

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.

The Occupational Safety and Health Administration (OSHA) and the 25 states and territories operating their own job safety and health programs are determined to help reduce eye injuries. In concert with efforts by concerned voluntary groups, OSHA has begun a nationwide information campaign to improve workplace eye protection.

Take a moment to think about possible eye hazards at your workplace. A 1980 survey by the Labor Department's Bureau of Labor Statistics (BLS) of about 1,000 minor eye injuries reveals how and why many on-the-job accidents occur.

WHAT CONTRIBUTES TO EYE INJURIES AT WORK?

- Not wearing eye protection. BLS reports that 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 eyeglasses with no side shields, though injuries among employees wearing full-cup or flat-fold side shields occurred, as well.

WHAT CAUSES EYE INJURIES?

- Flying particles. BLS found that 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 pin head. Most of the particles were said to be traveling faster than a hand-thrown object when the accident occurred.
- Contact with chemicals caused 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.

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 for the hazard encountered and properly fitted. For example, the BLS survey showed that 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 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.

Better training and education. BLS reported that 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 employees, about 40% of the workers received no eye safety training 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.

WHERE CAN I GET MORE INFORMATION?

- The OSHA website or your nearest OSHA area office. Safety and health experts are available to explain mandatory requirements for effective eye protection and answer questions. They can also refer you to an on-site consultation service available in nearly every state through which you can get free, penalty-free advice for eliminating possible eye hazards, designing a training program, or other safety and health matters.

o Call an OSHA Regional Office at the U.S. Department of Labor in Boston, New York, Philadelphia, Atlanta, Chicago, Dallas, Kansas City, Denver, San Francisco, or Seattle.

- The National Society to Prevent Blindness. This voluntary health organization is dedicated to preserving sight and has developed excellent information and training materials for preventing eye injuries at work. Its 26 affiliates nationwide may also provide consultation in developing effective eye safety programs. For more information and a publications catalog, write the National Society to Prevent Blindness, 79 Madison Ave., New York, NY 10016-7896.

EYE PROTECTION WORKS!

BLS reported that 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. That is our goal and, by working together, OSHA, employers, workers, and health organizations can make it happen.

This is one of a series of fact sheets highlighting U.S. Department of Labor programs. It is intended as a general description only and does not carry the force of legal opinion. This information will be made available to sensory impaired individuals upon request. Voice phone: (202) 523-8151. TDD message referral phone: 1-800-326-2577.

U.S. Department of Labor

Program Highlights

Fact Sheet No. OSHA 92-03

Safety Glasses And Goggles

No matter where we work, flying particles, dusts, fumes, vapors or harmful rays are apt to expose us to potential eye injury. Fortunately, we can protect against these hazards by using the appropriate protective eyewear for our jobs and by following our companies' established safety guidelines. The following is a guide to the most common types of protective eyewear and the specific hazards they can guard against.

Safety Glasses

Standard safety glasses look very much like normal glasses, but are designed to protect you against flying particles. Safety glasses have lenses that are impact resistant and frames that are far stronger than regular eyeglasses. Safety glasses must meet the standards of the American National Standards Institute (ANSI). (Safety glasses are also available in prescription form for those persons who need corrective lenses.) Standard safety glasses can be equipped with side shields, cups, or tinted lenses to offer additional protection.

Safety Goggles

Like standard safety glasses, goggles are impact resistant and are available in tinted lenses. Goggles provide a secure shield around the entire eye area to protect against hazards coming from many directions. Safety goggles may have regular or indirect ventilation. (Goggles with indirect ventilation may be required if you are exposed to splash hazards.)

Shields and Helmets

Face shields and helmets are not in themselves protective eyewear. But, they are frequently used in conjunction with eye protectors. Full-face shields are often used when you are exposed to chemicals or heat or glare hazards. Helmets are used when welding or working with molten materials.

Using Protective Eyewear

You can guard against eye injury by making sure that you are wearing the appropriate protective eyewear for the particular eye hazards you face. It's important to remember that regular glasses alone do not offer protection from eye hazards. Follow your company's established safety procedures, and never hesitate to ask your supervisor if you have any questions about what you can do to protect your sight for life.

It's come a long way

Protective eyewear has evolved dramatically over the years. In the 1960s, standard safety glasses were worn mainly in industry and made of tempered glass with unattractive frame styles. But since then, a merge between safety glasses and sunglasses has made eyewear more protective and fashionable. There's a much wider selection of colors and styles to choose from. In fact, many sports and industry safety glasses are made with anything from sports team logos to zebra stripes on the frames. And instead of tempered glass, the majority of lenses today are made of impact-resistant polycarbonate.

In terms of research to improve protective eyewear, Dr. Williams noted that the process is ongoing: "A lot of work has been done over the years to perfect the features of protective eyewear. What we have today is quite good. The task now is to educate people on how important it is to wear eye protection. People don't realize that an eye can be destroyed in a fraction of a second."

Where to find protection

You can purchase most protective eyewear from e-tailers like ABCSafetyGlasses.com for about \$5-\$10 a pair and considerably less on higher quantity orders. Buy glasses that are made of an impact-resistant polycarbonate, or that are labeled as meeting ANSI (American National Standards Institute) requirements. Some types of sunglasses can be used as protective eyewear, as long as they have impact-resistant polycarbonate lenses.