

The Bureau of Labor Statistics (BLS) states that electrical injury has been responsible for about 320 deaths and around 4,000 injuries in the United States annually.

### **BACKGROUND**

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Electrical shock or electrocution occurs when the body completes an electrical circuit, giving the electricity a pathway through the body. There are four main types of electrical injury.

1. **Electrocution:** death due to electrical shock
2. **Electrical shock:** anytime electrical current passes through the body
3. **Burns:** commonly occur at the entry and exit points of the electrical current. These are very serious because these burns are not topical; they burn from the inside out. Medical attention is required.
4. **Falls:** many electrical shocks occur while on ladders or in elevated positions. This typically results in a serious fall.

### **GENERAL SAFETY PRECAUTIONS**

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- All employees should be educated on electrical awareness.
- Only qualified persons may work on electric circuit parts or equipment that have not been deenergized.
- Any maintenance performed should be done with the equipment de-energized, if it needs to be done live, then only highly qualified persons should perform the work.
- Ground Fault Circuit Interrupters should always be used in areas that are subject to moisture. GFCI's will sense any disturbance in the circuit and kill the circuit immediately.
- Machines and equipment should be inspected before use. All equipment shall be kept in good condition to prevent any kind of hazards.
- Extension cords and any other items that show exposed wiring should be taken out of service immediately.
- Conductors and parts of electrical equipment that have been de-energized but not been locked or tagged out shall be treated as live parts.
- A minimum distance of 10' from powerlines should be kept at all times.

### **THINGS TO CONSIDER**

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**Power Tools** – Power Tools carry voltage and may cause serious injury and death. It is important to inspect tools before use to check for cracks in the plastic and to ensure the ground prong is present or the tool is marked as double insulated.

**Fires** – Electrical fires are always possible in the workplace. Class C or a Multi-purpose Fire Extinguisher can be used to fight small electrical fires.

**Overloading** – Overloading outlets can be extremely dangerous and is a big fire hazard. Be sure to report any outlets that look to be overload (usually numerous power strips and items plugged into one outlet)

**Improper Wiring** – An easy way to check if wires are not adequate is to feel them. If wires, panels, or boxes feel abnormally warm, there is a good chance something is wrong. Report these situations immediately.