



## Safety & Risk Office 5-Minute Safety Talk No. 5 – Electrical Safety

*Note to Supervisor: This 5-Minute Safety Talk (in some places, it might be called a Toolbox Talk or a Tailgate Talk) is designed not only to communicate important safety information to your employees, but also to be given to them by you, which will hopefully reinforce the message and let them know your expectations for safety. You can use the text below as a script to be rendered verbatim or just as talking points to be stated in your own words. Please also complete the attendance listing on the last page and send it to Safety & Risk, Mail Stop 66.*

Electrical hazards are doubly hazardous in that there is not only the chance of electrocution but also, there is the probability that any electric shock will cause a loss of consciousness that may well result in a fall of some sort. Also, whereas many accidents at the College may pose a risk of injury only, an accident involving electricity may present a risk of not only serious injury, but also death. Remember that most of the circuits at the College are 15 amperes, and that an electric current as small as 100/1,000 of an ampere (100 milliamperes) flowing through the body for only 2 seconds can cause death by electrocution. This is not much current when you consider that a portable electric drill draws 30 times that much. Today we will discuss ways in which you can receive an electric shock and ways to avoid electrical hazards.

There are a number of ways in which you can receive an electric shock, e.g.:

- From a defective power tool.
- From defective electrical cords.
- From overloading a switch or over-riding a by-pass.
- By not grounding electrical equipment.
- By coming into contact with energized electric lines.
- By coming too close to high power lines with the power arcing over and making contact with you or the equipment you are using.

Here's what you must do in order to avoid electrical hazards:

- Be alert to the clues that an electrical hazard may be present, such as:
  - Tripped circuit breakers or blown fuses.
  - Warm tools, wires, cords, connections or junction boxes.
  - A GFCI (Ground Fault Circuit Interrupter) that shuts off a circuit. A GFCI continuously monitors the current flowing from the source and compares it to the current returning to the source. If the difference is 6/1,000 of an ampere (6 milliamperes) or more, it opens the circuit almost instantly. A GFCI that trips is indicative of an electrical grounding problem.
  - Worn, cut or frayed insulation around a wire or connection.

- Always inspect extension cords and the cords of power tools and equipment for damage (cuts), fraying and defective plugs before using them. If you see a problem, do not use the item until it has been repaired.
- Never use a power tool or an extension cord that has had the ground prong removed.
- Discard any piece of equipment that gives you even the slightest shock.
- Never stand in water and operate a power tool. Use only battery-powered tools in wet conditions. Also, keep extension cords out of water when in use.
- Disconnect all electric tools and cords to make adjustments and when not in use.
- Use GFCI with all power tools. A GFCI should be installed wherever a water hazard is present. GFCIs can be at the circuit breaker, the outlet, incorporated into the plug of the appliance or piece of equipment or part of a short extension cord. You will commonly find GFCI plugs on hairdryers, wet vacs, etc.
- Use extension cords only when necessary and only on a temporary basis. Do not use them in place of permanent wiring or run them above ceiling tiles or through walls. Do not fasten or staple them to a building or structure to hold them in place. Never use a metal outlet box as an extension cord.
- Keep electrical cords away from areas where they may be pinched and areas where they may pose a tripping or fire hazard (e.g., doorways, walkways, under carpet, etc.).
- Consider all power lines to be “live” and avoid contact with them.
- Lock out all energized electrical equipment before working on it.
- Use your AC voltage tester to confirm that wiring is not energized.
- Make sure all power supplies, circuit boxes and breaker boxes are properly marked to indicate their purpose.
- Stay away from overhead high power lines, at least 6 to 20 feet away, depending voltage. Likewise, lifting and hoisting equipment should stay between 10 and 42 feet away from the line. Never work above a high power line, regardless of the distance.

Electricity is a mighty servant, but it also can be a killer. The best way to eliminate the hazard that electricity poses is to act as if each exposure to electricity may be your last. Never take it for granted, and never get lazy or take short-cuts with it. Always practice electrical safety.

# 5-Minute Safety Talk No. 5 – Electrical Safety Attendance List

Presenter: \_\_\_\_\_ Date/Time: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

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**Send to the Safety & Risk Office, Mail Stop # 66, when completed.**