

Electrical Safety – A Shocking Reality



May is National Electrical Safety Awareness Month

May is National Electrical Safety Awareness Month, and InSource wants to provide you with the tools, knowledge, and resources to reduce electrical injuries and deaths in the workplace. According to the [Electrical Safety Foundation](#), between 2011 and 2022, there were 1,322 workplace fatalities involving electricity, and according to the Occupational Safety and Health Administration (OSHA), during that period, 70% of fatalities occurred in non-electrically related occupations.

Four Main Types of Electrical Injuries

Electrical currents expose workers to a serious, widespread workplace hazard, and many workers are exposed to electrical energy while completing their daily responsibilities. According to the Centers for Disease Control and Prevention (CDC), there are four main types of electrical injuries.

1. Electrocution (which can be fatal)
2. Electric shock
3. Arc Flash and Burns
4. Fatal falls from height (including ladders) are caused by contact with electrical energy.

Essential Safety Tips for Electrical Safety Awareness

The four main types of electrical injuries are preventable by creating written safety procedures, following them, and conducting safety meetings. The Hierarchy of Hazard Controls safety [systems](#) can assist with creating a robust safety procedure. The Texas Department of Insurance ([TDI](#)) has basic electrical safety tips that employers can use as resources to implement safety procedures.

- Wear Personal Protective Equipment (PPE). Wear rubber-soled shoes and insulated safety gloves when operating power tools, replacing fuses, or working with any device that could give an electric shock. Use rubber floor matting, if available.
- Inspect Power Cords. Check power cords regularly and replace any frayed or damaged insulation covers. Never tape or splice damaged cords. The Occupational Safety and Health Administration ([OSHA](#)) standards require that extension cords used with portable electric tools and appliances "shall be three-wire type and shall be designed for hard or extra-hard usage."
- Ground all Power Supply Systems. Ensure that all electrical equipment, circuits, and power supply systems are grounded. Never remove the grounding wire on a three-pronged cord or attach an ungrounded, two-pronged adapter plug to a three-pronged cord or tool.
- Do Not Overload Circuits. Ensure that all circuit breakers or fuses have the correct rating.
- Always use Ground Fault Circuit Interrupters (GFCIs). GFCIs interrupt the flow of electricity within as little as 1/40 of a second. They can prevent electrocution in wet areas, such as bathrooms, kitchens, sinks, or outdoors. Always follow the manufacturers' testing procedures to ensure GFCIs are correctly working.
- Disconnect electrical equipment from its power source before repairs. Never assume the electrical device has been unplugged. Check to make sure.

- Follow manufacturers' instructions. To avoid electrical shock, always use tools and equipment as intended and as outlined in the manufacturer's instructions.
- Inspect tools before use. Ensure that all tools are in good working order before use. Remove any defective tool with a frayed cord, missing prongs, or a cracked casing from service. Attach a "Do Not Use" tag to the damaged tool. Set it aside and report it to a supervisor. Allow only a qualified electrician to complete repairs. Keep tools and equipment clean. Clean and inspect tools after each use. Liquids like grease, oil, and solvents left on tools and equipment can result in electric shock.
- Never use electrical appliances or tools near water. Avoid all liquids when using electrical devices. Even the water content in the human body can make an efficient conductor of electricity when it seeks a path to the ground.
- Use Double-Insulated Tools. Tools with non-metallic cases and a manufacturer's label that says "double-insulated" means the insulation is inside the tool. This insulation protects the user from shock if water enters the tool's housing. If a double-insulated tool is dropped into water, disconnect the power source before reaching for it.
- While working or near overhead power lines, be aware of the following: Do not let aluminum paint rollers, saws, dump truck beds, and other equipment touch power lines. Stay at least 10 feet away from power lines and use non-conductive wood or fiberglass ladders when working near utility lines. Keep the base of fiberglass ladders clean and dry.

Creating and maintaining electrical safety policies and procedures and training employees can help reduce the number of incidents and deaths from electrical hazards. Below are more resources for electrical safety awareness.

Safety and Health Topics - [Electrical](#)

OSHA

[Basic Electricity Safety](#)

Possible [Solutions](#)

National Safety Compliance

[Safety Resources](#)

Insurance Office of America (IOA)

[Safety Matters](#) & Safety Focused [Newsletter](#)

NFPA

Saving Lives by Following the Law and an Electrical Safety [Program](#)

Risk Management Center (RMC)

Comparing Four [Decades](#) of Electrical Injuries and Fatalities

Visit the [Risk Management Center](#) (RMC) for eLearning Courses, Videos, Training Materials, and Safety Information (English & Spanish versions available for many resources).