

Burns and scalds

Following a burn or scald, make sure that you and the affected person are safe from further burns or danger – then cool a burnt or scalded area immediately with cool running water for at least 20 minutes. This leaflet also gives further advice.

The vast majority of burns and scalds are caused by accidents. However, occasionally burns and scalds can be caused deliberately, especially in [children](#) and [vulnerable adults](#). If you have any concerns about this then you should report it to the relevant authorities, who can investigate further. You can do this anonymously if you are afraid to leave your name.

How to treat a burn or scald

1. Remove the heat source.
2. Apply a cold compress/water for 20 minutes.
3. If there is mild pain/redness, treat with [painkillers](#) only.
4. Do not burst blisters.
5. If affected areas are large, deep, very painful, numb, or black, seek emergency help.
6. If there is an electrical burn or smoke exposure, seek emergency help.
7. If feeling unwell, seek emergency help.
8. If unsure, seek medical assistance.

First aid for burns and scalds

Safety first

Do not put yourself in danger in order to provide help. Always call 999 at the earliest possible opportunity. If possible, or if required:

- Stop the burning process and remove any sources of heat.
- Put out the flames with water or smother with a blanket. If the victim's clothing is burning, roll the victim on the ground to smother the flames.
- Remove any clothing or jewellery that are over the burn. Clothing can retain heat and so should be removed as soon as possible. However, do not pull off clothing that has stuck to the skin. This may cause skin damage.
- Burns caused by tar should be cooled with water but do not remove the tar itself.
- For electrical burns – disconnect the victim from the source of electricity before attempting first aid. If you cannot switch off the electricity:
 - If the person has been injured by a low-voltage source (220-240 volts, domestic electricity supply) then remove the person from the electrical source, using a non-conductive material such as a wooden stick or wooden chair.
 - Do not approach a person connected to a high-voltage source.
- For chemical burns – remove the victim's affected clothing. Brush the chemical off the skin if it is in a dry form. Then wash the burn with lots and lots of water, as described below. Do not attempt to neutralise chemicals.

Treat the burnt area immediately with cool water

Preferably, use running water, for at least 20 minutes. For example, put the burnt area under a running cold tap. A shower or bath is useful for larger areas.

Note: do not use very cold water, ice or any objects from a freezer – this can damage the skin. Ensure the person is otherwise kept warm to avoid hypothermia. Chemical burns should be washed (irrigated) with lots of water and for longer than 20 minutes. (Take advice from a doctor, if possible, as to how long to keep washing a chemical burn.)

Remove rings, bracelets, watches, etc from the affected area

These may cause tightness or constriction if any swelling occurs.

Cover the burn – ideally with cling film

Cling film is ideal to cover a burn as it is sterile – as long as the first few centimetres are thrown away and not used. Also, it does not stick to skin, a doctor can see through it to assess the burn, it is protective and it is soothing. A clear plastic bag is an alternative if no cling film is available. Leave cling film on until seen by a doctor or nurse.

Important: apply cling film in layers rather than round like a bandage, to prevent it causing pressure if the burnt area swells. So, for example, never wrap cling film round and round a burnt arm or leg. A burnt hand can be put into a loosely fitting clear plastic bag.

Give painkillers

Paracetamol or ibuprofen may help to ease pain for small burns. A doctor may give stronger painkillers, if required.

Do not do the following:

- Prick any blisters. It is better to leave them intact until medically assessed, to lessen the risk of infection.
- Apply creams, ointments, oils, grease, etc. (The exception is for mild [sunburn](#). A moisturiser cream may help to soothe this.)
- Put on an adhesive, sticky or fluffy dressing.

Types of burn

- **Superficial (first-degree) burns** affect the top layer of skin only. The skin looks red and is mildly painful. The top layer of skin may peel a day or so after the burn but the underlying skin is healthy. It does not usually blister or scar. A good example is mild sunburn. Healing is likely to take 5 - 10 days.
- **Partial-thickness (second-degree) burns** cause deeper damage. The skin forms blisters and is painful. However, some of the deeper layer of skin (the dermis) is unharmed. This means the skin usually heals well, sometimes without scarring if the burn is not too extensive.

- **Full-thickness (third-degree) burns** damage all layers of skin. The skin is white or charred black. There may be little or no pain, as the nerve endings are destroyed. These often require skin grafting and healing will take many weeks. If not treated with a skin graft then healing is likely to cause contractures, which will cause a long-term restriction on movement of that part of the body.
- **Electrical burns** can cause damage inside the body even if there is little damage to the skin.

Note: a burn from one accident may have various types of burn within it. For example, some areas of the burnt skin may be superficial, some partial-thickness and some full-thickness.

