



# USACE Safety Gram



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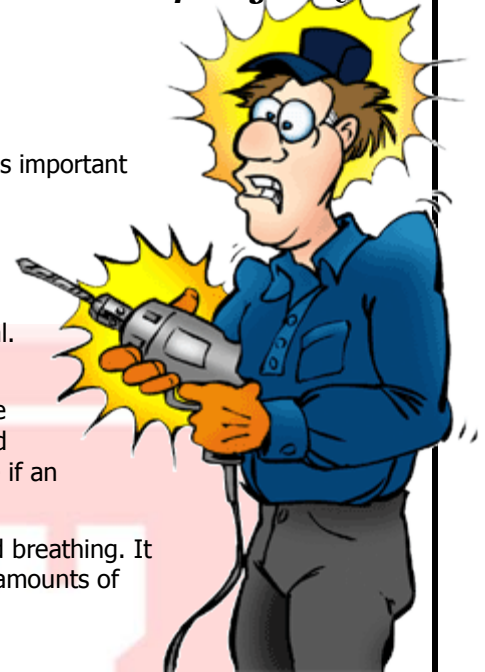
## Electrical Hazards

Almost any kind of job you can think of today involves using electricity. That is why it is important for everyone to understand how to avoid electrical shock.

There are many different kinds of electrical hazards, depending on the kind of place where you work. Some jobsites have high voltage installations and some use small electrical equipment. But whether the electrical shock comes from an overhead transmission line or an incorrectly grounded power tool, the results can be equally fatal.

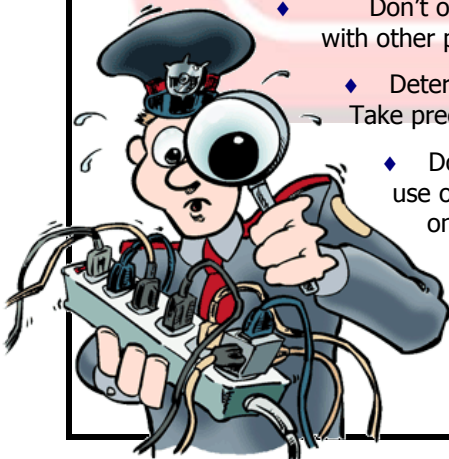
Besides electrical shock, electricity can also cause other hazards. Electrical shock can cause the startled victim to fall from a ladder. Electricity causes burns, including severe internal burns. Electricity can cause fires, for instance when circuits are overloaded and the resulting heat sets off a fire. Electricity can cause explosions, as would be the case if an electrical spark occurred in the presence of a flammable vapor, gas or dust.

When electricity enters the human body, it can affect the heartbeat, brain function and breathing. It can cause immediate death or serious injury. Under the wrong conditions, even small amounts of electricity can kill, so never take any electrical device for granted.



### *Follow these tips to avoid electrical shock:*

- ◆ Always make sure all electrical equipment you use is in good repair. Report any problems so the equipment can be repaired or replaced.
- ◆ Never do repairs on electrical equipment unless you are both authorized and qualified to do so. Fatal accidents have been caused by poorly repaired equipment.
- ◆ Use only correctly grounded equipment. Never use three-pronged cords which have had the third prong broken off. Make sure grounding connections are secure.
- ◆ Watch for wires and connections which are damaged, worn or broken.
- ◆ Use a Ground Fault Circuit Interrupter (GFCI) when using electrical equipment outdoors or in a damp area. Do not use electrical equipment which is damp or which may have been submerged in water. Do not handle any electrical equipment, including cords and plugs, with wet hands.
- ◆ When unplugging a cord, pull on the plug rather than the cord.
- ◆ Never use a ladder made of aluminum or one with metal reinforcement when doing any electrical work. This includes changing a light bulb.
- ◆ Don't overload power strips. Make sure you stay within their load ratings and never daisy chain with other power strips or multi-plug outlets. Have wiring upgraded to accommodate new equipment.
- ◆ Determine if there are any overhead hazards such as power lines and electrical installations. Take precautions to not come into contact with them with an object such as a ladder, pole or pipe.
- ◆ Don't ever use water on an electrical fire. If fire occurs in energized electrical equipment, use only a "C" fire extinguisher, or a combination "ABC" or "BC" extinguisher. Never put water on an electrical fire; the result can be a deadly shock.



***Always be alert to electrical hazards no matter what kind of work you do. Be sure to use electrical safety sense at home too.***