ELECTRICAL INJURIES

The following hazards are the most frequent causes of electrical injuries:

- contact with power lines
- lack of ground-fault protection
- path to ground missing or discontinuous
- equipment not used in manner prescribed
- improper use of extension and flexible cords

An electric shock is received when electrical current passes through the body and can result in anything from a slight tingling sensation to immediate cardiac arrest. A severe shock can cause considerably more damage than meets the eye.

- A victim may suffer internal hemorrhages, renal damage and destruction of tissues, nerves, and muscles that aren't readily visible.
- Involuntary reaction to a shock may also result in bruises, bone fractures, and even death from collisions or falls.
- A small current that passes through the trunk of the body (heart and lungs) can cause severe injury or electrocution.
- Burns are the most common shock-related injury.

When a person receives an electrical shock, sometimes the electrical stimulation causes the muscles to contract. This "freezing" effect makes the person unable to pull free of the circuit.

- If a person is "frozen" to a live electrical contact, shut off the current immediately. If this is not possible, use boards, poles, or sticks made of wood or any other nonconducting materials and safely push or pull the person away from the contact.
- Low voltage does not mean low hazard. The longer the exposure, the greater the risk of serious injury. Longer exposures at even relatively low voltages can be just as dangerous as short exposures at higher voltages.
- If you or a co-worker receives a shock, seek emergency medical help immediately.

Discussion

What is the difference between electric shock and electrocution?

What is the purpose of equipment grounding?