



## Drowning Prevention

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Drowning can happen to anyone and at anytime and infants and children are especially at high risk. Drowning is the number one cause of unintentional injury death among children under the age of four in Canada and it is the second leading cause of preventable death for children under the age of ten.



More than 40 people lose their lives to drowning globally every day. Despite this high death rate, there are no global strategies for drowning prevention and that is why the World Health Organization published the first-ever [report on drowning](#).

Although the greatest percentage of drownings occur in oceans, lakes and ponds, they do occur in swimming pools, wading pools and bathtubs. The water depth of any pool or bathtub is sufficient for drowning to occur.

### **SECONDARY OR DRY DROWNING**



Secondary or Dry Drowning can occur when a tiny amount of water enters the lungs and causes an irritation. As a result, fluid that is produced in the lungs can accumulate causing drowning up to 72 hours after the initial immersion in water. *Secondary Drowning or Dry Drowning* is a term for victims who are still breathing after they have been rescued.

According to a 2011 statistical report from the Canadian Red Cross, while approximately 10-15% of drowning victims have a secondary or dry drowning, most wet drowning victims have less than 4cc/kg of water found in their lungs. For a 50-pound child, this amounts to less than 3 ounces.

**Call '911'** for Emergency Medical Service (EMS) immediately if you suspect Dry Drowning or Second Drowning.

If water enters the airways of a conscious victim, the victim will try to cough up the water or swallow it, thus inhaling more water involuntarily. When water enters the airway, both conscious and unconscious victims experience laryngospasm (when the larynx or vocal cords in the throat constrict and seal the air tube) which prevents water from entering the lungs. Because of laryngospasm, water enters the stomach in the initial phase of drowning and very little water enters the lungs. Unfortunately, this can interfere with air entering the lungs too.

In most victims, the laryngospasm relaxes some time after unconsciousness and water then enters the lungs causing a "wet drowning." About 10-15% of victims maintain this seal until cardiac arrest. This is called "dry drowning" - as no water enters the lungs. Water in the lungs indicates that the victim was still alive at the point of submersion. Absence of water in the lungs may be either a dry drowning or indicates a death before submersion.

If you would like to read more information on this subject, please click on [Secondary or Dry Drownings](#), courtesy of the Canadian Red Cross.

Casualties who have suffered a near drowning must always be seen by a doctor as soon as possible, even if they appear to be fine. The following safety guidelines will help prevent the unthinkable from happening.



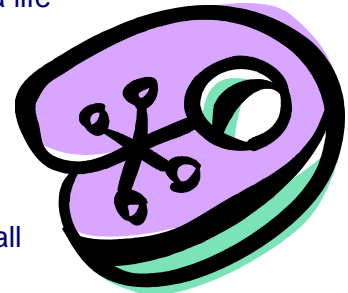
## ***SAFETY GUIDELINES***

Never leave a child unattended in or near a pool - not even for a second. There is absolutely no substitute for constant adult supervision. If you must leave the pool area, take your child with you.

Children under the age of 3 and children who cannot swim must wear a life jacket or PFD (personal floatation device).

Teach your children basic swimming and water safety skills. [The Lifesaving Society](#) teaches school children three critical skills they need to survive a fall in deep water.

- How to roll into deep water - this simulates what it feels like to fall off a boat or off a dock.
- How to tread water for one minute - this teaches children how to calm down and make a plan to reach safety.
- How to swim for 50 metres and get to safety - most drownings occur close to shore or near the side of a pool.



People assume they would know if a person is drowning because the child would make a lot of noise, but when a child is drowning, they actually often sink into the water without making a noise.

Pools and spas are attractive to children so they must always have adequate supervision when in the vicinity.



A fence, wall or natural/artificial barrier should completely enclose your pool or spa.

All gates or doors leading from the house to the pool area should have a self-closing and self-latching mechanism that protects against unauthorized entry and use. The inside latch should be high enough that children cannot reach it.

If your pool, spa or hot tub is indoors, lock the door to the room or have a cover that locks, to keep children and other unauthorized users from entering this area.

Do not place objects like chairs or tables near the fence that a child could climb onto to reach the pool area.

A clear view of the pool or spa from the house should be maintained by removing all vegetation (flowers, plants, shrubs and trees) and other obstacles.

If you use a pool or spa cover, follow the manufacturer's directions for safe installation, use and maintenance.

Always remove the cover completely before using your pool or spa, to avoid the possibility of anyone, especially a small child from being trapped and drowning under the cover.

