



Every year, more than 3,600 disabling electrical contact injuries occur in the United States.

These injuries include burns, shocks, and death by electrocution. The National Safety Council estimates that 600 people die every year from electrocutions, and that electrocutions are the fourth leading cause of work-related traumatic death. The highest percentage of electrocutions (40 percent) are reported to happen within the construction industry.

### Electrocution cases

**CASE 1: Overhead power line.** A painter was cleaning up at the end of the workday after painting the exterior of a private residence. He picked up his 40-foot metal ladder and retracted it to approximately 20 feet. While carrying the ladder upright to the work van, the worker was electrocuted when his ladder contacted a 13,200-volt overhead power line located approximately 21 feet above the ground.

**CASE 2: Electrical repair.** A video store owner was electrocuted when he contacted an energized circuit while repairing an air conditioning thermostat. The victim was grounded through an aluminum ladder.

### Electrical Safety Tips

**Stay at least 10 feet away from overhead wires.**

If working at heights or handling long objects, locate overhead wires before starting work. Wear nonconductive hard hat protection whenever there is a danger of head injury from electric shock.

**Make sure the power is off.**

Test or verify that power is off and equipment is de-energized before making repairs (drilling into a 110-volt AC line can kill).

**Safely service hazardous equipment.**

Use lock out (typically a lock with a unique key or combination) and tag out (warning tag

or sign) procedures to control hazardous energy until service work is finished.

Don't repair cords – buy new ones.

Watch for wires with exposed terminals, loose connections, or faulty insulation. Never remove the third prong (ground pin) to make a three-prong plug fit a two-prong outlet.

Special care is needed in wet or damp locations.

Water and electricity are a bad combination. Never operate electrical equipment while you are standing in water.

Proper housekeeping saves lives.

Keep areas around electrical boxes clear for quick access in an emergency. Don't use the attached electrical cord to raise or lower equipment. Resist overloading outlets with too many appliances.

### Safety Quiz

Which of the following are unsafe acts?

- A. Working too close to overhead power lines
- B. Use of proper extension cord to power an appliance on a temporary basis
- C. Altering a three-prong plug to fit a two-prong outlet
- D. A and C
- E. All of the above

*(The correct answer is D.)*