



[Home](#) → [Health Topics](#) → Burns

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Burns

A burn is damage to your body's tissues caused by heat, chemicals, electricity [<https://medlineplus.gov/electricalinjuries.html>] , sunlight [<https://medlineplus.gov/sunexposure.html>] , or radiation [<https://medlineplus.gov/radiationexposure.html>] . Scalds from hot liquids and steam, building fires and flammable liquids and gases are the most common causes of burns. Another kind is an inhalation injury [<https://medlineplus.gov/inhalationinjuries.html>] , caused by breathing smoke.

There are three types of burns:

- First-degree burns damage only the outer layer of skin
- Second-degree burns damage the outer layer and the layer underneath
- Third-degree burns damage or destroy the deepest layer of skin and tissues underneath


Burns can cause swelling, blistering, scarring and, in serious cases, shock [<https://medlineplus.gov/shock.html>] , and even death. They also can lead to infections because they damage your skin's protective barrier. Treatment for burns depends on the cause of the burn, how deep it is, and how much of the body it covers. Antibiotic creams can prevent or treat infections. For more serious burns, treatment may be needed to clean the wound, replace the skin, and make sure the patient has enough fluids and nutrition.

NIH: National Institute of General Medical Sciences

Start Here

- Burns [<https://www.emergencyphysicians.org/article/know-when-to-go/burns>] (American College of Emergency Physicians)


Diagnosis and Tests

- Burn Evaluation [<https://medlineplus.gov/lab-tests/burn-evaluation/>]  (National Library of Medicine)
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/evaluacion-de-quemaduras/>]

Prevention and Risk Factors

- Burn and Scald Prevention [https://www.usfa.fema.gov/downloads/pdf/publications/burn_and_scald_prevention_flyer.pdf] (United States Fire Administration) - **PDF**
- Preventing Burns in Your Home [<https://familydoctor.org/burns-preventing-burns-in-your-home/?adfree=true>] (American Academy of Family Physicians)
Also in Spanish [<https://es.familydoctor.org/quemaduras-como-prevenir-las-en-su-casa/?adfree=true>]

Treatments and Therapies

- Aloe Vera [<https://www.nccih.nih.gov/health/aloe-vera>]  (National Center for Complementary and Integrative Health)
- Blisters: First Aid [<https://www.mayoclinic.org/first-aid/first-aid-blisters/basics/ART-20056691?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/first-aid/first-aid-blisters/basics/art-20056691?p=1>]

Hyperbaric Oxygen Therapy [<https://www.mayoclinic.org/tests-procedures/hyperbaric-oxygen-therapy/about/pac-20394380?p=1>] (Mayo Foundation for Medical Education and Research)

Also in Spanish [<https://www.mayoclinic.org/es/tests-procedures/hyperbaric-oxygen-therapy/about/pac-20394380?p=1>]

- Skin graft - series [https://medlineplus.gov/ency/presentations/100100_1.htm] (Medical Encyclopedia)
Also in Spanish [https://medlineplus.gov/spanish/ency/esp_presentations/100100_1.htm]
- What Do I Need in My First Aid Kit? [<https://familydoctor.org/what-do-i-need-in-my-first-aid-kit/?adfree=true>]
(American Academy of Family Physicians)
Also in Spanish [<https://es.familydoctor.org/que-necesito-en-mi-botiquin-de-primeros-auxilios/?adfree=true>]


Related Issues

- How to Help a Person with a Serious Burn Injury [<https://www.phoenix-society.org/resources/how-to-help-a-person-with-a-serious-burn-injury>] (Phoenix Society for Burn Survivors)

Specifics

- Avoiding Injuries from Super-Heated Water in Microwave Ovens [https://www.fda.gov/radiation-emitting-products/resources-you-radiation-emitting-products/microwave-ovens#Avoiding_Injuries] (Food and Drug Administration)
- Chemical Burns: First Aid [<https://www.mayoclinic.org/first-aid/first-aid-chemical-burns/basics/ART-20056667?p=1>]
(Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/first-aid/first-aid-chemical-burns/basics/art-20056667?p=1>]
- Electrical Burns: First Aid [<https://www.mayoclinic.org/first-aid/first-aid-electrical-burns/basics/ART-20056687?p=1>]
(Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/first-aid/first-aid-electrical-burns/basics/art-20056687?p=1>]
- Fireworks Safety [<https://www.nfpa.org/downloadable-resources/safety-tip-sheets/fireworks-safety-tips>]
(National Fire Protection Association)
Also in Spanish [<https://www.nfpa.org/es/downloadable-resources/safety-tip-sheets/fireworks-safety-tips>]
- Scald Burns [<https://burninstitute.org/wp-content/uploads/2013/03/ScaldBurns-factsheet.pdf>] (Burn Institute) - **PDF**


