

A **burn** is a skin or tissue injury caused by overexposure or close contact with hazards such as heat, chemicals, electricity, or radiation.

If you have burned yourself at work or you are offering first aid to a co-worker that has experienced a burn, attempt to determine whether it is a major or a minor burn.

- A **minor burn**, that doesn't require emergency medical attention, is limited to an area no larger than 3 inches in diameter and may involve some pain, swelling, blisters or superficial redness, similar to a sunburn.
- For **major burns** that are deep, larger than 3 inches in diameter or cover the hands, feet, face, groin, buttocks or a major joint, call 911 (or emergency services) or seek immediate medical care.

Minor burns can be treated with basic first aid. Major burns require emergency medical care, but first aid skills can help keep the injured person safe until help arrives.

This safety topic provides basic first aid guidance for recognizing and treating minor burn injuries and when to seek emergency medical care for major burn injuries.

- The most important practical skill that you can use in a life-threatening emergency is to call 911 (or emergency services) and request assistance.



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*The information provided in this safety topic is not intended as a substitute for professional medical advice or formal first aid training.*

A **minor burn** is limited to an area no larger than 3 inches in diameter. There may be redness, swelling blisters and some pain. To treat a minor burn that doesn't require emergency care:

1. **Cool the burn.** Hold the burned area under cool (not cold) running water or apply a cool, wet compress until the pain eases.
  2. **Remove tight items.** Take off jewelry, including rings, or any other tight items that are on or near the burned area. Try to do this quickly and gently, before the area swells.
  3. **Don't break blisters.** Fluid-filled blisters protect against infection. If a blister breaks, clean the area with water (mild soap is optional). Apply an antibiotic ointment. But if a rash appears, stop using the ointment.
  4. **Apply burn ointment** or spray, if available in the first aid kit.
  5. **Bandage the burn.** Cover the burn with a sterile gauze bandage (not fluffy cotton). Wrap it loosely to avoid putting pressure on burned skin. Bandaging keeps air off the area, reduces pain and protects blistered skin.
- Adequate first aid supplies shall be available and accessible<sup>1</sup> in the workplace or at the job site.



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A **major burn** is deep and may cause the skin to appear dry and leathery. Burns larger than 3 inches in diameter and burns that cover the hands, feet, face, groin, buttocks or a major joint should be considered as a major burn. The skin may even appear charred or have patches of white, brown or black.

Until emergency help arrives, there are some first aid tips that can assist a person with a major burn injury.

1. **Protect from further harm.** If you can do so safely, make sure the injured person is not in contact with the source of the burn.
2. **Remove tight items.** Take off jewelry, belts and other tight items, especially from around burned areas and the neck. Try to do this quickly and gently, before the area swells. Do not remove clothing that has melted or become stuck to burned skin.
3. **Cover the area of the burn.** Use a cool, moist bandage or a clean cloth. Don't immerse large severe burns in water. Doing so could cause a serious loss of body heat (hypothermia).
4. **Elevate the burned area.** Raise the wound above heart level, if possible.
5. **Watch for signs of shock.** Signs and symptoms include fainting, pale complexion or breathing in a notably shallow fashion.



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Remember, the overall goals of first aid are:

- Keep the person alive.
- Prevent the condition from worsening.
- Give first aid until help arrives.
- Ensure the person receives needed medical care.



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A **chemical burn** can be caused by exposure to many substances like strong acids, cleaning agents and gasoline. Typically, a worker is aware of the cause of the chemical burn, but sometimes the pain and redness may not develop until sometime later after the exposure.

As with other types of burns, it is important to determine whether it is a major or a minor burn.

For **major burns** that are deep, larger than 3 inches in diameter or cover the hands, feet, face, groin, buttocks or a major joint, call 911 (or emergency services) or seek immediate medical care.

To treat a chemical burn, follow these steps.

1. **Remove the cause of the burn.** Flush the chemical off the skin with cool running water for at least 10 minutes. For dry chemicals, safely brush off any remaining material before flushing.
2. **Remove clothing or jewelry** that has been contaminated by the chemical.
3. **Bandage the burn.** Cover the burn with a sterile gauze bandage (not fluffy cotton) or a clean cloth. Wrap it loosely to avoid putting pressure on burned skin.
4. **Flush again**, if needed. If you experience increased burning after the initial flushing, flush the burn area with water again for several more minutes.



An **electrical burn** can occur as a result of an electrical shock, depending on factors like the type of current, how high the voltage is, how the current traveled through the body and the person's overall health. Any person who has been injured by contact with electricity should be evaluated by medical personnel.

Minor electrical burns can be treated as you would other minor burns.

## CAUTION:

- Don't touch the victim if they are still in contact with the electrical current.
- Don't get near any live wires until the power is turned off.
- Don't move a person with an electrical injury unless the person is in immediate danger.



Call 911 (or emergency services) immediately if the injured person has major burns or experiences any other symptoms, like difficulty breathing, confusion, seizures, or loss of consciousness.

While waiting for emergency medical services, these actions can help:

- Turn off the source of electricity if possible. If not, move the source away from both you and the injured person using a dry, nonconducting object made of cardboard, plastic or wood.
- Begin CPR if the person shows no signs of circulation, such as breathing, coughing or movement.
- Try to prevent the injured person from becoming chilled.
- Apply a bandage. Cover any burned areas with a sterile gauze bandage, if available, or a clean cloth. Don't use a blanket or towel, because loose fibers can stick to the burns.

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## FOOTNOTES

<sup>1</sup> OSHA Standard 1910.151(b) and OSHA Standard 1926.50(d)(1)

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