.
- Employees should have regular eye exams to make sure their vision is adequate to work safely.
- Employees with reduced vision should ask if prescription glasses or goggles can be provided.

FINAL TEST

- Ensure that there is the right eye protection for the job.
- Ensure the eye protection is in excellent condition for use as follows:
 - Safety glasses should have no visible cracks or scratches, and the side shields or straps should be in good condition to help hold them firmly in place
 - When using safety goggles, make sure that there is a proper fit around the eyes, and that the seals are pliable and soft so they make a firm seal
 - Face shields are typically used for liquid handling and transfer, and also for some grinding and drilling applications
 - Safety glasses or goggles may be required under the face shields
 - The face shields themselves may be part of a helmet, or with an elastic band only to hold them in place
 - Special optical filter equipment should always be worn when welding or working with lasers
 - Engineering controls can help protect your workers from eye injury
 - Placement of machine guards, safety screens, and shields can reduce the risk of foreign particles entering the eye during grinding, drilling, or handling liquids

- Make sure employees have the proper training on both the tools they will be using, and the equipment they will use to keep themselves safe
- Make sure that when doing jobs that are hazardous, others are directed to stay out of the area to minimize risk to them