Videos and Tutorials

- Burn Prevention for Families with Children with Special Needs [<https://www.safekids.org/video/burn-prevention-families-children-special-needs>]  (Safe Kids Worldwide)

Statistics and Research

- Burn Incidence and Treatment in the U.S. [<https://ameriburn.org/resources/burn-incidence-fact-sheet/>]
(American Burn Association)
- Fire and Burn Injuries Among Children in 2020
[https://www.safekids.org/sites/default/files/documents/2022_fire_and_burn_fast_facts.pdf] (Safe Kids Worldwide) - **PDF**

Clinical Trials

- ClinicalTrials.gov: Burns [<https://clinicaltrials.gov/search?cond=%22Burns%22&aggFilters=status:not%20rec>]
 (National Institutes of Health)

Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: A double-blind, randomized, controlled trial evaluating a surfactant-based wound dressing for...
[<https://www.ncbi.nlm.nih.gov/pubmed/40393384>]
- Article: Effects of special waterproof layer under tourniquet cuff on the incidence...
[<https://www.ncbi.nlm.nih.gov/pubmed/40382651>]
- Article: Effects of resilience training for mothers on maternal resilience and children's...
[<https://www.ncbi.nlm.nih.gov/pubmed/40382408>]

Burns -- see more articles [<https://pubmed.ncbi.nlm.nih.gov/?term=%22Burns%22%5Bmajr%3A%22burn%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+1+Year%22+%5Bdat%5D+AND+%28patient+education+handout%5Bpt%5D+OR+guideline%5Bpt%5D+OR+clinical+trial%5Bpt%5D%29++NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+>]

Find an Expert

- American College of Emergency Physicians [<https://www.acep.org/>]

Children

- Burn Safety Awareness on Playgrounds: Thermal Burns from Playground Equipment [<https://www.cpsc.gov/s3fs-public/3200.pdf>] (Consumer Product Safety Commission) - **PDF**
- Burn Treatment & Prevention Tips for Families [<https://www.healthychildren.org/English/health-issues/injuries-emergencies/Pages/Treating-and-Preventing-Burns.aspx>] (American Academy of Pediatrics)
Also in Spanish [<https://www.healthychildren.org/spanish/health-issues/injuries-emergencies/paginas/treating-and-preventing-burns.aspx>]
- Burns (For Parents) [<https://kidshealth.org/en/parents/burns.html>] (Nemours Foundation)
Also in Spanish [<https://kidshealth.org/es/parents/burns.html>]
- First Aid: Burns [<https://kidshealth.org/en/parents/burns-sheet.html>] (Nemours Foundation)
Also in Spanish [<https://kidshealth.org/es/parents/burns-sheet.html>]

Patient Handouts

- Burns [<https://medlineplus.gov/ency/article/000030.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000030.htm>]
- Chemical burn or reaction [<https://medlineplus.gov/ency/article/000059.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000059.htm>]
- Minor burns - aftercare [<https://medlineplus.gov/ency/patientinstructions/000662.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000662.htm>]
- Skin graft [<https://medlineplus.gov/ency/article/002982.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/002982.htm>]



MEDICAL ENCYCLOPEDIA

- Burns [<https://medlineplus.gov/ency/article/000030.htm>]
- Chemical burn or reaction [<https://medlineplus.gov/ency/article/000059.htm>]
- Hyperbaric oxygen therapy [<https://medlineplus.gov/ency/article/002375.htm>]
- Minor burn - first aid - series [https://medlineplus.gov/ency/presentations/100213_1.htm]
- Minor burns - aftercare [<https://medlineplus.gov/ency/patientinstructions/000662.htm>]

Skin graft [<https://medlineplus.gov/ency/article/002982.htm>]

Skin graft - series [https://medlineplus.gov/ency/presentations/100100_1.htm]

Related Health Topics

Electrical Injuries [<https://medlineplus.gov/electricalinjuries.html>]

Fire Safety [<https://medlineplus.gov/firesafety.html>]

Inhalation Injuries [<https://medlineplus.gov/inhalationinjuries.html>]

Wildfires [<https://medlineplus.gov/wildfires.html>]

National Institutes of Health

The primary NIH organization for research on *Burns* is the National Institute of General Medical Sciences [<https://www.nigms.nih.gov/Pages/default.aspx>]

NIH MedlinePlus Magazine

When Getting Warm Goes Wrong: How to Prevent and Treat Burns [<https://magazine.medlineplus.gov/article/burns-how-to-treat-and-prevent>]

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