



Consider This

HEALTH & SAFETY NEWSLETTER
JANUARY 2016



2015 AHA Guidelines
for CPR & ECC



Contaminated Water in
Eyewash Stations



Planning for the Fire
that Strikes in the
Night



Proper Respirator
Selection



Captain Obvious



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& Safe 2016



AHA Guidelines for CPR & ECC

In 2015, the American Heart Association (AHA) released the most current guidelines for Cardiopulmonary Resuscitation (CPR), Emergency Cardiovascular Care (ECC) and use of Automated External Defibrillators (AED). Here's a brief overview of some of the changes for those of us who are trained in CPR/AED.

1

Ensure the scene is safe before you act!

2

Immediate recognition of a heart attack/cardiac arrest, and immediate activation of the emergency response system. Contact 9-1-1 or the local emergency dispatch number as soon as you see that someone has had a heart attack. Recognize the arrest, call for help, and initiate CPR and provide defibrillation.

3

Use of social media to access trained CPR responders. This may be new in the guidelines but has actually been around in various forms for some time. Some emergency dispatchers have the capability of sending notices to those in their jurisdiction that are trained responders to quickly get help to where it is needed.

4

During a witnessed cardiac arrest, *as soon as an AED is present - use!* If the AED is immediately present, you can attach and activate it before compressions begin. Remember that an AED will not administer a shock unless the patient requires it. You can't hurt someone by getting the AED attached and started. The AHA says, "There is clear and consistent evidence of improved survival from cardiac arrest when a bystander performs CPR and rapidly uses an AED. Thus, immediate access to a defibrillator is a primary component of the system of care". For an unwitnessed cardiac arrest, compressions are still recommended.

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2015 AHA Guidelines for CPR & ECC (Cont.)

5

Number of compressions increases! The previous guidelines had compressions at the rate of 100 per minute. The new guidelines state that *100 compressions per minute is the minimum* and the **goal should be 100 to 120 per minute.**

6

Compression depth has increased! Compressing an adult chest was about 2 inches, now the **goal is between 2 inches and 2.4 inches.**

7

More emphasis on compression quality! When performing CPR, you are pumping on the chest to increase and decrease pressure to pump blood while the heart is disabled. Effective compressions are not only rapid and deep, they are also smoothly administered, in equal up and down motions. Don't jerk up and down, but deliver a smooth up and down pumping motion.

8

Rescue breathing stays the same! While there has been speculation of a move to "hands only" CPR, that is not the case for trained rescuers. The AHA still recommends that if you are trained in CPR, you should be doing **30 compressions to 2 rescue breaths**. The only difference is increased emphasis that the breaths be 1 second in duration to prevent excessive ventilations.

Quick Link
[2015 AHA Guidelines for CPT and ECC](#)

References: Safety Compliance Management Inc., SCM Safety Tip of the Week, <http://www.scm-safety.com/tip-of-the-week/>

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Contaminated Water in Eyewash Stations



Eyewash stations are critical emergency safety equipment intended to mitigate eye injuries when control methods do not prevent exposure to a physical or chemical irritant or a biological agent. The ANSI standard for eyewashes specifies that eyewashes must be capable of delivering tepid flushing fluid to the eyes not less than 1.5 liters per minute (0.4 gpm) for 15 minutes after a single movement and subsequent hands-free operation.

Whether the eyewash station is permanently connected to a source of potable water (i.e., plumbed) or has self-contained flushing fluid, improper maintenance may present health hazards that can worsen or cause additional damage to a worker's eye.

Where are eyewash stations used? Eyewash facilities are required in workplaces where corrosive chemicals are used (29 CFR 910.151(c)), in HIV and HBV research laboratories and production facilities (1910.1030(e)(3)(i)), and where there is any possibility that an employee's eyes may be splashed with solutions containing 0.1 percent or greater formaldehyde (1910.1048(i)(3)).

How can improperly maintained eyewash stations cause infections?

Water found in improperly maintained eyewash stations is more likely to contain organisms (e.g., Acanthamoeba, Pseudomonas, Legionella) that thrive in stagnant or untreated water and are known to cause infections. When a worker uses an eyewash station that is not maintained, organisms in the water may come into contact with the eye, skin, or may be inhaled. Workers using eyewash stations after exposure to a hazardous chemical or material may have eye injuries that make the eye more susceptible to infection. Also, workers with skin damage or compromised immune systems (e.g., transplant recovery, cancer, MS) are at increased risk for developing illnesses from contaminated water. Early diagnosis is important to prevent infections from causing serious health effects, including permanent vision loss and severe lung diseases (e.g., pneumonia).

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Contaminated water in Eyewash Stations (Cont.)

A couple of organisms that thrive in eyewash stations when not maintained properly are *Acanthamoeba* and *Pseudomonas aeruginosa*, along with many other microorganisms that live in stagnant water.

How can eyewash stations be maintained to prevent infections?

Eyewash station manufacturer instructions provide direction on how often and how long to activate specific plumbed systems to reduce microbial contamination and generally reference the American National Standards Institute (ANSI) standard Z358.1-2014. Self-contained eyewash units must be maintained and employers should consult the manufacturer's instructions for maintenance procedures. This includes flushing the system and using only solutions appropriate for flushing eyes.



