



## BASIC INFORMATION

### WHAT IS BURNS?

- A burn is an injury to tissue or skin that can be caused by several sources
  - Heat
  - Sunlight
  - Chemicals
  - Electricity
  - Radiation
- There are six degrees (types) of burns, with 1st thru 3rd being most common household or workplace related
  - First-degree: damages the outer layer of skin only (epidermis)
  - Second-degree: damages both the outer layer and the layer underneath (dermis)
  - Third-degree: damages the deepest layers of skin and underlying tissues, often destroying these tissues
  - Fourth-degree: extends into fat layer
  - Fifth-degree: extends into muscle layers
  - Sixth-degree: extends into bone
- The severity of a burn depends on how large of an area it covers and how deep the damage goes

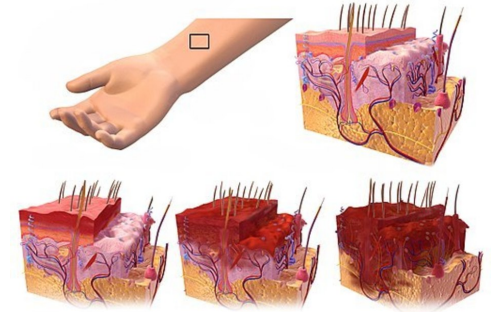


Image of Burns courtesy of BruceBlais [CC BY-SA 4.0]  
Available at [https://commons.wikimedia.org/wiki/File:1st\\_2nd\\_and\\_3rd\\_degree\\_burns.jpg](https://commons.wikimedia.org/wiki/File:1st_2nd_and_3rd_degree_burns.jpg)

### WHAT ARE COMMON SIGNS AND SYMPTOMS?

- First-degree
  - Redness, tenderness, pain
  - Generally no blistering
  - Minor skin damage
- Second-degree
  - Damage extends beyond the top layer of skin
  - Blisters
  - Extremely red and painful
- Third-degree
  - Destroy both dermis and epidermis
  - Can extend into tissue underneath
  - Can appear white or charred

### WHAT CAUSES BURNS?

- Being scalded by hot liquids, steam, or hot surfaces is the most common
- Building fires
- Flammable liquids and gases
- Chemicals (wet or dry)
- Electricity
- Radiation

### WHAT INCREASES MY RISK?

- Not having smoke/fire detectors
- Unsafe cooking/kitchen practices
- Working in a profession that has a high risk of burn potential or chemical exposure

### WHAT ARE POSSIBLE COMPLICATIONS?

- Scarring
- Septic shock
- Death

## WHAT CAN I EXPECT?

- The deeper the burn the longer it will take to heal
- For more severe burns you may need to be hospitalized

## HOW DO I REDUCE MY RISK?

- Install smoke detectors and ensure strict maintenance (change batteries) and testing to make sure they are working
- General fire safety knowledge and family training
  - Fire escape plans and practice drills
  - Have your fireplace professionally cleaned and inspected yearly
  - Fire extinguisher on every floor and training on how to operate
  - Careful use of space heaters
- Keep pot and pan handles turned toward the back of the stove while cooking
- If you have small children
  - Teach children to avoid hot surfaces (stove, campfires, fireworks)
  - Outlet covers
  - Safety locks on cleaning supply storage
  - Do not carry hot items while carrying your child
  - Test bath water before placing your child in the tub
  - Check the temperature of heated beverages before giving them to your child
  - Keep matches and lighters away from your children
  - Test car seats and belt buckles when getting into a hot car
- If working in a profession with a high risk of burn potential, follow all safety regulations
  - OSHA
  - Workplace safety training and emergency drills
  - Hazard communication
    - Signs
    - Color codes
    - Labels

# DIAGNOSIS AND TREATMENT

## WHAT GENERAL MEASURES SHOULD I TAKE?

- Your healthcare provider will perform an exam, collect information regarding your signs and symptoms, and history of how burn happened
- Self-care
  - For minor burns
    - Place area in cool water for 10-15 minutes
    - Dry gently with a clean cloth
    - Cover with a sterile gauze or non-adhesive bandage
    - Do not break blisters
    - Over-the-counter pain medications can help with pain and swelling
  - For more severe burns
    - Follow your health care providers instructions
- Activity
  - Activity recommendations and restrictions would be dependant on degree, location, and severity of burn
- Diet
  - Remain adequately hydrated while healing
  - Dietary restrictions generally are not required unless burns affect your ability to eat, chew, or swallow
- Helpful Link(s)
  - To learn more: National Library of Medicine; MedlinePlus
    - Website: <https://medlineplus.gov/burns.html>

