

# Cold Plunge Tanks – Fact Sheet

Cold water swimming and cold plunging (also known as cold water immersion) have gained popularity in recent years. Cold plunge tanks are typically not designed for swimming but for brief, partial, or full immersion in cold water.

## Introduction

Cold plunging involves partial or full submersion in cold water (typically between 2°C and 10°C) and is believed to have health and wellbeing benefits. Common options include indoor and outdoor tubs, specially designed tanks, or plunge barrels, as well as bathtubs and metal tubs often found in athletic rehabilitation facilities.

Cold plunge tanks can be plumbed with recirculating filtration and automatic disinfection systems, or they can be stand-alone units without filtration or disinfection.

Cold plunging typically involves a brief immersion lasting 30 seconds to 5 minutes. For safety, longer immersions should always be performed under professional guidance or supervision.

## How are cold plunge tanks regulated in Saskatchewan?

*The Swimming Pool Regulations, 1999* and standards apply to cold plunge tanks that have a recirculating water system and meet the definition of a “whirlpool” as defined in the Regulation.

Single-basin, single-use, non-recirculating cold plunge tanks (not classified as 'whirlpools') are regulated under *The Public Health Act, 1994*, when used by the public in places like fitness centers, therapeutic facilities, spas, and personal service establishments.



## What are the risks associated with cold plunge tanks?

Cold plunge environments present several risks including:

- **Biological hazards:**
  - Waterborne pathogens, including viruses, bacteria and protozoa exist and survive in cold plunge tanks, although their growth rate may be slower.
  - Typical pathogens include *E. coli*, *Salmonella typhi* and *paratyphi*, *Shigella*, norovirus, *Pseudomonas*, and *Vibrio cholerae*.
  - Cold water can reduce chlorine's effectiveness, increasing the risk of infection. Additionally, some operators may not use approved disinfectants.
  - Users introduce organic material into the water, and cold water can trigger gastric emptying, increasing the risk of fecal contamination.
  - Contamination can also come from users' skin, mucus, and saliva.
  - Cold water exposure can increase the risk of skin infections.
- **Physiological Hazards:**
  - Sudden cold water exposure can lead to several physiological reactions, some of which can be severe and life-threatening.
  - “Cold Shock Response” can include gasping, hyperventilation, stress hormone release, hypertension, and arrhythmias.
  - Additional, though rare, adverse reactions can include hypothermia, slowed heartbeat, increased arterial blood pressure (which may cause stroke), nerve damage, muscle cramps, and loss of consciousness.
- **Physical Hazards:**
  - Exiting cold water tanks poses a risk of falling due to muscle failure or impaired coordination. Additional risk comes from slippery wet surfaces or, for outdoor facilities, ice formation on decks.

## What can users do to reduce risks from cold water immersion?

- Do not use if you are infected with a communicable disease, are experiencing diarrhea, or have open sores.
- Use washroom facilities prior to the plunge.
- Take a cleansing shower before and after the plunge.

### Additional recommended precautions:

- Consult with a physician prior to engaging in cold water immersion activities.
- Do not use cold plunge tanks when under the influence of drugs and/or alcohol.
- Pregnant women, children, and individuals with medical issues should not use cold plunge tanks.
- Do not bring glass containers, food, or drink in or near the plunge tank.
- Enter cold water gradually to minimize the risk of cold shock. Wait for this response to subside before immersing your face and avoid holding your breath for extended periods.
- Do not participate without supervision capable of providing immediate assistance.
- Take care exiting the tank due to potential loss of motor control and slippery surfaces.



Source: NCCEH

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### Adapted from:

[Cold Plunge Tanks and Pools](#). Public Health Ontario. October 2024.  
[Cold Plunge Tanks: Considerations for Environmental public health](#). NCCEH. April 2024.

## What can facility operators do to reduce risks from cold water immersion?

### Operators should:

- Provide direct supervision by trained staff who are knowledgeable about the risks of cold water immersion.
- Consider users' health, fitness, and swimming abilities, when allowing them to use the facility.
- Post the water temperature visibly for users and regularly monitor to ensure the cold plunge tank matches the posted temperature.
- Post information on time limits for cold water immersion. The duration can vary among individuals. Typically, immersion times range from 2 to 5 minutes, but can extend up to 15 minutes.
- Provide safe methods for entry and exit.
- Provide pre-immersion instructions to the user (e.g., Gradually enter the water and avoid submerging your head initially to reduce cold shock).
- Provide a warming area and ensure participants have rewarmed sufficiently before leaving the facility.
- Maintain sanitary conditions in the facility and in and around the cold plunge tank. Surfaces should be disinfected with a low-level disinfectant.
  - Surfaces contaminated with blood and body fluids require use of a high-level disinfectant.
- Cold plunge tanks intended for public use, that do not meet the definition of a “whirlpool” must be drained, cleaned, and disinfected with an intermediate-level disinfectant, at a minimum, between uses.
  - See the Personal Service Facility Best Management Practices for intermediate-level disinfection concentrations and information.
- Cold plunge tanks intended for public use, that meet the definition of a “whirlpool”, must be inspected, licensed, and equipped according to *The Swimming Pool Regulations, 1999* and standards.
  - Operators can contact their local public health inspection office for more information.

### For more information, contact your local public health inspection office.

A list of offices can be found here:

<https://www.saskatchewan.ca/residents/health/public-health/public-health-inspectors>