

# Minor Burns

Burns are a common and potentially serious cause of injuries in children. Burns that extend to the deeper layers of the skin (second- and third-degree burns) and cover a large part of the body surface (10% or more) require hospital treatment. Hospital treatment is also needed for burns involving large portions of the hands, feet, or genitals. Especially with young children, it is very important to take steps to prevent burns.

## What are burn injuries in children?

Children are at high risk of burns. Burns are the second most common cause of accidental death in children and teens (after motor vehicle crashes). Scald injuries (caused by hot water) are especially common in children under age 4. Most burns are thermal, caused by flame or heat. Other types of burns include electrical and chemical burns.

Small burns of the skin surface can be safely managed at home. However, larger or deeper burns require medical attention. Burns that are very large or involve a large proportion of the hands, feet, or genitals often require hospital care. Fortunately, most burns in children are not that severe.

 Especially with young children, it is very important to take steps to prevent fires and burn injuries. These steps include wearing flame-retardant clothing, having working smoke detectors, paying attention to water-heater settings, and not smoking.

## What do they look like?

In assessing burn injuries, there are three main things the doctor needs to know: how deep the burn is, how large the burn is, and whether there are any other injuries.

- *How deep is the burn?* Burns are classified as first-degree, second-degree, or third-degree:
  - **First-degree:** Mild surface burns. The skin is red, painful, and sometimes swollen, like a mild sunburn. There are no blisters, although skin peeling may occur. Pain usually goes away in 2 or 3 days.
  - **Second-degree:** Burns that destroy the top layer of the skin (epidermis) and cause damage to parts of the deeper layer (dermis). You may see blisters on the injured skin. Some second-degree burns are extremely painful. There is a risk of infection, which can delay healing. Milder second-degree burns heal within a week or two, but more severe burns take longer to heal and may require skin grafting (surgery to cover the area damaged by the burn).
  - **Third-degree:** Burns that destroy both the epidermis and dermis. Because the skin in the area is completely

destroyed, it cannot heal without surgery or scarring. These are serious injuries with many possible complications.

## What are some possible complications of burns?

- Infection is one of the most important complications of burns. The skin plays an important role in protecting against germs. If it is damaged or destroyed, the risk of infection is much higher. Even for relatively minor second-degree burns, infection can lead to longer healing time.
- Scarring may occur after more severe burns. The more skin damage that has occurred, the less the skin will be able to heal normally.

## What increases your child's risk of burns?

- Children under age 4 are at high risk of scald injuries—for example, from being put in a bath that is much too hot or pulling a pot full of hot liquid off the stove.
- Playing with matches is a major source of fires and burns in young children.

## Can burns be prevented?

- Make sure your home has working smoke detectors! This is the most important step in preventing fatal house fires. Check smoke detector batteries regularly. 
- Don't set the hot water heater thermostat too high. A setting of 120°F (49°C) is recommended.
- Be careful with matches, lighters, and smoking materials. Keep them out of the reach of young children.
- Choose flame-retardant pajamas and other clothing for infants and toddlers.

## How are burns treated?

Seek medical attention for large burns, burns that cause visible skin damage (worse than a minor sunburn), or burns that are causing a lot of pain.

- For first-degree burns (no blisters, just redness and sometimes swelling):
  - Use a cool compress (washcloth soaked in cool water) and pain medications such as ibuprofen.
  - Pain clears up in 2 to 3 days; peeling may occur.
- For mild second-degree burns (with blisters), the main goals are to prevent infection and speed healing. Unless the burn is very small, see the doctor for second-degree burns.

- Leave blisters alone. Cover the burned area with an antiseptic cream, such as bacitracin or another ointment recommended by the doctor, and a bandage.
- Each day, remove the bandage, wash the area with lukewarm water, and apply antiseptic cream and a fresh bandage. Give pain medication, if needed, 1 hour before dressing changes.
- For some burns, the doctor may want your child to return to the office every few days to remove dead skin (*debridement*) and check on the healing process.
- The burn should heal within 10 to 20 days. If not, call our office—it may be that the burn was deeper than originally thought. It can be particularly difficult to judge the depth of scald burns.



More severe burns require medical attention! See below.



### When should I call your office?

After home or doctor's office treatment for burns, call our office if your child has any of the following:

- Signs of infection: increased pain, redness or swelling of the burned area, fluid or pus draining from the wound.
- Severe pain or pain that is not controlled by medications.

*Get immediate medical attention for:*

- Burns producing blisters, unless very small.
- Burns on the hands, feet, or genitals.
- All electrical burns.

