

This Week's Learning Objective:

Electrical Wall Outlet Safety

Materials Needed for this Session:

A copy of "Injuries from Electrical Current" sheet for each attendee.

A copy of the group discussion document for each attendee.

Gather tools and chemicals/products that a technician might use in and around wall voids and to access outlets.

Leader Notes / Training Outline

1. Review the "Injuries from Electrical Current" sheet. Encourage discussion. Each attendee should have a copy of the group discussion sheet to take notes.
2. Discuss the circumstances under which a technician would access a wall outlet. Be sure to include the appropriate tools and the proper chemical/products to use in outlets and wall voids.
3. Open the discussion to the attendees. See Leader Tips below.

- _____
- _____
- _____



Leader Tips:

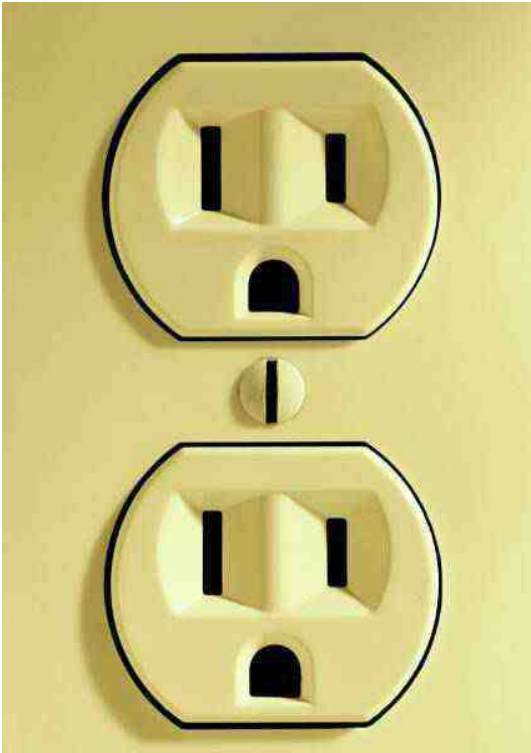
Announce the learning objective: Our objective today is _____

Explain to the group why this topic is being reviewed:

- Prevent you from being injured
- Prevent property damage
- .
- .

Ask the **group to discuss** the subject matter and give input by drawing from their work experiences:

- Attendee to relate a personal story involving this objective
- Attendee to share something learned on the job involving this objective
- .
- .



What kinds of injuries result from electrical currents?

People are injured when they become part of the electrical circuit. Humans are more conductive than the earth which means if there is no other easy path, electricity will try to flow through our bodies. There are four main types of injuries: electrocution (fatal), electric shock, burns, and falls.

Direct contact with the electrical energy. When electricity travels through our bodies, it can interfere with the normal electrical signals between the brain and our muscles (e.g., heart may stop beating properly, breathing may stop, or muscles may spasm).

When the electricity arcs (jumps, or "arcs") through a gas (such as air) to a person who is grounded (that would provide an alternative route to the ground for the electricity).

Arc flashes result in intense heat (causing burns), intense light (can cause blindness), or ignition of other materials.

Arc blasts cause the same conditions as an arc flash, but are more intense and can also include a strong pressure wave. These pressure waves can damage machinery, throw a person, collapse a lung or rupture ear drums.

Thermal burns including flash burns from heat generated by an electric arc, and flame burns from materials that catch on fire from heating or ignition by electrical currents. High voltage contact burns can burn internal tissues while leaving only very small injuries on the outside of the skin.

Muscle contractions, or a startle reaction, can cause a person to fall from a ladder, scaffold or aerial bucket. The fall can cause serious injuries.

Group Discussion Document: Accessing Electrical Outlets and Switches

Under what circumstances do you access (remove the cover) of a wall outlet or switch?

What tools and application method do you use after removing the cover of a wall outlet or switch?

What specific products do you use when treating behind a wall outlet cover or switch?