

Environmental Health and Safety

May 2015



Electrical Safety

Each year in the U.S., electrical issues cause over 140,000 fires, 4,000 injuries, and over \$1.6 billion in property damages.

400 deaths are reported each year from electrical fires.

180 out of 400 deaths from electrical fires are caused by consumer products, such as large appliances, wiring, plugs, and lighting.

December and January are the most common months for electrical fires.

Over 25% of consumers do not understand the purpose of GFCIs and how they can prevent electrocution and fires.

An average household will experience five fires in a lifetime.



Electrical hazards are a major cause of injury, death, and property damage around the world. In order to prevent these incidents, it is important to learn how electricity works.

Electricity runs through a wire system that connects using different amounts of amperage. The larger an appliance's wire, the more amps/hazard it will carry.

The difference between amps and volts is the amount of intensity they hold. A volt is not lethal without a current (amp). Anything with over 0.1 amp can be considered lethal.

Electricity uses the shortest possible path to remain powered.

Ground plugs and **Ground-Fault Circuit Interrupters (GFCIs)** prevent this by shutting off power in the event of a ground fault, stopping the possibility of electrocution or fire.

Underwriter's Laboratories (UL) is a safety consultation company that analyses the safety standards of new technologies.

UL conducts experiments to create new standards for electronics that will reduce the risk of fire or electrocution.

How to spot hazards with electrical wiring:

- Frequent blackouts
- Fading/blinking devices
- Heating appliances (toaster, iron, hair dryer, etc.) do not reach a high enough heat
- Outlets are hidden by furniture
- Cords are tied in knots, bound or tacked in place tightly
- Electronics are located near combustible materials (cloth or curtains)
- Overloaded power outlets with multiple cords attached
- Broken or missing wall plates
- Outlets or cords have exposed wiring
- Outlets are warm or hot

What You Can Do:

- Install **Ground Fault Circuit Interrupters (GFCIs)** where water is near any electricity
- Use ground plugs
- Never mix electricity with water
- Use outlet covers to protect children
- Be gentle with wires
- Use the right size circuit breakers and fuses
- Replace broken or missing wall plates
- Switch power tools OFF before plugging into an outlet
- Keep powered yard care tools dry



Resources

[Controlling Electrical Hazards](#)

[Spring: Electrical Safety](#)

[Preventing Home Electrical Hazards](#)

[Facts at the Household Level](#)

[Electrical Safety-Basic Information](#)

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Don't learn safety by accident