

CONSTRUCTION SAFETY TALK SERIES - THE FATAL FOUR (FOCUS FOUR) ELECTRICAL HAZARDS

Electrical hazards led to 82 construction worker deaths in 2016.

By identifying these hazards, and understanding how they happen, we can take steps to protect ourselves.



According to OSHA...
Electrical Hazards can be defined as a serious hazard that exposes workers to burns, electrocution, shock, arc flash / arc blast, fire, or explosions.

For more information and training on how to prevent the Focus Four Hazards, please visit: https://www.osha.gov/dte/outreach/construction/focus_four/index.html

TYPES OF ELECTRICAL HAZARDS AND WHAT TO BE AWARE OF

Contact with Power Lines

Overhead and buried power lines are hazardous because they carry extremely high voltage. Fatalities are possible as electrocution is the main risk; however, burns and falls from elevations are also hazards that workers are exposed to while working in the vicinity of high voltage power lines.

Contact with Energized Sources

Hazards regarding contact with energized sources are electrical shock and burns. Electrical shock occurs when the body becomes part of the electric circuit (when an individual comes in contact with both wires of an electrical circuit, one wire of an energized circuit and the ground, or a metallic part that has become energized by contact with an electrical conductor).

Improper Use of Extension Cords

Normal wear and tear on extension and flexible cords can loosen or expose wires, creating a hazardous condition. Hazards are created when cords, cord connectors, receptacles, and cord- and plug connected equipment are improperly used and maintained. If the electrical conductors become exposed, there is a danger of shocks, burns, or fire.

BE SAFE! Electrical hazards expose workers to the following:

Burns: Three types; electrical, arc flash, or thermal contact.

Electrocution: Electrocution is fatal; it means to kill with electricity.

Shock: A response to electric current passing through the body.

Arc Flash/Blast: Emits heat and intense light that causes burns.

Fire: Occurs with faulty outlets, old wiring, cords, and switches.

Explosions: When electricity ignites explosive material in the air.

How to Protect Yourself:

- Inspect all electrical tools and equipment PRIOR to use.
- GFCIs are required on temporary electricity and wet locations.
- Never use anything that is damaged.
- Treat all electrical wires as if they were energized.
- Maintain a 10 ft. clearance from all overhead lines.
- Allow only Qualified Electricians to perform electrical work.
- Keep at least 3 feet from all electrical panels.
- Ensure all tools and wiring are properly grounded.
- Require the proper PPE for the work being performed.
- NEVER work on hot electrical equipment, always de-energize.
- Follow the NEC and other Electrical Safe Work Practices.
- Train others on basic electrical safety and hazard recognition.