

Burns and scalds - children

Children are curious and like to explore their surroundings. They don't know that hot water and hot drinks can cause burns. A child's sensitive skin burns far more easily than adult skin. Burns and scalds are a major cause of serious injury in children from newborn to 14 years old. Children under four years, especially those aged between one and two years are most at risk due to their increased mobility and natural curiosity.

A severe scald can inflict a serious injury and may mean a long stay in hospital. It may also require painful skin grafts and years of treatment, and can result in permanent scarring. A severe scald over a large skin area can cause death.

Common causes of scalds

Scalds are burns from hot liquids or steam. Any hot substances can scald a child. Treat all hot things as if they are as dangerous as fire. In fact, everyday items used in and around the house cause the most scald injuries. These include:

- Hot drinks such as cups of tea and coffee
- Running hot tap water
- Bath water
- Hot cooking oil
- Hot food
- Saucepans of hot liquid
- Steam and vapour.

Times when injuries are likely to happen

Children are most at risk when you are:

- In a hurry, under a lot of pressure, busy or have too many things going on at the same time
- Entertaining
- Not feeling well
- Distracted
- Tired, or when your child is tired
- Away from home, visiting friends or family, or on holiday and out of routine.

A change of routine can help

Perhaps this is the time to skip unnecessary jobs or to change your routine. Suggestions include:

- Avoid the high demands of families between 4pm and 7pm by feeding a hungry toddler their main meal at midday and serving something light that you don't need to cook in the early evening.
- Arrange for the rest of the family to eat a later meal, once your toddler is safely in bed.
- Prepare the evening meal earlier in the day when you are less likely to be distracted by competing family demands.
- Occasionally, give your baby a wipe instead of a bath if you don't have the time to stay beside them. Alternatively, bath your baby earlier in the day.

Bathroom safety

The bathroom is one of the most hazardous rooms in the house for a baby or child. Scalds and burns can occur here, as well as falls and drowning. Most hot tap water scalds occur in the bathroom.

There are a number of ways to protect your child against serious injury in the bathroom. Some suggestions include:

- Use a bath thermometer to ensure the bath's water is always a safe and comfortable temperature. The recommended maximum water temperature for bathing young children is between 37°C and 38°C.
- A soft bath spout cover and non-slip suction mini bath mats can help prevent falls in the bath.
- Keep the bathroom door closed when not in use. You may wish to put a lock or restraint on the outside of the bathroom door (out of reach of children, but accessible to adults in case of emergency).
- Always remain within arm's reach of children in the bath.

Take the child with you if you have to answer the door or telephone.

When hot water is too hot

The average temperature of domestic hot water is 70°C. A much safer temperature for domestic hot water is 50°C. This is because water at a lower temperature takes longer to cause injury:

- At 60°C, it takes one second for hot water to cause third-degree burns.
- At 55°C, it takes 10 seconds for hot water to cause third-degree burns.
- At 50°C, it takes five minutes for hot water to cause third-degree burns.

Turn your hot water down

To reduce the risk of injury to your child from hot water scalds, install a recommended device to control bathroom hot water to a maximum of 50°C. Options include:

- **Tempering valves** – these are fitted to the water pipeline and mix hot and cold water to a specific temperature, adjustable between 35°C and 50°C.
- **Hot water shutdown devices** – these are fitted to the end of a tap and automatically cut off water flow once the water reaches the pre-set temperature.

By law, all new hot water systems are now required to comply with the Victorian plumbing regulations, which limit hot tap water to no more than 50°C in bathrooms at the basin, bath and shower in new houses and new renovations. The only exceptions to this are premises intended for children and the elderly, such as early childhood centres, schools and nursing homes. These have a temperature limit of 45°C.

Remember that the maximum bathing temperature recommended for young children is between 37°C and 38°C, so cold water still needs to be mixed with water from the hot tap.

Kitchen safety

Some simple steps you can take to prevent scalds in the kitchen include:

- Never leave cooking unattended.
- Always supervise your children in the kitchen.
- Keep hot drinks and handles out of reach.
- Put a baby down when drinking something hot.
- Use non-slip place mats instead of tablecloths.
- Turn handles of saucepans in towards the back of the stove, out of reach of small children.
- Keep hot drinks away from the edge of the table or bench. You never know when the baby will be able to reach or when a crawling infant will start to toddle. Make it a habit from the moment they are born to keep hot drinks out of their reach.
- Never carry hot drinks while children are playing underfoot. Make sure your care extends outside your home, when visiting relatives and friends or attending playgroups.

- Use a cordless kettle to prevent a child pulling over the kettle, or make sure cords are well away from the edge. Empty any unused water out of the kettle after boiling.
- Use the back hotplates on the stove before using the front ones.
- Give toddlers their own special mug so they don't drink from an adult mug or cup, which may contain liquid that is too hot.
- Carry plates to pots, not pots to plates.
- It is safer to serve cold drinks when children are present and to have a tea break when toddlers are sleeping.
- Your toddler may be safer in the playpen or in the highchair for a short time when you are very busy in the kitchen, or you could use a child safety gate.

First aid advice for burns

Stop the burning process, while considering your own safety by:

- **If on fire** – stop-drop-roll.
- **If electrical** – turn off current.
- **If chemical** – remove the burning agent and irrigate with water.

Immediate first aid will reduce the severity of a burn. If someone has received a burn, you should:

- Apply cool running water (not ice or ice water) to the burn for at least 20 to 30 minutes (useful for up to three hours after the burn).
- Carefully remove wet clothing only if the skin is not blistered or stuck to the clothing.
- Remove all jewellery and watches. Burns cause swelling and it may hinder circulation.
- Cover the burn using a clean dressing, a clean sheet, non-fluffy towel/tea towel or gladwrap.
- If the burn is severe or spread over a large area, keep the child warm and calm, and dial triple zero (000) to call an ambulance.
- Burns that involve the face, hands, feet, genitals or bottom, or if the burnt area is larger than a twenty-cent piece, should be seen by a doctor as soon as possible.

What not to do

If a child is burned, there are a few things you should not do:

- Never use butter, oils or ointments to cover the burn, as they may retain the heat.
- Never use ice. Children can be dangerously chilled in ice water.

Home safety and first aid advice

The Royal Children's Hospital Safety Centre in Melbourne facilitates first aid courses for the public. The six-hour paediatric emergency care course is particularly helpful for parents, grandparents, nannies and childcare providers. You can also contact the Safety Centre Telephone Advisory Line on (03) 9345 5085 for advice plans and safety products to reduce the risk of burn injuries in your home.

Where to get help

- The Safety Centre Telephone Advisory Line, The Royal Children's Hospital Tel. (03) 9345 5085
- Child Health and Safety Resource Centre, The Royal Children's Hospital Tel. (03) 9345 6429 to buy safety products.
- Hardware and bathroom suppliers
- A qualified plumber or gasfitter

Things to remember

- Keep hot drinks and pot handles out of reach.
- Never leave children alone in the bathroom or kitchen.
- If a child is burned, apply immediate first aid. Dial triple zero (000) for an ambulance if the injury is severe.

- Do not use butter, oils or ice to treat burns.
- The best way to prevent scalds in the bathroom is to reduce the temperature of the hot tap water to 50°C.
- The maximum bathing temperature recommended for young children is 37 to 38°C.

This page has been produced in consultation with, and approved by:

Royal Childrens Hospital - Safety Centre

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