Eye and Face Protection

Eye Protection In the Workplace

Every day an estimated 1,000 eye injuries occur in American workplaces. The financial cost of these injuries is enormous – more than $300 million per year in lost production, time, medical expenses, and workers compensation. No dollar figure can adequately reflect the personal toll these accidents take on the injured workers. Take a moment to think about possible eye hazards at your workplace.

What Contributes To Eye Injuries at Work?

--Not wearing eye protection. Nearly three out of every five workers injured were not wearing eye protection at the time of the accident.
--Wearing the wrong kind of eye protection for the job. About 40% of the injured workers were wearing some form of eye protection when the accident occurred. These workers were most likely to be wearing protection eyeglasses with no side shields, though injuries among employees wearing full-cup or flat-fold shields occurred, as well

What causes Eye Injuries?

--Flying particles. Almost 70% of the accidents studied resulted from flying or falling objects or sparks striking the eye. Injured workers estimated that nearly three-fifths of the objects were smaller than a pinhead. Most of the particles were said to be traveling faster than a hand-thrown object when the accident occurred.
--Contact with chemicals cause one-fifth of the injuries. Other accidents were caused by objects swinging from a fixed or attached position, like tree limbs, ropes, chains or tools which were pulled into the eye while the worker was using them.

Where Do Accidents Occur Most Often?

--Craft work; industrial equipment operation. Potential eye hazards can be found in nearly every industry, but more than 40% of injuries occurred among craft workers, like mechanics, repairers, carpenters, and plumbers. Over a third of the injured workers were operatives, such as assemblers, sanders and grinding machines operators. Laborers suffered about one-fifth of the eye injuries. Almost half of the injured workers were employed in manufacturing; slightly more than 20% were in construction.

How Can Eye Injuries be Prevented?

--Always wear effective eye protection. OSHA standards require that employers provide workers with suitable eye protection. To be effective, the eyewear must be of the appropriate type of the hazard encountered and properly fitted. For example, 94% of the injuries to workers wearing eye protection resulted from objects or chemicals going around or under the protector. Eye protective devices should allow for air to circulate between the eye and the lens. Only 13 workers who were injured while wearing eye protection reported breakage.
Nearly one-fifth of the injured workers with eye protection wore face shields or welding helmets. However, only six percent of the workers injured while wearing eye protection wore goggles, which generally offer better protection for the eyes. Best protection is afforded when goggles are worn with face shields.

Eye and Face Protection cont.

--Better training and education: Most workers were hurt while doing their regular jobs. Workers injured while not wearing protective eyewear most often said they believed it was not required by the situation. Even though the vast majority of employers furnished eye protection at no cost to the employees, about 40% of the workers received no information on where and what kind of eyewear should be used.
--Maintenance: Eye protection devices must be properly maintained. Scratched and dirty devices reduce vision, cause glare and may contribute to accidents.

Eye Protection Works!

More than 50% of workers injured while wearing eye protection thought the eyewear had minimized their injuries. But nearly half the workers also felt that another type of protection could have better prevented or reduced the injuries they suffered. It is estimated that 90% of eye injuries can be prevented through the use of proper protective eyewear.

Impact Hazards

The majority of impact injuries result from flying or falling objects, or sparks striking the eye. Most of these objects are smaller than a pinhead and can cause serious injury such as punctures, abrasions, and contusions.
While working in a hazardous area where the worker is exposed to flying objects, fragments, and particles, primary protective devices such as safety spectacles with side shields or goggles must be worn. Secondary protective devices such as face shields are required in conjunction with primary protective devices during severe exposure to impact hazards.

Safety Spectacles

Safety spectacles are intended to shield the wearer's eye from impact hazards such as flying fragments, objects, large chips and particles. Workers are required to use eye safety spectacles with side shields when there is a hazard from flying objects. Non-side-shield spectacles are not acceptable eye protection for impact hazards.
The frames of safety spectacles are constructed of metal and/or plastic and can be fitted with either corrective or plano impact-resistant lenses. Side shields may be incorporated into the frames of safety spectacles when needed. Consider each component of safety spectacles when selecting the appropriate device for your workplace.

