



Minor burns

Yolanda Moroney, BSc(Pharm)

Introduction

Burns are common household injuries, especially amongst children. Most burns are minor and can be managed at home. It is important to recognise the signs of more serious skin burns, since moderate to severe burns can result in serious complications, and frequently require urgent medical attention.

Understanding burns

Burns are categorised according to the severity of damage to the skin.

- **First-degree burns** (superficial burns) involve the outer layer of the skin. The skin may be red, mildly swollen, painful to the touch, and turn white when pressed. As the burn heals, the skin becomes dry and peels. These burns usually heal within 7–10 days without scarring. Non-blistering sunburn is an example of a first-degree burn.
- **Second-degree burns** (superficial partial thickness burns) are more serious and involve the upper two layers of the skin. Symptoms include intensely reddened skin, pain, swelling, and blisters may form. These burns may take from 7–21 days to heal, and heal usually without scarring, but often with pigment changes to the affected area. Sunburn which blisters after some hours is an example of a second-degree burn.
- **Third-degree burns** extend deeper into the skin and are characterised by widespread thickness of the skin with a white, leathery appearance.
- The damage in **fourth-degree burns** extends through all layers of the skin, and may involve tendons and bones.

Minor burns include first-degree burns, and mild second-degree burns which are no larger than five centimeters in diameter.

More extensive second-degree burns, and third- and fourth-degree burns require emergency medical attention.

Causes

Common causes of minor burns include:

- Scalds from hot liquid or steam, including extremely hot baths or showers.
- Fires, including flames from lit matches, candles and lighters.
- Excessive exposure to the sun.
- Electricity – electrical sockets, cords, and appliances may pose considerable dangers for skin burns, especially to children.
- Chemicals – chemical burns may be caused by common household products such as car battery acid, bleach, ammonia, and swimming pool chlorination products.
- Electrical and chemical burns should be referred for immediate medical attention since they may cause internal damage to the body, even if skin damage is minor.

Treatment

Minor burns may be treated with prompt at-home care.

Cool the burn by holding it under cool (but not cold) running water long enough to reduce the pain. This may take 10 to 15 minutes. Alternatively, the burn may be immersed in cool water, or a cool, wet compress may be applied. The area should be dried with a clean cloth and a sterile, lightly wrapped bandage applied to protect the skin.

To **prevent infection**, avoid breaking blisters. If a blister should inadvertently break, the area should be gently washed with soap and water, and an antibiotic ointment applied. The area should then be covered with a sterile gauze bandage. Avoid using fluffy dressings. If necessary, the burn should be washed daily, and the dressing changed. A healthcare provider should be consulted if the wound is not healing or there are signs of infection.

Relieve pain by taking over-the-counter analgesics such as paracetamol or ibuprofen as necessary. A lotion or moisturiser may be applied topically to provide relief and prevent drying of the skin. Agents containing aloe vera or tea tree in hydrogel or gel-dressing type formulations may be particularly useful for minor burns.

Points to note:

Ice or extremely cold compresses should not be applied directly to the burn since this may cause further damage to the tissue.

Ointments or butter should not be applied to the burn. They retain heat in the skin, causing increased damage and the risk of infection.

Soap and cold tap water are adequate to cleanse the skin. Disinfection with iodine, alcohol, or other cleansers is not necessary.

Prevention of burns in the home

- Lock up matches and lighters.
- Keep children out of the kitchen when cooking.
- Turn pot handles inward and cook on the back burners of the stove when possible.
- Keep hot foods and drinks away from the edges of counters and tables.
- The thermostat of the geyser should be set no higher than 49 °C.
- Install electrical outlet covers.
- Ensure that all smoking products are stubbed out completely.
- Apply sunscreen every day.

Call the doctor if:

- The burn is larger than 7.5 cm, or involves the face, hands, feet, groin, or buttocks.
- The burn is on or near a joint including the knee, shoulder, and hip.
- The victim is younger than five years old or older than seventy years.
- Signs of infection are present. These include increasing redness, pain, a pus-like discharge, or temperature greater than 38 °C.

More about sunburn

Sunburn usually appears a few hours after over-exposure to the **ultraviolet (uv) rays** from the sun. The skin will usually flake and peel after a few days and heal fully within a week. It is important to prevent sunburn, since serious health problems, including cancer, may result in later age.

As with other minor burns, symptoms of mild sunburn can usually be **treated at home**.

Measures to **cool** the skin may include taking a cool bath or shower.

Paracetamol or ibuprofen are suitable for **analgesia**.

Soothe the skin by applying moisturiser or lotion. Calamine lotion or aloe vera/tea tree gels/lotion may be helpful.

Help **prevent infection** by not breaking blisters. Treat open blisters with appropriate cleansing, application of antibiotic ointment, and bandaging.

Drink plenty of water to **prevent dehydration** and avoid further exposure to the sun.

Prevent sunburn by:

- Wearing a wide-brimmed hat, and clothing which covers the body, arms and legs.
- Keeping to the shade as much as possible and avoiding the sun between 10h00 and 16h00.
- Applying a water-resistant sunscreen frequently and generously to all exposed skin. Sunscreen and lip balm with an SPF of 30 or greater are suitable.
- Keeping children under the age of six months out of direct, strong sunlight.

Call a doctor if:

- The sunburn is not responding to home treatment.
- Blisters are present over a large area of the body, or severe swelling occurs.
- There are signs of infection.

Emergency medical care should be sought if there is:

- A fever over 38 °C
- Confusion
- Fainting
- Dehydration

Conclusion

Most minor burns, including sunburn, respond to home treatment. If burns do not improve, a healthcare provider should be consulted. Measures to prevent minor burns and sunburn should be consistently observed.

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