Fundamentals of First Aid: Burns

What's at Stake?

A burn means more than the burning sensation associated with this injury. Burns cause skin damage because the skin cells die. Burns can happen at work and outside of work. In fact, burns are one of the most common household injuries, especially among children.

Most people can recover from burns without serious health consequences, depending on the cause and degree of injury. More serious burns require immediate emergency medical care to prevent complications and death.

Burns take many weeks to heal. Large burns often require skin grafts and multiple operations to reduce disfigurement and loss of function in the affected area.

What's the Danger?

- There are 3 degrees of burn and the burn is classified by the skin damage rather than the cause.
- First-degree burns: red, non-blistered skin
- Second-degree burns: blisters and some thickening of the skin
- Third-degree burns: widespread thickness with a white, leathery appearance

Even a seemingly harmless scald can cause all three levels of burn.

How to Protect Yourself

First aid for burns

1. Keep yourself safe

   - **Call 911 1st in an emergency.**
   - Assess the scene and proceed with care only if it's safe to do so.
   - Put on proper personal protective equipment (PPE).

2. General burn care

   - FOR ALL BURNS – CALL 911 IF:
     - The burn penetrates all layers of the skin.
     - The burn covers a large area(s) of the body.
     - The skin is leathery or charred looking, with white, brown, or black patches.
     - The hands, feet, face, or genitals are burned.

    - The person is an infant or a senior.
- Burned areas swell rapidly. Remove jewelry, belts and other restrictive items, especially from around burned areas and the neck, quickly and carefully, before the area swells.
- Don’t break blisters.
- Don’t apply butters or ointments – these may cause infections.
- A Tetanus shot may be needed; booster shots are recommended every 10 years.

3. 1st-degree burns

- A first-degree burn is the least serious type, involving only the outer layer of skin. It may cause:
    - Redness
    - Swelling
    - Pain
- Hold burned skin under cool (not cold) running water or immerse in cool water until pain subsides. Use compresses if running water isn’t available.
- Cover with sterile, non-adhesive bandage or clean cloth.
- Use over-the-counter pain relievers for pain.

4. 2nd-degree burns

- A second-degree burn affects the top 2 layers of skin and may cause:
    - Red, white or splotchy skin
    - Swelling
    - Pain
    - Blisters
- Immerse in cool water for 10 or 15 minutes. Use damp compresses if running water isn’t available.
- Don’t apply ice and don’t immerse large severe burns in cold water.
    - Doing so could cause a serious loss of body heat (hypothermia) or a drop in blood pressure and decreased blood flow (shock).
- Call 911 or emergency medical help.
- Protect the burned person from further harm, if you can do so safely.
    - Move the person away from smoldering materials, smoke, and heat.
    - **DO NOT** remove burned clothing stuck to the skin.
- Cover the burn(s) loosely with sterile, non-stick bandage and secure in place with gauze or tape.
- Elevate the burned area – raise the wound above heart level, if possible.

5. 3rd-degree burns

- A third-degree burn involves all layers of the skin and underlying fat. Muscle and even bone may be affected.
- Call for emergency medical help immediately.
- Burned areas may be charred black or white.
- The person may experience:
    - Difficulty breathing.
    - Carbon monoxide poisoning.
    - Toxic effects of smoke inhalation.
- Unless the person has a head, neck, or leg injury, or it would cause discomfort:
    - Lay the person flat.
    - Elevate feet about 12 inches.
    - Elevate burn area above heart level, if possible.
    - Cover the person with coat or blanket.
- Keep the victim calm and treat for any other injuries and shock until medical help arrives.

Final Word

Burns are very common but the severity of them varies widely. A burn causes the skin to blister. It is generally best if the skin be left intact because it protects the raw skin underneath. Burns can be painful, disfiguring, and the damage can take several weeks to be fully repaired.