

Safety  
Fact Sheet  
SCALD BURNS

## Hot Tap Water and Scald Burns

Thousands of tap water scald burns occur annually.  
ALL of these burns are preventable.

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### DID YOU KNOW..

• That a baby's skin is thinner than an adult's skin. A hot tub that feels great for Mom and Dad will scald baby's delicate skin. Water temperatures greater than 100 degrees F / 39 degrees C are dangerous to babies.

**CONTINUOUS AND ADEQUATE SUPERVISION OF YOUNG CHILDREN IS THE SINGLE MOST IMPORTANT FACTOR IN PREVENTING TAP WATER SCALD BURNS.**

### Prevent scalds in the bathroom:



• **NEVER** leave a young child unattended in the bathroom or tub. Young children can turn the hot water tap by themselves *and* older children can scald a younger child.

• Before placing a child into the bath or getting into the tub yourself, test the temperature of the water by moving your hand rapidly through the water for several seconds or measure the temperature with a hot water gauge or mercury thermometer.

• Use extreme caution if bathing small children in the sink. Many sinks have single-lever faucets, which are easy for small children to turn on.

• Adjust the thermostat setting on your water heater to produce a temperature of 120°F or less. The lower the temperature; the lower the risk. (Your clothes and dishes will get clean at this setting!) If you live in a rented apartment, ask your landlord to lower the water temperature.



## Hot water causes third degree burns...

in 1 second at

**156°**

in 2 seconds at

**149°**

in 5 seconds at

**140°**

in 15 seconds at

**133°**

• Consider installing 'anti-scald' devices on the tub faucets and showerheads. They will stop the flow of water when the temperature exceeds the setting.



## Prevent scalds in the kitchen:

• Do Not keep hot food and drinks near the edge of tables and counters. Do not put them on a tablecloth/place mat that little hands can pull.

• Do not hold or handle something hot while you are carrying your child.

• When you cook, keep your child away from the stove. Turn pot handles toward the back of the stove, and if possible, use the rear burners.

• Watch for dangling appliance cords, i.e. coffee pots, tea kettles, etc.

• Be careful when you use a microwave oven; they can heat and create super-hot pockets in food, milk and formula.



## Hot Liquids and Tap Water Burn like Fire:



• Hot liquids can cause life-threatening burn injuries.

• Scalds are the number one cause of burn injury to children under the age of 4.

• Burn accidents frequently occur when parents and caregivers are in a hurry, angry, upset, or under a lot of pressure.

• Coffee, tea, soup and hot tap water can be hot enough to cause a serious burn injury.

• Scald and steam burns are often associated with microwave oven use.

• When hot tap water reaches 140° F. (60° C), it can cause a full-thickness, third-degree burn in just FIVE seconds.



# Scald Burn Injuries - Statistics

## Children, Ages 0-6 Years

The following information provides an overview of the data specific to injuries associated with tap water for children aged 0-6 years (212,437 records) from the Emergency Rooms of 15 Canadian hospitals between 1994 -1998. (Injury data was obtained from the database of the Children's Hospitals Injury Reporting and Prevention Program (CHIRPP), Health Canada).

AGE OF INJURED	
Age (Years)	Percent of Injuries
< 1 year	28.9
1	38.6
2	13.2
3	8.8
4	5.3
5	4.4
6	0.9
<b>Total</b>	<b>100.0</b>



## Burn Unit

Children less than two years of age represented 67.5% of all injuries associated with tap water among those aged 0-6 years.

BODY PART BURNED OR SCALDED	
Body Part	Percent of Injuries
Lower extremity *	50.0
Upper extremity **	28.1
Trunk	15.8
Face	6.1
<b>Total</b>	<b>100.0</b>
<small>* Highest percent of total injuries to foot or toe.                      ** Highest percent of total injuries to hand, fingers or wrist &gt; 14%.</small>	

Half the burns or scalds were located on the lower extremity of their bodies; of these, 51% were to the foot or toe(s).



84.2% of the injuries occurred in the patient's own home; of these, 52.1% occurred in the bathroom and 20.0% in the kitchen.

