



ELECTRICAL SAFETY- THE OFFICE ENVIRONMENT CAN BE AN ELECTRICAL HAZARD

Office Electrical Safety. Electrical equipment used in an office is potentially hazardous and can cause serious shock and burn injuries if improperly used or maintained. Electrical accidents usually occur as a result of faulty or defective equipment, unsafe installation, or misuse of equipment on the part of office workers. (State Office of Risk Management, 2020)

Too often, we don't think a great deal about office electrical safety. Ergonomics and slips, trips, and falls are usually what we consider when looking to improve a safe work environment. As a special consideration these days, we should include our "home office" in our efforts to eliminate electrical hazards as well. Since working from home, is our new office for many of us, it's important to raise our awareness of the possible existing electrical hazards.

The good news is that according to the Electrical Safety Foundation International's (ESFi) latest data, there has been a decrease in non-fatal electrical injuries from 2,012 injuries in 2017, to 1560 in 2018, 11% of these in education and health services. What isn't clear are what measures were taken to realize this reduction. It is safe to say that by focusing on injury prevention, we can go a long way in keeping ourselves, co-workers, and our family members safer from electrical contact.

By following the steps below in understanding/identifying, minimizing/eliminating, and taking action/correcting you will be well on your way to reducing the risk of electrical shock or electrocution.

Three steps in reducing or eliminating electrical hazards at the office:

Step 1- Understand and identify your electrical hazards.

Step 2- Determine options on how to minimize or eliminate hazards.

Step 3- Take action and correct the hazards by carrying out what you found were the best solutions during step 2.

Step 1 is fundamental in your search of the electrical hazards. If you are not familiar with this type of hazard, it's a good idea to do some research or, better yet, ask someone more knowledgeable in this area in order to get familiar with possible hazards in your particular work environment. Below is a brief definition of what are electrical hazards:

1. Shock, which is caused when contact is made with a live wire or equipment that is not grounded, allowing the current to flow through the body.

2. Electrical burns, one of the most serious, painful, and disfiguring of all burns. They typically occur on hands and feet where the current enters and exits the body.
3. Electrocution is death or severe injury by electric shock.
4. Secondary injuries, which typically result from the effects of shock, such as being thrown to the ground or off a ladder, causing indirect injuries.

Step 2 is what could be the most challenging step. It's the "search and find process" that, with your knowledge of what to look for and interest in injury prevention, the challenge is to identify corrective actions that will minimize or eliminate all hazards. Below is a list of steps that can be taken minimize or eliminate hazards:

- Even when using a surge protector, make sure the electrical load is not too much for the circuit.
- Avoid overloading outlets with too many appliances. Never plug in more than one high-wattage appliance at a time.
- Unplug appliances when not in use to save energy and minimize the risk of shock and fire.
- Inspect electrical cords once a month to ensure they are not frayed, cracked or otherwise damaged.
- Do not run electrical cords through high-traffic areas, under carpets or across doorways.
- Consider having a licensed electrician install additional outlets where needed, rather than relying on extension cords and power strips.
- Ensure all electrical equipment is certified by a nationally recognized laboratory and read all manufacturers' instructions carefully.

Step 3 - You've come this far, now is when you make the necessary changes or improvements to mitigate the hazardous conditions. Some changes could be as simple as eliminating an appliance that is questionable, such as a paper shredder with a loose wire where it is attached from its case or replacing a broken outlet cover. It is important to utilize qualified assistance when the change being made may require exposure to the hazard itself. An example of this may be an outlet that has burn marks on the surface and most likely requires that a qualified electrician replace it. Below is a list of 3 of the most effective methods of mitigating hazards listed by effectiveness with number 1 being the most effective:

1. Elimination- eliminates the hazard and you eliminate the possible injury.
2. Substitution- replace a compromised appliance or outlet with a safe one.
3. Engineering controls- installing shock/electrocution prevention equipment such as Ground Fault Interrupters (GFIs) or Arc Fault Interrupters (AFIs) to electrical circuits in order to reduce or eliminate exposure to the hazard.

By following these steps, you will lower the possibility of injury as well as property damage, thus allowing for a safer working environment.