



## SPOTLIGHT ON SAFETY: THE “EYES” HAVE IT!

According to the Occupational Health and Safety Administration (OSHA), more than 1,000 eye injuries occur in American workplaces each day, and account for \$300 million annually in lost production time, medical expenses, and workers’ compensation.

While potential eye hazards can be found in nearly every industry, the Bureau of Labor Statistics (BLS) reports more than 40 percent of eye injuries occur among skilled craft workers, such as mechanics, carpenters, and plumbers; further, more than one-third of those injuries involve “operatives”, such as assemblers and machine operators. General laborers suffer more than 20 percent of all workplace eye injuries, and just over 20 percent of workers who are afflicted with eye injuries are in the construction industry.

Every department within your municipality should take preventative measures to decrease the likelihood of employees sustaining on-the-job eye injuries. Training, best safety practices and properly maintained mandatory equipment can greatly reduce the occurrence of eye injuries at your facilities.

BLS states nearly 70 percent of workplace eye injuries involve flying or falling particles or sparks entering the eye. Typically, the particles are traveling faster than a hand-thrown object and are smaller than the head of a pin. Additionally, one fifth of eye injuries involve chemicals, and a small but consistent number of annual eye injuries involve objects swinging from a fixed position, such as tree limbs, machine parts, ropes, or chains, which can be pulled into the eye while the employee is working with them.

Alarmingly, when BLS conducted a study on workplace eye injuries, it found nearly three out of every five workers who received eye injuries were not wearing eye protection when the accident occurred. Additionally, the study revealed that while some workers were wearing some form of eye protection while working, failure to wear the proper eye protection for the job still resulted in a large occurrence of eye injuries, despite the employees’ attempts to comply. Be sure your facility requires all employees working near eye hazards to wear proper eye protection, and that management within those facilities is diligent in enforcing the utilization of that protective equipment. OSHA estimates nearly 90 percent of all workplace injuries can be avoided with the use of proper protective eyewear.

Employers are also responsible for providing and maintaining adequate first aid equipment for employees who may sustain eye injuries at work. The applicable OSHA regulation (CFR 191.151 [c]) states “where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.” This standard is most easily complied with through the installation and maintenance of an emergency eyewash

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station.

There are two types of OSHA-approved eyewash stations: plumbed units, which are permanently connected to a water source; and gravity-fed units, which are self-contained flushing units that must be refilled or replaced after each use. Regardless of the type of unit you choose for your facility, all eyewash units must meet strict guidelines for installation, performance, maintenance and training.

## **Installation**

Under ANSI/ISEA Z358.1-2009, the American standard for emergency eyewash and shower equipment, all eyewash stations must be installed on the same level as the hazardous material, and be in a location that takes no more than 10 seconds to reach. Your eyewash station should be installed in a well-lit area, no less than six feet from barriers or obstructions, and identified with a sign and instructions. In large or noisy facilities, employers should consider installing an audible or visible alarm that will activate when a unit is in use.

## **Operation**

In the event of an on-the-job eye injury, it is recommended that the eyes are immediately and continuously flushed with eyewash solution for a minimum of 15 minutes. In an attempt to ensure the eyes are irrigated thoroughly and for the proper duration, the following operation standards are mandatory for all eyewash stations:

- All eyewash stations must be installed at a height of between 33 and 45 inches from the floor.
- Eyewash stations should be easy to use, requiring no more than one motion (usually a foot pedal or pull cord) and one second to activate. Valves should remain open for “hands-free” operation.
- Once activated, solution must flow at a rate of at least 0.4 gallons per minute (GPM) for a duration of no less than 15 minutes. Plumbed units must flow at a pressure of 30 pounds per square inch (PSI).
- Solution must remain between 60-100 degrees Fahrenheit.

Due to slight variations in design and function of each eyewash station, employees should be trained on specific eyewash technique according to the manufacturer’s instructions.

## **Maintenance and Training**

In order to ensure your facility’s eyewash station will perform properly in the event of an accident, plumbed eyewash units should be tested on a weekly basis. Gravity-fed units

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should be tested according to the manufacturer's recommendations. Activation, pH level of irrigating solution, and pressure/duration of solution should be tested at each inspection. Additionally, all safety equipment should be professionally inspected annually. While the standard requires only employees who may be exposed to chemical splashes to be trained in the use of an eyewash station, best safety practice dictates that if even one of your employees is at risk for eye injury while performing their duties, all employees in your facility should be trained on the proper operation and utilization of your eyewash station.

For questions or more information regarding workplace safety or eyewash stations, contact an AMRRP loss control consultant at (602) 996-8810.

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