



This is from the Hospital for Sick Kids Journal:

Hot Tap-water scalds

Burns are a significant cause of severe injury and death for young children. Scald burns, caused by contact with hot liquid, are a common cause of burns. Approximately 10 per cent of all scalds are the result of hot tap water. In the context of the more frequent hot beverage scalds and flame burns, tap-water scalds may seem to be an infrequent and insignificant problem. However, tap-water scalds result in greater morbidity than other scalds. What frustrates so many health professionals is that tap-water scalds are easily preventable. Evidence has shown that turning down water heater temperatures to 49C reduces the frequency and morbidity of tap-water scald injuries in children.

Each year, more than 500 children in Canada are hospitalized because they were burned by hot tap water. The frequency of tap-water scalds to young children has remained constant over the past 20 years. Fortunately, there are few deaths associated with scalds, but the impact on those who have suffered severe injuries can be devastating and have life-long consequences. The body surface area of full-thickness burns caused by tap-water scalds is almost twice that of other scalds. At The Hospital for Sick Children, children scalded by hot tap water are hospitalized for approximately 23 days. The average length of stay for children scalded from other sources is 10 days.

The critical factor in these injuries was the temperature at which the hot water was delivered from the tap. A review of time and temperature data has shown that the higher the water temperature, the lower the time of exposure required to produce a full thickness scald. Children can burn in about one-fourth the time of adults in temperatures greater than 55C.

- At **60C** In children, a second-degree burn can occur in **one second** when water temperature is.
- At **55C**, a second-degree burn can occur in **10 seconds**.
- At **49C**, it may take up to **10 minutes** for a second-degree burn to occur when the water temperature is at this temperature.

Therefore, the installation of a "Hot Water Mixing valve" in all homes will provide an optimal safe hot water temperature of 49C. This recommendation will significantly reduce the time to receive a severe burn.

Courtesy of ~

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