When to get medical attention for burns and scalds

See a doctor or nurse if you are unsure about what to do after a burn. However, you may be happy to manage small, mild (superficial) burns at home. Mild sunburn, small mild burns, or mild scalds are best left uncovered. They will heal more quickly if left to the fresh air.

Even a small blister is best left uncovered to heal. If the blister bursts, you can use a dry, non-adhesive, non-fluffy sterile dressing. This will soak up the weeping blister and stop dirt and germs from entering into the wound.

However:

See a doctor or nurse as soon as possible if:

- The burn becomes infected. Infection causes a spreading redness from the burn, which becomes more painful.
- You are not up to date with [tetanus immunisation](#) and you have a second- or third-degree burn
- Blisters occur. You may be happy to deal with a small burn with a small blister. However, a blister means a partial-thickness burn and it may be best to see a doctor or nurse.

Go straight to the emergency department (after cooling with cool water and first aid) for the following:

- Electrical burns.
- Full-thickness burns – even small ones. These burns cause white or charred skin.
- Partial-thickness burns on the face, hands, arms, feet, legs or genitals. These are burns that cause blisters.
- Any burn that is larger than the size of the hand of the person affected.
- If you suspect breathing in smoke or fumes (smoke inhalation) has occurred. The effects on the lungs from smoke inhalation may be delayed by a few hours so a person may appear OK at first. Symptoms such as sore throat, cough, wheeze, singed nasal hair, facial burns or breathlessness may suggest there may have been smoke inhalation.

Cover the burn with cling film or a clean plastic bag before going to the emergency department (as described earlier).

Causes of burns and scalds

Nearly half of severe burns and scalds occur in children aged under 5 years. About half of these accidents happen in the kitchen, with scalds from hot liquids being the most common. Many accidents involve the child reaching up and pulling on a mug or cup of hot drink. Other common causes include:

- Children falling or climbing into a bath of very hot water.
- Accidents with kettles, teapots, coffee-pots, pans, irons, cookers, fires and heaters.

Preventing burns and scalds – particularly to children

- Keep young children out of the kitchen unless they are fully supervised.
- The front of the oven and even the washing machine can become hot enough to burn a young child. Keep them away.

- Use the back rings of cookers when possible. Turn pan handles towards the back and away from where a child may reach and grab, or consider using a safety device to prevent children reaching the hob.
- Never drink hot drinks with a baby or child in your lap.
- Never let a child drink a hot drink through a straw.
- Teach older children how to boil kettles and how to use the cooker safely. There is no right age for this. Every child is different. However, it is important to teach them correctly when the time is right rather than let them find out for themselves.
- Never heat up a baby's milk in a microwave. It may heat the milk unevenly and some parts may become very hot. Stir baby food well if it is heated in a microwave.
- Put cold water in the bath first and then bring up the temperature with hot water.
- Do not set the thermostat for hot water too high in case children turn on the hot tap. (Water at 60°C takes one second to cause a full-thickness burn, and five minutes at 50°C.)

Preventing fires

- Fit smoke alarms in every floor of the home and check them regularly.
- Use fireguards for fires and heaters. Do not dry or air clothes on fireguards.
- Shut all doors at night. This prevents any fire from spreading.
- Store matches away from children. Teach older children how to use matches correctly and safely. Do not just let them experiment and find out for themselves.
- Have a fire blanket in the kitchen.
- Do not leave chip pans unattended. They should also never be more than a third full of oil. Some people argue that you should get rid of any chip pans altogether as they are a major cause of kitchen fires.

Preventing sunburn

- Keep children out of hot sun, particularly between 11 am and 3 pm.
- When out in the sun, remember: Slip, Slop, Slap – slip on a shirt, slop on some high-protection sunscreen and slap on a hat.

Further reading

- [Cleland H](#); Thermal burns – assessment and acute management in the general practice setting. Aust Fam Physician. 2012 Jun;41(6):372–5.
- [Alharbi Z, Piatkowski A, Dembinski R, et al](#); Treatment of burns in the first 24 hours: simple and practical guide by answering 10 questions in a step-by-step form. World J Emerg Surg. 2012 May 14;7(1):13.
- [Wasiak J, Cleland H](#); Burns: dressings. BMJ Clin Evid. 2015 Jul 14;2015. pii: 1903.
- [Norbury W, Herndon DN, Tanksley J, et al](#); Infection in Burns. Surg Infect (Larchmt). 2016 Apr;17(2):250–5. doi: 10.1089/sur.2013.134.
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Authored by:	Peer Reviewed by: Dr Colin Tidy, MRCP	
Originally Published: 19/11/2023	Next review date: 14/06/2023	Document ID: doc_4419

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