Eyewash and Shower Stations

No one can predict when and where an accident will occur, especially if employees must work around hazardous substances. This puts them at risk of getting the substance in their eyes or on their skin. To combat this risk, personal protective equipment (PPE) is issued; however, if the protection supplied by PPE is breached, employees need to be able to remove the contaminant as quickly as possible. That’s where eyewashes and showers come into play.

Basic Requirements

The Occupational Safety and Health Administration (OSHA) specifically requires emergency eyewash and shower stations in a number of regulations such as those for dipping and coating operations; medical services and first aid; pulp, paper, and paperboard mills; formaldehyde; and carcinogens. The general OSHA requirement for emergency eyewashes and showers is outlined in 29 CFR 1910.151(c). In this standard, OSHA specifies that “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.” OSHA has said that the safety data sheet (SDS) should be consulted when determining the need for emergency eyewash and shower stations. OSHA also expects the employer to determine the level of potential risk and provide protection accordingly. Beyond requiring the equipment, OSHA does not provide a great deal of detail on eyewashes and showers. There isn’t a list that specifies exactly where equipment is needed. However, where the regulations are silent, OSHA refers to the American National Standards Institute (ANSI) standard Z358.1, Emergency Eyewash and Shower Equipment, for specific requirements. While not having the force of a regulation under the OSH Act, the standard provides valuable information for employers.

Location, Location, Location

In 2008, there were 774 federal violations for emergency eyewash and shower stations not being in near proximity to employees, with adjusted penalties over $300,000. While the OSHA standard does not provide detail on the location or number of eyewash stations at a facility, it does state that suitable facilities for quick flushing of the eyes and body are to be provided “within the work area for immediate emergency use.”
Specifically, ANSI suggests that an eyewash and shower be no farther than a 10 second travel time from the hazard. For strong acids or caustics, the eyewash unit should be immediately adjacent to the hazard. The path of travel to the eyewash or shower station must remain clear of obstructions and the eyewash and shower station must be located on the same level as the hazard.

In a supplementary appendix, ANSI also says that the average person covers a distance of approximately 55 feet in 10 seconds when walking at a normal pace. The physical and emotional state of the victim should be considered along with the likelihood of personnel in the immediate area to assist. Bear in mind that a person in need of an eyewash will likely be temporarily blind. Ask yourself: How quickly does a person move when they can’t see?

**Personal Eyewashes**

Installing a plumbed eyewash unit can be an expensive project and it’s easy to see why employers might explore less expensive alternatives. However, employers need to make sure equipment meets ANSI’s flushing requirements.

Eyewashes should supply 0.4 gallon per minute of water for at least 15 minutes. Many self-contained/portable eyewash stations only have a capacity of 5 to 10 gallons. Squeeze bottles and other personal eyewashes have even lower water capacities.

It’s important to note that ANSI says personal wash units (such as bottles) do not meet the criteria of plumbed or self-contained eyewash equipment. Personal wash units can provide immediate flushing to support plumbed and self-contained equipment but not replace them. Further, self-contained eyewash equipment that cannot provide the full 15 minutes of flushing is also considered supplementary.

**Tepid Water**

A continuous flow of clean, tepid water is important for providing effective first aid treatment for an eye injury. What is tepid water? The water in emergency eyewash equipment should be no warmer than 100 degrees and no colder than 60 degrees, according to ANSI recommendations.

In a 2002 Occupational Safety and Health Review Commission case, a judge ruled against OSHA which had cited a company for not having an eyewash station next to their forklift charging area. As stated in the case, the company did not perform maintenance on the batteries, only plugged them in at night for charging. As such, the potential hazard of exposure to electrolytes did not exist in this instance. As a result, employers are not required to have the eyewash station for an area where batteries are only being charged and not maintained. On the other hand, emergency eyewash units must be available when doing any service to a battery beyond routine charging. All in all, it would still be a best practice to have an eyewash station in the charging area, and insurance carriers may require it.

**The Bottom Line**

OSHA expects employers to determine the level of potential risk to employees and provide protection accordingly. Completing hazard assessments, referencing SDSs, and utilizing ANSI standard Z358.1 will help wash away uncertainties there might be about emergency eyewash and shower equipment.
Did you know that you have less than 5 minutes to intervene successfully when an individual suffers a cardiac arrest? Nearly 400,000 Americans suffer out-of-hospital cardiac arrests every year, and almost 90 percent die because they don’t receive immediate Cardio Pulmonary Resuscitation, or CPR, from someone on the scene. When begun immediately, CPR can double or triple a person’s chance of survival. This is one of the primary reasons the American Heart Association (AHA) has come out with new guidelines for CPR.

For the past 40 years, CPR guidelines have trained people to follow these simple A-B-C instructions: 1) Open the airway by tilting the victim’s head back; 2) Provide breaths by pinching the victim’s nose and doing a succession of breaths into his/her mouth; and 3) Perform chest compressions.