## WHAT ARE COMMON LABS AND TESTS?

- Burns usually do not need labs or testing
- If you are hospitalized you may require labs

## WHAT ARE MY TREATMENT OPTIONS?

- Minor burns can usually be treated at home with self-care
  - Remove person or body part from source of heat/ burn agent
  - Run cool water over the area or hold a cold compress on the area until the pain is relieved
  - Do not use butter, vaseline, ice, or other home remedies
  - Remove any tight clothing or jewelry from the area burned
  - You can apply antibiotic cream
  - Cover with a sterile gauze or non-adhesive bandage
  - Try to keep the burned area elevated to help reduce swelling
- Serious burns/ third-degree burns
  - Seek immediate medical attention
  - You may require hospitalization or transfer to a burn unit
  - Burned tissue may be removed and covered with skin graft
- Chemical burns
  - Dry chemicals should be brushed off the skin by a person wearing gloves
    - Remove clothing and jewelry and rinse chemicals off the skin in a shower for 15 to 20 minutes
      - Be careful to protect your eyes
  - Wet chemicals should be flushed off affected areas with cool running water for 20 minutes or longer or until emergency help arrives
  - If you or someone else has swallowed a chemical substance or an object that could be harmful (e.g., watch battery) call poison control first (1-800-222-1222) and then 911
    - It is helpful to know what chemical product has been swallowed
    - Take it with you to the hospital if unsure
- Minor electrical burns can be treated with cool (not cold or ice) compresses
  - After cleansing, a mild antibiotic ointment and bandage may be applied
  - A tetanus shot is also recommended, especially if the person has not had one in more than 10 years
- For more serious electrical burns
  - Check for breathing
    - If the person is not breathing, start rescue breathing if you know how
  - Raise burned arms and legs higher than the person's heart
  - Cover the person with cool, wet cloths

- Do not use butter, ointments or any other home remedy at site of electrocution
- Do not break the blisters or remove burned skin

## WHAT MEDICATIONS MAY BE PRESCRIBED?

- Topical antibiotics
- Tetanus shot if not current
- Dressings containing silver to help prevent infection

## WHAT CAUTIONS SHOULD I TAKE?

- Do not break blisters

## WHEN SHOULD I SEEK MEDICAL HELP?

- Seek medical attention if the burn covers a large area of the body
- If there are signs of a deep second-degree or third-degree burn
- If the blisters appear to be filled with greenish or brown fluid
- The person burned is an infant or elderly
- If the burn was caused by electricity
- Fever
- Signs of an infection: puss or foul smelling
- Excessive swelling
- If a minor burn does not heal in 10 days to 2 weeks

# MY HEALTHCARE PROVIDER'S COMMENTS

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## REFERENCES

- Burns. NIH NLM MedlinePlus. Available at: <https://medlineplus.gov/burns.html> . Accessed May 2019.
- Burns. EmergencyCareForYou; American College of Emergency Physicians. Available at: <http://www.emergencycareforyou.org/emergency-101/burns/#sm.0000buc587rwge1dvav2e2bad0cq6> . Accessed May 2019.
- Burns. National Institute of General Medical Sciences. Available at: [https://www.nigms.nih.gov/Education/Pages/Factsheet\\_Burns.aspx](https://www.nigms.nih.gov/Education/Pages/Factsheet_Burns.aspx) . Accessed May 2019.
- Burns: Preventing Burns in Your Home. familydoctor.org; American Academy of Family Physicians. Available at: <https://familydoctor.org/burns-preventing-burns-in-your-home/?adfree=true> . Accessed May 2019.
- Image of Burns courtesy of BruceBlaus [CC BY-SA 4.0] Available at <https://commons.wikimedia.org/wiki/File:Burns.png> .

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