Factsheet: 120 Volts Can Kill!

Ordinary, household, 120 volts AC electricity is dangerous and it can kill.

Voltage is the force that allows electricity to flow in a circuit.

Electrical *current* involves the flow of electrons and it's measured in *amps.*

The third factor involved in current flow is *resistance,* the opposition to current flow, measured in *ohms.*

We can use a simple formula to calculate the current: Current in **Amps** = Voltage in **Volts** divided by Resistance in **Ohms.**

Using electrical tools or equipment in wet areas can be a hazard.

If your skin is dry, it has quite a lot of *resistance* (measured in *ohms* or Ω).

However, if your skin is wet for any reason (rain, sweat, standing in a puddle of water), the skin's electrical resistance drops dramatically.

The amount of electrical **current**, in *amps,* that flows through your body **goes up when resistance** in ohms **goes down.**

Amps = Volts divided by **Ohms.**

If your skin is wet and you get your body across 120 volts of electricity – possibly from an electrical defect in a homemade extension cord – it's very likely that you'll have a current of *100 milliamps (mA)* or more flowing through your heart. (1 mA is 1/1,000 of 1 amp.)

At 100 mA, you may not be able to let go of an energized tool or piece of equipment.

Currents *above 75 milliamps (mA)* can lead to a condition called *ventricular fibrillation,* which can be fatal.

A major safety precaution when working under wet conditions is using an electrical device called a *Ground Fault Circuit Interrupter (GFCI).*

A properly wired and tested GFCI can save your life. It will trip and turn off the electricity when it detects *current leakage* as low as 5 mA.

You should consider bringing and using your own plug-in GFCI receptacle or GFCI extension cord, especially if there is any question about the condition of electrical wiring at your site.

It's important to test your GFCI every time you use it, so you know it will protect you.