
Burns and scalds

Summary

- Some of the causes of burns include flame, UV radiation, hot liquids, electricity, lightning and certain chemicals.
 - Major burns are a medical emergency and require urgent treatment.
 - First aid treatment is to apply cold running water over the burn site for 20 minutes.
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Burns can be caused by flames, ultraviolet (UV) radiation, hot liquids, electricity, lightning and certain chemicals. All burns require immediate first aid treatment. Partial and full thickness burns require urgent medical attention. Full thickness burns often require skin graft surgery.

Types of burns

There are three levels of burns:

- **Superficial** – these burns cause damage to the first or top layer of skin only. The burn site will be red and painful.
- **Partial thickness** – these burns cause damage to the first and second skin layers. The burn site will be red, peeling, blistered and swelling with clear or yellow-coloured fluid leaking from the skin. The burn site is very painful.
- **Full thickness** – involves damage to both the first and second skin layers, plus the underlying tissue. The burn site generally appears black or charred with white exposed fatty tissue. Very deep burns may damage the underlying muscle or bone. The nerve endings are generally destroyed and so there is little or no pain at the site of the full-thickness burn. However, surrounding partial thickness burns will be very painful.

It can be difficult to tell the difference between partial and full-thickness burns. The depth of a burn is not critical in the initial treatment of burns. An assessment of the extent of the burn is more important initially.

First aid for burns

Remove the person from danger and further injury. Hold the burn under cold running water for 20 minutes. If necessary, prevent heat loss by covering unburnt areas.

Burnt clothing should only be removed if it does not stick to the burn. Do not remove clothing that is stuck to the burn.

Chemicals, such as acids and alkalis, must be washed off with running water for at least 20 minutes but take care not to splash the chemicals onto unaffected skin or other people. A cool shower is ideal.

Superficial burns require pain relief, dressings, and regular review to make sure they have not become infected.

Do not apply anything other than water to second or third degree burns until they are fully cooled and medically assessed.

A major burn is defined as a burn of any depth that involves more than 20 per cent of the total body surface area for an adult and more than 10 per cent of the total body surface area for a child.

Major burns are a medical emergency and require urgent treatment. Immediately apply cold water to all affected areas and then call triple zero (000) for an ambulance. A cool or lukewarm shower is ideal.

Complications of major burns

Some of the potential complications of major burns include:

- **injury to lungs** from smoke inhalation
- **hypovolaemia** – loss of fluid from burnt skin. This may lead to shock
- **heat loss (hypothermia)** – since burnt skin is unable to properly regulate body temperature
- **infection.**

Treatment for burns

The medical treatment you will receive on admission to the hospital emergency department could include:

- pain relief. morphine may be required
- a cool shower
- intravenous fluids through a drip
- intensive medical monitoring.

Admission to a burns unit

There are national guidelines that help hospital emergency department staff decide whether you need care in a specialised burns unit.

Some of these guidelines include:

- for adults – partial or full thickness burns over 10 per cent of the body surface
- for children – partial or full thickness burns over five per cent of the body surface
- respiratory burns – lungs or other parts of the breathing system affected
- circumferential burns – burns that go right around the body
- burns to hands, feet, face, perineum and joints
- electrical burns
- chemical burns.

Skin graft surgery

If the body is not able to heal the injury by itself, skin grafts will be needed. The specifics of skin graft surgery depend on the location and severity of your burns. Skin grafts are usually performed under anaesthetic in an operating theatre.

Self-care for burns

Be guided by your doctor, but general suggestions include:

- Rest as much as you can.
- Follow all self-care instructions from your doctor.
- Try to avoid moving or stretching the area, as you may injure your skin graft.
- Antibiotics are usually prescribed to reduce the risk of infection. Make sure you take the full course.
- Avoid getting your dressings wet.
- See your doctor immediately if you experience any unusual symptoms.

Where to get help

- In the case of a major burn – or where breathing has been affected – call triple zero (000) for an ambulance
- Your doctor
- Emergency department of your nearest hospital
- Burns unit
- **Victorian Adult Burns Service** at The Alfred Hospital

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