

Northwestern employees could be at risk for electrical hazards, and the acronym “BE Safe” is an easy way to remember potential dangers – **B**urns, **E**lectrocution, **S**hock, **A**rc flash, **F**ire, and **E**xplosions. Below are some examples of common electrical hazards that can lead to burns, shock, and electrocution.

- **Overloading:** Cords, power strips, and electrical receptacles are all rated to handle specific amounts of electricity. When connecting multiple extension cords into power strips or power strips into each other, also known as daisy chaining, fire or explosions may occur. Also, extension cords and power strips should never be used in lieu of permanent wiring because they are not rated for long-term use.
- **Improper grounding:** Grounding is a means to protect people from shock or electrocution. Devices such as ground fault circuit interrupters (GFCIs) are built into cords and outlets to protect us from these hazards. GFCIs monitor the amount of current flowing between the ungrounded (hot) to the grounded (neutral) conductor of a circuit. If there is an imbalance in the current, the GFCI will react to quickly trip or shut off the circuit. For example, let’s say you are working outside in the rain, with an electric drill. There is a path from

the hot wire inside the drill through your body to the ground. If the electricity flows from hot to ground and then through you, it could be fatal. The GFCI will detect that the current is not flowing from hot to neutral, trip the circuit, and cut off electricity.

- **Working on live equipment:** Because of the potential for arc flash, electrocution, and shock only qualified persons, such as electricians, are authorized to work on live electrical equipment at Northwestern.

Qualified persons receive an advanced level of training to safely perform live electrical work. All other individuals should seek assistance from a qualified electrician and avoid working on live electrical equipment.

- **Preparation is key:** Inspect tools, cords, and electrical fittings prior to use in order to ensure they are in good condition. Look for things such as missing grounding plugs, damaged cords, and hot outlets. If you notice a frayed cord or missing grounding prong be sure to mark the cord and take it out of service immediately.
- **Follow guidelines:** Do not run cords through doorways, windows, or walls, be aware of surroundings that could potentially damage electrical equipment and understand