**Hands-Only™ CPR**
The AHA now is teaching people how to save lives with Hands-Only™ CPR. This type of CPR focuses on chest compressions only. This technique helps oxygen-rich blood circulate throughout the body sooner, critical for people who have had a heart attack. This technique is also much easier to perform so even non-trained individuals can provide assistance.

There are a few things to do before you start chest compressions. Check to see:

- Is the person is conscious or unconscious?
- If the person appears unconscious, tap or shake his or her shoulder and ask loudly, “Are you OK?”
- If the person doesn’t respond, lay the person down on a flat surface. If two people are available, one should call 911 or the local emergency number and one should begin CPR. If you are alone and have a phone handy, call 911 before beginning CPR. If an AED is immediately available, deliver one shock if instructed by the device, then begin CPR.

**Stayin’ Alive**
The tempo of the 1970’s Bee Gees’ classic hit, “Stayin’ Alive,” happens to be the near-perfect rate for doing chest compressions during CPR. The song is a centerpiece of the AHA national awareness campaign to teach people how to save lives with Hands-Only™ CPR. If a teen or adult suddenly collapses, follow these two steps:

1. Call 9-1-1.
2. Position yourself directly over the victim and place the heel of one hand in the center of the chest. Then, put your other hand on top of the first, interlocking the fingers. Push hard and fast at the rate of 100 beats per minute, about the same tempo as “Stayin’ Alive,” until help arrives.

You do not need to be certified to perform this training and it only takes 60 seconds to learn the life-saving skill. Children and infants require a different technique. Go to [www.heart.org](http://www.heart.org) for more information about training on CPR for younger individuals.

**True or False?**

1. **I might make a mistake.** False. According to the AHA, there is almost nothing you can do during CPR to harm a person in cardiac arrest except to delay your response.
2. **Chest compressions might not help.** False. The AHA asserts that people having a heart attack still have oxygen remaining in their lungs and bloodstream. Starting chest compressions delivers needed oxygen until medical help arrives.
3. **Only older, overweight men are at risk for a heart attack.** False. Equal numbers of men and women have heart attacks.
4. **The majority of all cardiac emergencies occur at work.** False. The AHA says that 90 percent of cardiac arrest events occur at home. This means that you will most likely perform CPR on a family member.

Anyone can learn to do CPR. Information on AHA Hands-Only CPR is available at: [www.heart.org/HandsOnlyCPR](http://www.heart.org/HandsOnlyCPR), or [www.youtube.com/HandsOnlyCPR](http://www.youtube.com/HandsOnlyCPR).
The mission of Putnam City Schools is to prepare our students to be responsible citizens and lifelong learners. It's a mission in which we are succeeding. For 17 consecutive years, Putnam City Schools has been selected as one of the top school systems in the nation as a recipient of the SchoolMatch "What Parents Want Award." SchoolMatch maintains information on every public school system in the country to help employees transferred by their companies find schools that match the needs of their children. Criteria used in selecting winners of the "What Parents Want Award" include curriculum, academic test scores, recognition for excellence, library/media services, class size and above average expenditures on pupil instruction.

Afternoon Sleepiness and Your Body Clock

Feeling a bit droopy in the middle of the afternoon? You’re far from alone. “It’s not unusual to feel a little groggy in the afternoon,” said Dr. Russell Rosenberg, chairman of the board of the National Sleep Foundation. “A lot of cultures take advantage of midday tiredness and close down business for an afternoon siesta.” Lunch often takes the blame for afternoon sleepiness, but the drop in alertness has more to do with a person’s circadian rhythms than a sandwich. These are the body’s physical, mental, and behavioral changes that follow roughly a 24-hour cycle and influence the part of the brain that wakes a person up. While social factors such as eating play a role in a person’s circadian rhythm, light and darkness are the primary drivers in a person’s sleep-wake cycle.

“Light has an effect on your brain,” Rosenberg said. “It suppresses melatonin release. When it’s dark, melatonin is released, signaling sleep.” A person’s drive for being awake is at its lowest point between 2 and 4 a.m., and alertness also typically drops between 2 and 3 p.m. The midday dip can occur earlier or later depending on whether someone is a morning person or night owl.

A person who feels sleepy at other times of the day could be getting too little sleep at night or could have a sleep disorder, which should be evaluated by a primary care physician or sleep specialist. “The kind of sleepiness and drowsiness people feel in the middle of the day is normal. Fighting it throughout the day is abnormal,” Rosenberg said. “A little sleepiness in the middle of the afternoon is fine. The rest of the time you should feel fully alert.”

To minimize afternoon sleepiness:

- **Take a brief walk outside, or sit near a bright light or window.** Sunlight has an alerting effect on the brain,” Rosenberg said.
- **Eat a low-carb lunch.** Carbohydrates can intensify natural midday drowsiness.
- **Get seven to nine hours of sleep.** “Whenever you are sleep deprived, midday sleepiness can be worse,” Rosenberg notes.
- **Nap, if possible.** If your schedule allows, get some shut-eye for no longer than 30 minutes. “For a lot of people it really does help boost alertness for the rest of the day,” Rosenberg said.