Decks should be kept clean and clear of all debris.

Decks should have a non-slip surface.

Only one person should be allowed on the diving board at a time.

Do not allow swimming under the diving board.



Make sure all electrical appliances and devices are protected with a Ground Fault Circuit Interrupter (GFCI). Water is an excellent conductor of electricity and electrical shock or electrocution can occur in a pool if live electrical current flowing through appliances and devices comes into contact with the water.

Provide adequate lighting in and around your pool at night so that the bottom of the swimming pool is clearly visible.

Stay out of the swimming pool during lightning and rainstorms.

Do not leave toys and pool accessories in the pool when it is no longer in use, as they tend to attract young children.

Take a course on pool safety, first aid and lifesaving skills (such as CPR) with the [Canadian Red Cross](#).

Drain any standing water from the surface of your pool or spa cover. An infant or small child can drown in even the smallest amount of water. If you use any of the lightweight, floating pool covers, be especially alert for the potential for drowning accidents. These covers should not be used for safety measures, and no one should ever crawl or walk on them.

Keep toys, particularly tricycles and other toys with wheels, away from the pool. A child playing with these toys could accidentally fall into the water.

**NEVER** allow anyone of any age to swim alone. Examples of good safety behaviour by adults are important to the safety and well-being of all children.



Use caution with inflatable toys and mattresses because they can malfunction and deflate.

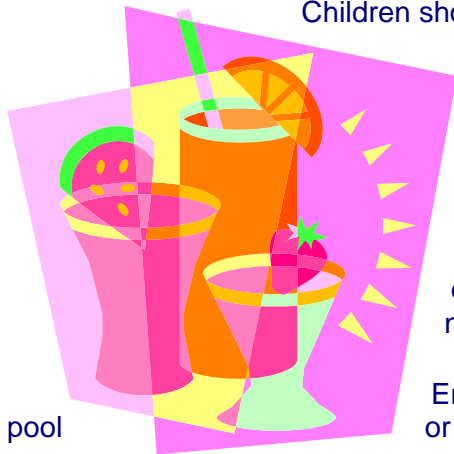
To avoid entrapment, never use a pool if any of the grate outlets are missing or broken.

Review and follow all instructions for pool accessories, such as ladders, filters and drains. These accessories pose entrapment and entanglement hazards, which may result in a person becoming trapped underwater. Do not allow children to play in or around these objects.

Do not permit playful screaming for 'help', which might mask a real emergency.

Establish sensible safety rules. No horseplay and no roughhousing. Teach your children to respect water and learn how to be safe around water.

Children should go down a slide feet first – not head first.



pool

Keep lifesaving equipment next to the pool. These items should remain stationary and never be misplaced.

Poolside rescue equipment including a ring buoy with an attached rope/line and /or a long handled hook should be available to assist in removing a child from the water. This equipment should only be used for lifesaving measures and never for play.

Emergency procedures should be clearly written and posted in the or spa/hot tub area. As well, a First Aid Kit should be nearby.

All glass and dishes should be non-breakable.

Whenever possible and practical, have people shower with soap and water prior to swimming in your pool. Perspiration and lotions will reduce the effectiveness of the pool disinfectant and lessen the ability of the filter to work efficiently.

## Safety Barriers around Swimming Pools

Many municipalities require fencing surrounding a pool. Be sure that you meet the municipal requirements. Ideally, fencing should be at least 6 feet high and completely surround the pool. To meet Toronto by-laws, the fence does not include the house as part of the 4-sided fence enclosure.



Gates should be self-latching and self-closing ensuring that the gate is not left open accidentally. Consider self-locking mechanisms.

Install alarms. Doors leading to the pool area should have an alarm. Add an underwater pool alarm that will sound when something enters the water. Make sure you can hear the alarm inside the house.

Block pool and hot tub access. Use a rigid, motorized safety cover to block access to the pool when it's not in use. Secure a cover for your hot tub as well. Don't allow water to collect on top of the pool or hot tub cover. Remove aboveground pool steps or ladders or lock them behind a fence when the pool is not in use. ~, *this excerpt from [www.redcross.ca](http://www.redcross.ca), Water Safety*

### ***Additional Resources***

[Bathtub Safety](#)

[Boating Safety](#)

[Summer Safety](#)

[Sun Safety](#)

[Swimming Pool and Chemical Safety](#)

[Diving Safety](#)

[Emergency Procedures for Infants and Toddlers](#)

[Mosquitoes and West Nile Virus](#)