Eye and Face Protection cont.

Safety Goggles

Safety goggles are intended to shield the wearer's eyes from hazards such as flying fragments, objects, large chips, and particles. Goggles fit the face immediately surrounding the eyes and form a protective seal around the eyes. This prevents objects from entering under or around the goggles.

Safety goggles may incorporate prescription lenses mounted behind protective lenses for individuals requiring vision correction. Take time to consider specific lens, frame, and ventilation options when selecting safety goggles.

Face Shields

Face shields are intended to protect the entire face or portions of it from impact hazards such as flying fragments, objects, large chips and particles. When worn alone, face shields do not protect the employees from impact hazards. Use face shields in combination with safety spectacles or goggles, even in the absence of dust or potential splashes, for additional protection beyond that offered by spectacles or goggles alone.

Face shield windows are made with different transparent materials and in varying degrees or levels of thickness. These levels should correspond with specific tasks. Window and headgear devices are available in various combinations to enable the worker to select the appropriate equipment.

Chemical Hazards

A large percentage of eye injuries are caused by direct contact with chemicals. These injuries often result from an inappropriate choice of PPE, which allows a chemical substance to enter from around or under protective eye equipment.

Serious and irreversible damage can occur when chemical substances contact the eyes in the form of splash, mists, vapors or fumes. When working with or around chemicals, it is important to know the location of emergency eyewash stations and how to access them with restricted vision.

When fitted and worn correctly, goggles protect your eyes from hazardous substances. A face shield may be required in areas where workers are exposed to severe chemical hazards.

Safety Goggles

Safety Goggles protect the eyes, eye sockets, and the facial area immediately surrounding the eyes from a variety of chemical hazards. Goggles form a protective seal around the eyes, preventing objects or liquids from entering under or around the goggles. This is especially important when working with or around liquids that may splash, spray or mist.

Safety goggles may incorporate prescription lenses mounted behind protective lenses for individuals requiring vision correction. Take time to consider specific lens, frame, and ventilation options when selecting safety goggles.

Eye and Face Protection cont'd.

Face Shields
Face shields are intended to protect the entire face from a variety of chemical hazards. All face shields are considered secondary protection and must be used in addition to safety goggles to provide adequate protection.
Face shield windows are made with different transparent materials and in varying degrees or levels of thickness. These levels should correspond with specific tasks. Window and headgear devices are available in various combinations in order to enable the worker to select the appropriate equipment.

Dust Hazards
Dust is present in the workplace during operations such as woodworking and buffing. Working in a dusty environment can cause eye injuries and present additional hazards to contact lens wearers. Either eyecup or cover-type safety goggles should be worn when dust is present. Safety goggles are the only effective type of eye protection from nuisance dust because they create a protective seal around the eyes.

Safety Goggles
Safety goggles are intended to protect the eyes against dust hazards. Goggles form a protective seal around the eyes, preventing nuisance dust from entering under or around the goggles. Ventilation should be adequate, but well protected from dust entry. Safety goggles may incorporate prescription lenses mounted behind protective lens. Take time to consider specific lens, frames, and ventilation options when selecting safety goggles.

Optical Radiation Hazards
Radiant energy can cause serious eye injuries, even if exposure occurs for a short period of time. Optical radiation may be in the form of ultraviolet, visible, or infrared light. Infrared or other intense radiant energy may cause eye injuries such as retinal burns. Prolonged exposure to glare, another form of optical radiation, can cause eyestrain and damage vision. Wearing protection with the correct filter shade number will protect worker's eyes from optical radiation. When selecting PPE, consider the type of degree of radiant energy in the workplace, filter lens requirements, welding protection, laser protection, and / or glare protection