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ATTENTION – An Unplanned Fire Drill is Scheduled for Next Friday (If it's sunny)

Being prepared for emergencies at the office/facility is no joke. Every year, thousands of workers are rushed to emergency rooms and clinics after falling, being burned, getting caught in a piece of equipment, being struck by a renegade forklift, you name it.

Once a year the announcement is made that a 'surprise' fire drill will happen at the end of the week. Personnel who have been with the company long enough and who have been through this routine 10 times would look at the weather and would decide to ignore the alarms, the lights, the announcements and continue working. Several figured they knew the routine and it was best for only the new hires.

These folks are missing the point. The purpose of the drill is not to show where the nearest stairwell is, nor to point out (again) where the closest fire extinguisher is, or to stay in the designated meeting area until further notification. The exercise is not about transmitting information – it is about building muscle memory – to go through the steps often enough that they become secondhand, that the scenario would play out without having to think about the steps necessary for execution. The experience one needs if a real emergency takes place.

A fire drill planned for the end of shift at 3:00 in the afternoon when all management personnel are available, when experienced personnel are working who have been with the company for many years, and when it is daylight is prime time. The reality is we need to plan for the fire that strikes in the middle of the night when one lone engineer is staying late in the upstairs office, when the second shift lead man is dealing with a workforce who is green and hasn't had fire extinguisher training and has no clue what the fire alarm even sounds like. At these moments, the company is most vulnerable.

The first step to an effective emergency plan and fire drill is to imagine everything that could possibly go wrong, from the most likely and least damaging, to the rare and catastrophic. Get your team together and start discussing what has already happened, what is currently presenting itself to happen and everything that could happen. Don't get in the position of having to say "We should have."



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Proper Respirator Selection

There are two main types of respirators: air purifying and supplied air. Proper respiratory selection is crucial when engineering controls are not feasible or are not completely removing the hazard source from the work atmosphere.

Air Purifying

Air purifying respirators remove contaminants from the air and are appropriate to use in environments of low-level contamination where there are sufficient oxygen levels. These contaminants can either be airborne particles or chemicals and gasses. Air purifying respirators (APR) are divided into two types: particulate filtering, which remove particulates such as dusts, mists, aerosols, and fumes; and vapor and gas filtering, which remove vapors and gasses from inhaled air. APRs are available in four types of styles: disposable, quarter mask, half mask, and full face. Disposable respirators, or dust masks, provide protection from nuisance dusts and particulates, and **should never be used for protection from gasses, vapors, or in oxygen deficient atmospheres.**

Quarter mask, half mask, and full-face respirators are designed to be used with cartridges or cloth filters. Full-face respirators protect the entire face and utilize twin cartridges or chin mounted canisters to filter intake air. All cartridges used for the half mask are available for the full-face mask, as well as several others. Each cartridge is designed for use to protect against specific contaminants. It is extremely important to know the contaminant present in the environment to select the appropriate cartridge.



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Proper Respirator Selection (Cont.)



Supplied Air

Supplied air respirators provide a source of clean, breathable air to the user. This type of respirator should be selected in work environments that contain contaminants that air purifying respirators cannot filter or in oxygen deficient environments. There are two types of supplied air respirators: air-line respirators and the self-contained breathing apparatus (SCBA). Air-line respirators have an air-line hose affixed to the facepiece and is attached to an air supply located away from the user. SCBA respirators have an air tank, which is carried by the user on their back, to supply clean air. These tanks are used for extremely hazardous environments and the tanks typically deliver 30 to 60 minutes of air to the mask.

Fit Testing

OSHA requires proper fit testing and training prior to workers using a respirator on the job, per the 29 CFR 1910.134 standard. There are two types of fit tests—qualitative and quantitative.

Qualitative	Quantitative
Involves placing a hood over the employee wearing a respirator and entering an easy to taste concentrated solution into the air space around the mask. A satisfactory fit is achieved if the user is unable to detect the solution. A satisfactory fit is achieved if the user is unable to detect the solution.	Quantitative testing measures the amount of contaminant in both the testing atmosphere as well as inside the respirator. These numbers are compared to determine the efficiency of the fit.
Qualitative testing relies on a subjective response from the employee, without providing a numerical result for mask integrity and leak rate	

OSHA mandates that fit testing be performed prior to initial use, if a different respirator facepiece is used, and annually.

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Why is it that safety professionals are getting heckled when we provide reminders on basic safety information and then go into a facility to conduct a mock-OSHA audit and find the same type of potential hazards or non-compliance items over and over again? Each month we feature a "Captain Obvious" photo to share simple safety reminders that are found on jobsites every day.



CORRECTIVE ACTIONS

- Provide worker with a full-body harness with shock-absorbing lanyard.
- Instruct worker that standing on the midrail or toprail is prohibited.
- Provide extensive and ongoing training on fall protection and fall prevention.



No Fall
Restraint
Standing on
Midrail



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Contact Monica Meyer at
[Monica.Meyer@ehs-
support.com](mailto:Monica.Meyer@ehs-support.com) today to learn
more about how we can help
you manage your health and
safety risks.

