

Residential hot tubs and pools: Health and safety tips

What are the health concerns of hot tub and pool use?

Hot tubs and pools can provide an environment for bacteria to grow. These bacteria can make you sick with an infection or disease. This includes the *Legionella* bacteria that cause Legionnaires' Disease, which can be fatal. As well, *Pseudomonas* bacteria can cause a number of serious infections, such as severe skin rashes, eye and ear infections, and pneumonia. Other pathogens that are spread through feces or vomit can also be transmitted through hot tubs and pools. Examples include Norovirus and Cryptosporidium. These can all be controlled by maintaining the disinfectant level and cleanliness of the water.

For more information, see [HealthLinkBC File #87 Norovirus](#) and [HealthLinkBC File #48 Cryptosporidium infection](#).

How can I make sure the water is safe?

If you are unsure of the maintenance or water quality, do not enter the pool or hot tub. "If in doubt, stay out."

To make your hot tub or pool as safe and enjoyable as possible, always consider the following precautions:

Cleanliness and disinfection

It is the owner's responsibility to ensure the hot tub or pool is clean and the water is properly disinfected to prevent the spread of disease. It is important to maintain the proper level of disinfectant to ensure clean and safe water. Chlorine and bromine are the most commonly used disinfectants. The more a hot tub or pool is used, the faster the disinfectant in the water gets used up.

Before and after use, you should check the disinfectant level and add chlorine or other disinfectant if it is low, even if the hot tub or pool will not be used for a while. There are other important measures of water quality, such as pH,

that must also be checked and adjusted as necessary. Pool chemicals should always be used safely and stored in a locked location or out of the reach of children. Your local pool supplier may offer water testing services to help you properly maintain water quality by identifying problems, knowing which chemicals to add, and knowing how and when to safely add them.

For more information on disinfectants and water quality, see [HealthLinkBC File #27b Residential hot tubs and pools: Safe water quality](#).

To help keep hot tubs clean, you should also drain and scrub them with a bleach solution (5ml per 4 litres of water) at least monthly, or more often for heavily used hot tubs. Filters and pumping systems should be cleaned and serviced on a regular basis.

Bacteria and dirt on surfaces may enter into the water with you. Always keep surfaces and decks clean. Steam condensing under the hot tub or pool cover can be a perfect place for many bacteria to live, so it should be wiped off with a bleach solution.

Always shower or bathe with soap before using a hot tub or pool. This helps keep the water free of germs and body oils and will use less disinfectant.

If you have diarrhea, have been vomiting, have an open wound, or any other infection or illness, you should not go in a pool or hot tub until you have been symptom-free for at least 48 hours.

Water temperature

The temperature of a hot tub should never be hotter than 40°C (104°F) (or 38.9 °C (102.0°F) if you are pregnant). Sitting in hot water for a long time can cause severe heat-related illnesses, such as nausea, dizziness or fainting, and even death. Avoid staying in the hot tub for more than 10 minutes at one time. Have a clock visible nearby to keep track of time.

How can I ensure the safety of hot tub users?

It is the owner's responsibility to ensure the hot tub or pool is safely maintained and free from hazards,

entrapments, and other dangers, including keeping bathers informed of all risks.

Pregnant women

Excessive heat and long soaks should be avoided during pregnancy as women may be at higher risk of overheating (hyperthermia). This can be harmful to the developing baby (fetus), particularly during the early weeks when organs are forming. If you are pregnant and choose to use a hot tub (or sauna), take the following precautions:

- Lower the temperature to below 38.9°C
- Limit your time in the sauna to no more than 15 minutes and hot tub use to no more than 10 minutes, or less if you feel uncomfortable
- Sit with your arms and chest above the water
- Have another adult with you

Get out right away if you feel dizzy, faint, have rapid pulse, irregular heartbeat, stomach pain, or tingling in feet and hands.

Bather load

Every hot tub and pool is designed for a maximum number of bathers at one time. You should know what the number is and not exceed it.

Children and supervision

Children must be supervised at all times. Most hot tub or pool accidents involving children occur when the children are not supervised, or while their supervisors are distracted, even for a moment.

All hot tub and pools should have restricted access to prevent drowning. Access can be restricted by using a fence or lockable gate. Cover and lock your hot tub when it is not in use.

Children are at higher risk of overheating than adults. Keep children less than 7 years of age, especially infants, out of hot tubs and spas. Their small bodies do not regulate temperature well and overheat too quickly.

Physical hazards

Hot tub users are always at risk of getting trapped underwater by the suction from an outlet opening. To help prevent this, all pool outlets should have a properly constructed and installed screen over them. You should know where the shut-off switch to the pump is located so that it can be shut off quickly if needed. Bathers should be discouraged from placing their heads under the water in case hair or jewelry may be caught in an outlet.

Be careful getting in and out, as many hot tubs have very slippery sides. Be aware of flooring choices around your pool and hot tub as some present more of a slip hazard than others.

Properly installed handrails can reduce the risk of injuries from slips or falls. Make sure the handrails cannot trap someone under water. Never dive into a hot tub or shallow pool. Always enter feet first.

Alcohol and drugs

Alcohol and drugs increase risk. Most adult accidents in the pool and hot tub environments are alcohol or drug related.

Alcoholic beverages and some drugs can cause drowsiness. They can also lower the body's resistance to the effects of overheating.

Walk, do not run

Hot tubs and pools are slippery places. Do not allow running around the edges.

For more information

For more health and safety tips on using pools and hot tubs, contact your local environmental health officer at your local public health authority by visiting www2.gov.bc.ca/gov/content/health/about-bc-s-health-care-system/partners/health-authorities/regional-health-authorities. For more information on proper care and maintenance of your hot tub, contact your service provider or manufacturer.