<b>WHERE THE INJURY OCCURRED</b>	
<b>Location/Area</b>	<b>Percent of Injuries</b>
<b>Own home *</b>	84.2
<b>Other home</b>	5.3
<b>Trade or service area</b>	2.6
<b>Unknown</b>	7.9
<b>Total</b>	<b>100.0</b>
* Highest percent of total injuries occurred in patient's home bathroom (>43.9%) and kitchen (>16.7%).	

<b>TIME AT WHICH THE INJURY OCCURRED</b>	
<b>Time of day</b>	<b>Percent of Injuries</b>
Midnight to < 8:00 am	1.4
8:00 am to < Noon	25.7
Noon to < 4:00 pm	20.0
4:00 pm to < 8:00 pm	22.9
8:00 pm to < Midnight	30.0
<b>Total</b>	<b>100.0</b>

<b>SEASON DURING WHICH THE INJURY OCCURRED</b>	
<b>Season</b>	<b>Percent of Injuries</b>
Spring (Mar.-May)	28.1
Summer (June-Aug.)	19.3
Fall (Sept.-Nov.)	25.4
Winter (Dec.-Feb.)	27.2
<b>Total</b>	<b>100.0</b>

Year-round, the injuries occurred most often during the day between 4:00pm and 11:59pm. Weekends represented 37.8% of all occurrences.

<b>DAY DURING WHICH THE INJURY OCCURRED</b>	
<b>Day of week</b>	<b>Percent of Injuries</b>
Sunday	16.7
Monday	13.1
Tuesday	16.7
Wednesday	10.5
Thursday	13.2
Friday	8.8
Saturday	21.1
<b>Total</b>	<b>100.0</b>

Of all the patients in hospital emergency, follow-up treatment was required by 59.6% and 27.2% were admitted to hospital. Of the admitted patients, 71% were less than two years of age.

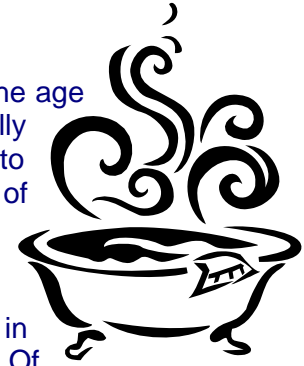
Most scald injuries can be prevented



CIRCUMSTANCES SURROUNDING THE INJURY	
Circumstances	Percent of Injuries
Patient in bathtub, sink or taking a shower when the patient, sibling or parent turned on the hot water or turned off the cold	32.4
Hot water spilled or splashed on the patient	21.1
Patient burned or scalded while stepping or being put into bathtub filled with water or while bathing	12.3
Burned or scalded by hot tap water, not further specified	10.5
Patient climbed into or fell into a bathtub or sink already filled with water or turned hot water on	9.6
Playing or washing hands, turned hot water on	7.9
Patient put hands in container of hot tap water	3.5
Contents of vaporizer/humidifier spilled on patient	1.7
Plumbing malfunction	0.9
<b>Total</b>	<b>100.0</b>

## Contact Burns

It was suggested that contact burns are the most common in children under the age of three due mainly to the fact that children acquire motor skills prior to fully understanding environmental hazards. These burns occur most commonly to the hands and upper limbs. This reinforces the assumption that a majority of burns are the result of a small child reaching out due to curiosity or to stabilize oneself.



Most contact burns occur at home, more so in the winter with the increase in indoor activities and the use of heaters, radiators and ventilating equipment. Of course, other appliances such as stoves, toasters, irons, etc. are also contributors to these accidents.

The increase of contact burns in children under 2 years of age can be directly attributed to the rising popularity of gas fireplaces.

We responded some years ago with the inclusion of bright and fiery burn prevention stickers, namely 'HOT' STICKERS in our [Safety Pack](#).



## RESULTS:

It was found that there was no statistically significant change in the rate of paediatric tap water scalds following the national campaign, and that the rate of these injuries was already very low (3.73 per 100,000 person-years over the study period). Of these, only 17% required observation or admission to hospital.

## CONCLUSION:

Given the low incidence of these injuries, their priority as a public health concern needs to be re-evaluated. If they continue to be a priority, new preventive strategies need to be used. It is thought that resources used to lobby for legislation of lower hot water temperatures may be more effective in reducing the incidence of these injuries.