

About...

Hot water safety

In August 1998, the Victorian Government passed legislation aimed at eliminating the risk of legionella bacteria forming in storage hot water services, whilst also preventing scalding at all hot water outlets used for bathing purposes.

As a result, hot water must be stored at a minimum temperature of **60 degrees** to kill legionella bacteria.

However, to prevent scalding, the hot water must then be delivered at a temperature not exceeding **50 degrees** at the outlets of sanitary fixtures.

ARE WATER BURNS REALLY A PROBLEM?

Each year, hot tap water causes serious scalds to many small children and elderly or disabled people around Australia.

More than 90 per cent of these scalds occur in the bathroom, where the delivery temperature of water from the hot tap is too high and a person cannot react quickly enough to avoid scalding.

At 68 degrees, it can take as little as one second to cause a full thickness scald.

At 50 degrees, it takes five minutes.

This may not seem a big difference in temperature, but it can mean the difference between scarring for life, agonising pain, hospitalisation and skin grafts, or a relatively minor injury.

This is why the Plumbing Regulations require a maximum temperature of 50 degrees at the outlets of hot taps used for bathing purposes. This is hot

enough for a bath or shower, but not hot enough to cause severe scalding.

HOW HOT IS TOO HOT?

Before the introduction of temperature regulations, hot water temperatures in most Victorian homes were generally set between 65 degrees and 75 degrees. In some homes, the hot water temperature was even higher.

The table below shows you how little time it may take for skin to receive a major scald burn from water at a range of different temperatures.

Water °C	Major Burn in
50 degrees	5 minutes
52 degrees	1.5 – 2 minutes
54 degrees	30 seconds
57 degrees	10 seconds
60 degrees	less than 5 seconds
63 degrees	less than 3 seconds
66 degrees	1.5 seconds
68 degrees	1 second

The best way of preventing scalds in the bathroom is to reduce the delivery temperature of the hot water at the basin, bath and shower to 50 degrees. By law, all new hot water systems are required to comply with the Plumbing Regulations.

The exception to the 50-degree temperature settings are premises intended for children, the elderly or people with disabilities – such as early childhood centres, schools, nursing homes or similar facilities, which have a mandated hot water delivery temperature limit of 45 degrees.

HOW CAN I PREVENT SCALDS?

The previously mentioned settings are not bathing temperatures. Cold water still needs to be mixed with hot water.

The maximum bathing temperature recommended for young children is 37 to 38 degrees.

Hot water systems installed before 5 August 1998 are unlikely to be tempered, but there are various ways of reducing the temperature of the hot tap water in the bathroom, depending on your type of hot water system.

For the best advice, talk to your licensed or registered plumbing practitioner, who may recommend:

- installing a tempering valve, which reduces the hot water temperature in the bathroom, but does not affect the temperature in the kitchen; or
- installing a thermostatic mixing valve that can be set to deliver hot water at a precise, safe temperature.

What else can I do to reduce the risk of burns in the bathroom?

- Always run cold water first.
- Never leave a small child in the care of an older child, who may be able to turn on the hot water tap.
- Take your child with you, if you have to answer the door or the telephone.
- Never leave your child alone in the bathroom.
- Keep the bathroom door closed when not in use.

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If you are buying a continuous flow hot water system, you can simply set the desired temperature with electronic control pads so that endless hot water is delivered at a safe pre-set temperature.

Remember: by law, your plumbing practitioner will have to set the temperature so that water from the hot tap does not exceed 50 degrees at any bathroom fixture.

APART FROM HOT TAPS, WHAT OTHER DANGERS SHOULD I WATCH OUT FOR?

Other than hot tap water, the most common causes of scalds are hot drinks and hot liquids from kettles, pots and saucepans. You can prevent your child from being scalded by taking special care to supervise them in the kitchen. In particular:

- Always keep hot drinks, kettles and jugs away from the edges of benches.
- Use a curly cord or buy a cordless jug.
- Use non-slip placemats instead of tablecloths.
- Always keep hot drinks away from children.
- Always turn pot handles away from the front of the stove or bench.
- Use rear hot plates first.
- Fit a safety guard around your stove or hot plates.

WHAT DO I DO IF SOMEONE IS SCALDED BY WATER?

If you or your child is scalded, you should:

- Remove clothing quickly. This helps the heat escape from the skin. Leave clothes on, however, if they are stuck to the skin.
- Immediately pour lots of cold water gently over the scald for 15 to 20 minutes. This will stop further burning. It also helps to relieve the pain. Never use oil,

butter or ointment, as these can further damage the skin.

- Cover the scald with a clean cloth and keep the person warm.

See a doctor if a scald on the buttocks is blistered or larger than a 20-cent coin.