SHA requires that all employees be educated in the use of fire extinguishers every year, according to OSHA 29 CFR 1910.157(g). The statute states “the employer shall provide an educational program to familiarize employees with the general principles of fire extinguisher use and the hazards involved with incipient stage firefighting,” but it doesn’t lay out many specifics about what a comprehensive fire safety training program should include. To ensure your employees are prepared to deal with emergencies in the workplace, follow the steps outlined in this article for a successful safety program.

The most important thing to consider when designing your fire extinguisher training program is your workplace. Focus your training on the type of emergencies employees really may face. For example, an office complex, manufacturing facility, hospital facility, and university dorm should all have markedly different programs. Furthermore, employees with different roles should be trained based on the threats they face and the emergency response protocols that are established.

Every successful program should combine classroom and hands-on instructional elements. Many of the basics can and should be covered before allowing trainees to cement their theoretical knowledge with hands-on application.

Trainees should leave the program with knowledge of the sources of fire, classes of fire and their corresponding fire extinguishers, how to identify an extinguisher, how to assess a fire situation, and fire emergency protocols.

Sources of Fire

- Fires are chemical reactions that occur when fuel, oxygen, and an ignition source combine.
- Fire extinguishers work by removing one or more of these sources, with different extinguishers working in different ways. For example, water extinguishers remove the heat and carbon dioxide (CO₂) extinguishers remove the supply of oxygen.

Five Classes of Fire

- Class A fires involve ordinary combustible materials, such as cloth, wood, paper, rubber, and many plastics.
- Class B fires involve flammable and combustible liquids, such as gasoline, alcohol, diesel oil, oil-based paints and lacquers, and flammable gases.
- Class C fires involve energized electrical equipment.
- Class D fires involve combustible metals, such as magnesium, titanium, and sodium.
- Class K fires involve vegetable oils, animal oils, or fats in cooking appliances.

Choosing the Correct Fire Extinguisher

- Many fire extinguishers are designed for use on specific types of fires. The most common fire extinguishers are:
  - Class A: water
  - Class BC: CO₂
  - Class ABC: dry chemical powder
- Users must understand that operating a fire extinguisher that does not match the class of fire can actually increase the fire hazard and endangers the user and those nearby. Talking about the best fire extinguisher for each situation is essential in any fire safety training program.

Identifying a Fire Extinguisher

- Teach employees how to identify an extinguisher, including its class and the size of fire it is designed to combat, by the markings on the fire extinguisher.
- Help employees identify the actual extinguishers found around their place of work.

Assessing a Fire Situation

- As portable fire extinguishers are designed for incipient-stage firefighting, employees should be familiar with how to properly assess a fire situation.
- Individuals should not use a portable fire extinguisher to combat fires larger than themselves.
- Individuals should also assess the fire’s location (is it fully visible or has it spread behind walls or equipment?), levels of heat (is the room too hot to remain in comfortably?), presence of thick smoke or fumes, and the availability of sufficient exit routes.

Additionally, each organization should clearly instruct employees as to what alerting actions are required and when evacuation is required. Ideally, employees should never attempt to fight a fire without signaling that there is an emergency.

Practical Training

When it comes to fire extinguisher training, nothing compares to actual practice. Hands-on training is by far the most successful way to familiarize someone with extinguisher usage. In fact, trained individuals are 250 percent more effective in extinguishing fires,
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according to the National Association of Fire Equipment Distributors.

Watching a video or providing a classroom demonstration is no substitute for seeing a fire, reaching for an extinguisher, pulling the pin, and squeezing the trigger. Fire extinguishers are an important safety tool located throughout the work site but, like any tool, proper training is needed to support safe and effective use.

Hands-on training engages trainees as they are able to put what they learned in the classroom into practice, and new learning points are uncovered through the hands-on experience. Hands-on training not only builds confidence, but it also breaks down overconfidence. Most employees who have not used an extinguisher are amazed at how little discharge time one has. A standard 10 pound ABC extinguisher provides just 20 seconds of discharge. Learning this helps employees further assess risk and appreciate the limits of portable extinguishers.

A well-executed fire extinguisher training program offers much more than a means of regulatory compliance. A comprehensive program that includes both classroom and hands-on education to help employees understand the risks, challenges, and opportunities in facing a fire emergency will truly engage employees in the company’s fire safety policies, creating a safer workplace for all.

Tips for Hands-On Training

Hands-on training provides many opportunities for teaching employees to use a fire extinguisher effectively. Consider these tips for further engaging and educating employees:

- Teach employees to check the pressure gauges and test extinguishers before approaching a fire. An excellent learning tool can include having trainees select from multiple training extinguishers where one or more are not fully charged.
- Keep class sizes small, ideally fewer than 20 students at a time. This will make it easier for everyone to participate, ask questions, and stay engaged. Allow all trainees to extinguish the fire and provide them with opportunities to refine their technique and retry if they fail.

Case Study: Harris Health System

The Harris Health System is tasked with training staff on how to use an extinguisher properly. Training medical staff is the number one priority, as well as working with administrative departments. Extinguisher training is also a focal point of their Safety Week, held each June. After training, staff consistently state that they feel much more comfortable operating an extinguisher and facing a fire should the need arise.

Harris Health trains 22 medical clinics each year and trains its hospital inpatient units as often as possible. Because their safety team is very small, as most safety teams are, it concentrates the training during the months when the members are not involved in safety audits or environmental rounds. The team also offers to do the training at every Safety Committee meeting and during safety audits. Training employees when they are able to focus on the task at hand and when the instructor is able to provide ample instruction and practice time is essential.

Recently, Harris Health invested in a digital fire extinguisher trainer to use in its training. They find that the system is easy to set up and use, which helps them train more people and allows trainees to learn quickly and return to their normal job duties. After obtaining the laser-based system, they also fabricated a pull station with strobes and chimes so staffers really get the feel of having to RACE and PASS in their own department. The pull station trainer was fabricated by the engineering team and is battery powered.

The key to Harris Health’s success lies in choosing a realistic, hands-on training method and also arranging for staffers to train in their natural environment rather than a foreign building. For inpatient locations, the laser extinguisher is placed in the extinguisher cabinet and a pull station trainer is positioned in front of the department’s actual pull station. Then, the staff executes a drill. Having the training in the department makes it more real and adds context to the training—employees learn where their extinguishers and pull stations are located so that they can easily remember what to do in an emergency situation.

As far as technique, Harris Health teaches concepts it has developed called “Precision Code Red Response.” This teaches trainees that the person discovering the fire becomes the Incident Commander. Using the RACE acronym, they train them to take charge of the event and delegate the Rescue, Alarm, Contain, and Extinguish actions to those who are present, rather than trying to do those actions by themselves. Training in this way reduces response time. They also train on the PASS (Pull, Aim, Squeeze, Sweep) technique so that all staffers know how to operate the extinguisher.

Harris Health limits the amount of classroom training it conducts. Because it is not as effective as on-site training, team members find their limited time is put to better use in training in the employees’ own potential response environments.

Training is always tough when there are so many other things on the safety staff’s plate. Harris Health recommends finding a system that allows for maximum staff participation. This enhances the learning experience and lets the safety staff enjoy the training while allowing everyone to gain muscle memory and hands-on experience.

Finding a system that is transportable, allows for quick and easy setup, and can be used in a multitude of places where staff may experience fire situations is a great way to ensure you’ve created a successful program.

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