



eSafetyLine

Electrical Burns

Electrical burns are the most common shock-related injury. Electrical burns occur when current jumps from an electrical outlet, cord or appliance and passes through your body. The electricity can burn the skin-sometimes very deeply- and may also cause internal damage. How quickly you heal depends on the severity of the burns and injuries. These burns are among the most serious and require immediate medical attention. As the electric current flows through the body's tissue, which is an excellent conductor of electricity, it generates heat that causes tissue damage. An electrical burn may appear minor or not show on the skin at all, but the damage can extend deep into the tissues beneath your skin.

Burns from electrical shock are typically characterized by the amount of damage caused:

- **Surface Burns**
 - These are seen on the body's surface
 - Caused by the entrance and exit of the electrical current through the body
 - Can be caused by a low current for a very short duration
 - Cause a first to third degree burn

- **Internal Burns**
 - These are deep in the body and may not be visible at the surface
 - Caused by electrical current moving through the organs of the body
 - Caused by higher currents (larger than 1.5 amps)
 - Cause third degree burns and affects internal organs
 - Typically fatal

A first degree burn involves the surface layers of the skin usually limited to redness and minor pain at the site of injury. Second degree burns are more serious and will have redness and blistering of the skin. It can involve more or less pain depending on the amount of nerve damage. Second-degree burns involve the deepest layers of the skin. A third degree burn is when the skin is lost with damage to the underlying tissue. The tissue will look charred. Third degree burns result in scarring and victims may require skin grafting.

All of these injuries, whether surface or internal burns, are very serious and can cause death or at the very least impact an employee's quality of life. The best way to avoid these injuries is to be smart and use your head when working around electricity.

Discussion Questions

Surface burns typically result in what types of injuries?

Why are internal electrical burns so often fatal?

MEETING / TRAINING ATTENDANCE ROSTER

COMPANY: _____

_____ SAFETY MEETING

JOB/DEPT: _____

_____ SAFETY TRAINING

DATE: ___/___/_____

TIME: _____

TOPICS ADDRESSED: _____

EMPLOYEE'S SIGNATURES

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

EMPLOYEE SUGGESTIONS AND RECOMMENDATIONS: _____

ACTION TAKEN: _____

Supervisor's Signature

_____/_____/_____
Date

Safety Coordinator's Signature

_____/_____/_____
Date