

Compliance Training

Electrical Safety

Electrical Safety

OSHA has established a series of standards relating to electrical safety in order to prevent some of the thousands of injuries and hundreds of deaths that occur as a result of electrical hazards in the workplace.

Electrical cords and cables (29 CFR 1926.416 (b)(2), 1926.416 (e)(1), 1926.416 (e)(2)): Working spaces, walkways, and similar locations shall be kept clear of electrical cords so as not to create a hazard to employees. Worn or frayed electric cords or cables shall not be used. Extension cords shall not be fastened with staples, hung from nails, or suspended by wire.

Portable electric equipment - handling (29 CFR 1926.416 (f)(2)): Portable equipment shall be handled in a manner that will not cause damage. Flexible electric cords connected to equipment may not be used for raising or lowering the equipment. Flexible cords may not be fastened with staples or otherwise hung in such a fashion that damage could occur to the outer jacket or insulation.

Visual inspection (29 CFR 1926.416 (f)(3)): When an attachment plug (a standard plug) is to be connected to a receptacle (outlet), the relationship of the plug and receptacle contacts shall first be checked to ensure that they are of proper mating configuration.

Connecting attachment plugs (29 CFR 1926.416 (f)(4)(i)): Employees' hands may not be wet when plugging and unplugging flexible cords and cord-and-plug connected equipment, if energized equipment is involved.

Reclosing circuits after protective device operation (29 CFR 1926.416 (f)(6)): After the power or piece of equipment has been turned off, it may not be turned on again until all repairs and checks have determined that the system may be safely turned on. Circuit breakers and fuses may not be replaced unless the main power to the box is turned off.

THIS TRAINING SESSION IS RECOMMENDED FOR:

All healthcare workers
(administrative and clinical).

Training Objectives

The training objective is intended to provide information for working safely with electricity and electrical appliances/equipment:

- Safe electrical work practices; and
- First aid and medical treatment for electrical shock.

Interactive Training Reminder

Compliance Training is an interactive training program in which you can address questions with other staff members or supervisors to obtain clarification for situations in your work setting.

Write down any questions that you have about the training topic and address them with your Safety Training Coordinator or supervisor.

Lockout and Tagging (29 CFR 1910.147 (2)(iii), 1910.333 (2), 1910.333 (b)(2)(i), 1910.333 (b)(2)(iii), 1926.417, 1926.417 (d)(2)(iv)): The intent of this regulation is to protect an employee or service person from having the power turned on while they are working on a piece of equipment. Where the equipment has no plug that can be pulled and/or managed, the facility would need a lockout/tagout policy to prevent injury.

De-energizing equipment (29 CFR 1926.417 (d)(1)(ii) (A-C)): Safety procedures for circuits and equipment should be determined prior to need. Written protocols are a good method of ensuring safety when more than simple unplugging is necessary. The circuits and equipment to be worked on shall be disconnected from all electric energy sources. Control circuit devices, such as push buttons, selector switches, and interlocks, may not be used as the sole means for de-energizing circuits or equipment. Interlocks for electric equipment may not be used as a substitute for lockout and tagging procedures.

First Aid for Electrical Shock

In some cases, even small amounts of electricity can be life-threatening, because electrical shock can cause unconsciousness, cardiac arrest and cessation of breathing. Serious, deep burns and tissue injury are also caused by electrical shock. It is important to familiarize yourself with the procedures to be taken in such an emergency.

If you suspect that someone has received an electrical shock, look carefully before you touch the victim. If the victim is still in contact with the energy source, you may be electrocuted if you touch him or her. If possible, turn off the source of electricity. If this is not possible, move the electrical source away from you and the affected person using a non-conducting object made of cardboard, plastic, wood, clothing or other available material.

Cardiac Arrest

Once the victim has been removed from the electrical source, it should be determined whether the person is breathing. If the person is not breathing, a method of artificial respiration or defibrillation should be started immediately. Statistics show that seven out of ten victims of electric shock were revived when artificial respiration was started in less than three minutes. After three minutes, the chances of revival decrease rapidly. For this reason, cardiopulmonary resuscitation (CPR) and first aid should be immediately available at every worksite. Employers may contact the local office of the American Heart Association, the American Red Cross, or equivalent groups or agencies, to set up a course for employees.

Treatment for Shock

If the victim is faint or pale or shows other signs of shock, lay the person down on his or her back and elevate the feet higher than the person's head. Keep the victim warm and comfortable. Do not give the victim anything to eat or drink. If the victim is vomiting, turn them onto their side to prevent choking.

First Aid

You may also need to treat major burns while waiting for emergency medical assistance to arrive. Cover any burns with cool, moist, sterile bandages. Do not use creams, ointments or ice on the burned area. Take care to avoid breaking blisters.

Keep in mind that prevention is the best medicine for electrical shock. Most fatal electrical shocks happen to people who should know better. Take the time to familiarize yourself and other staff members with the precautions recommended by OSHA. Inspecting and using care when utilizing electrical equipment can prevent electrocution and related injuries to staff members, as well as patients.

Fire risks can be compounded by defective equipment, overloaded circuits and defective wiring. In the event of electrical fire, use only a BC or ABC type fire extinguisher. ●

Compliance Training Test

Electrical Safety

NAME: _____

DATE: _____

SIGNATURE: _____

STAFF POSITION: _____

There are 10 questions to the test for Electrical Safety. There is no pass or fail grade to the test. Review the training information to find the correct answers to any questions that may have been missed.

1 Extension cords may be stapled to a wall so that people don't trip over them.

Select One T F

2 When an attachment plug is to be connected to a receptacle, the relationship of the plug and receptacle contacts shall first be checked to ensure that they are of proper mating configuration.

Select One T F

3 Small amounts of electricity or not life-threatening, so safety precautions are not necessary when using low output appliances.

Select One T F

4 If a suspected victim of electrical shock is faint or pale or shows other signs of shock, lay the person down on his or her back and elevate the feet higher than the person's head.

Select One T F

5 A suspected victim of electrical shock should be given plenty of fluids to prevent dehydration.

Select One T F

6 In the event of electrical fire, use only a BC or ABC type fire extinguisher.

Select One T F

7 Statistics show that seven out of ten victims of electric shock were revived when artificial respiration was started in less than three minutes.

Select One T F

8 Creams and ointments may be used to sooth electrical burns before emergency medical assistance arrives.

Select One T F

9 If a victim of electrical shock is still in contact with the energy source, turn off the source of electricity if possible. If this is not possible, you should move the electrical source away from you and the affected person using a non-conducting object made of cardboard, plastic, wood, clothing or other available material.

Select One T F

10 Control circuit devices, such as push buttons, selector switches, and interlocks, may not be used as the sole means for de-energizing circuits or equipment.

Select One T F