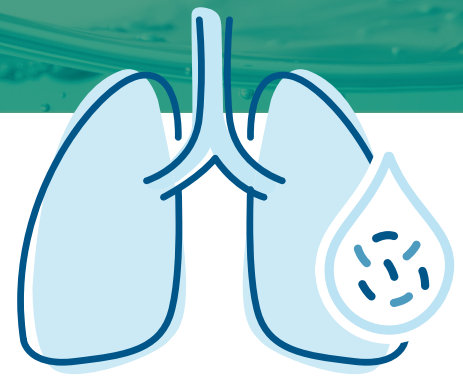


# Preventing Legionnaires' disease at home

**Legionella** is the bacteria that causes legionellosis (or Legionnaires' disease).

**Legionella** bacteria is found in water.

It can contaminate some household appliances, especially when water stagnates (doesn't circulate) at temperatures between 32 °C and 45 °C (89 °F to 113 °F).



## How to prevent legionellosis

To prevent Legionnaires' disease at home, make sure to follow the manufacturer's instructions for use and maintenance of household appliances that could get contaminated with *Legionella* bacteria:

- Hot water heater
- Shower heads and faucets
- Spas
- Home humidifier
- Respiratory equipment

## 1 Hot water heater

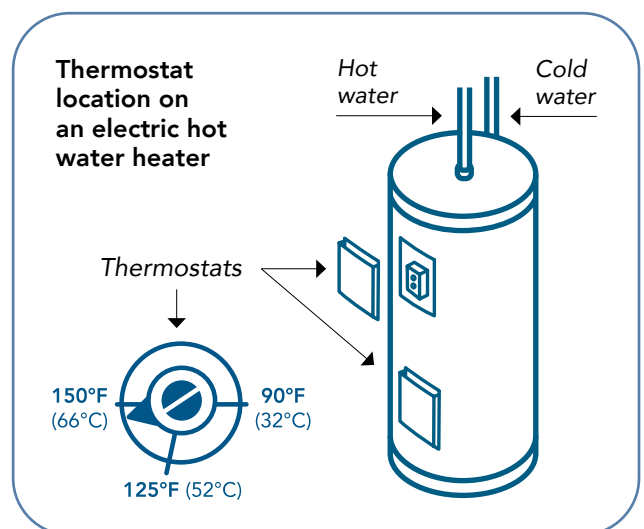
The best way to minimize the growth of *Legionella* is to keep water temperature at 60°C (140°F).

### Additional information about electric hot water heaters

Most newer electric hot water heaters are preset at 60°C by the manufacturer. To check and, if needed, change the temperature of your water heater, do the following:

1. Turn off the water heater circuit breaker.
2. Remove the heater's access panel (a hot water heater can have one or two thermostats, one at the top and one at the bottom of the heater).
3. The thermostat is a small dial with a pointer. The pointer must be positioned as illustrated in the figure on the right. To adjust the pointer, use a screwdriver or follow the manufacturer's instructions.

**IF THE WATER HEATER HAS NOT BEEN USED FOR A FEW DAYS, LET THE HOT WATER RUN FOR A FEW MINUTES.**



## ! NOTE

At 60°C, the risk of burns is high, especially for children, older adults and people with physical or mental disabilities.

Prevent scalding by installing automatic mixing valves on faucets, showers, and tubs, or an anti-scald mixing valve on your water heater. These mixing valves should be set to allow a hot water temperature of 49°C (120°F).

It is recommended to have a qualified plumber install an anti-scald device to lower the water temperature. For example, a temperature control valve can be installed directly on bathtub and shower faucets.

## 2 Shower heads and faucets

The presence of limescale (whitish calcium deposit) can promote the growth of *Legionella* bacteria. When you take a shower or turn on the taps, fine water droplets containing these bacteria can be dispersed into the air (aerosols).

Routine maintenance (e.g., every 6 months) of shower heads and sink faucets can reduce limescale.

This is a 3-step process:

1. Cleaning: unscrew, remove the limescale with a brush, or soak in vinegar and rinse.
2. Disinfection: soak for at least an hour in a solution containing 1 part bleach (5%) diluted in 9 parts water. Example: 1 cup bleach in 9 cups tap water.
3. Rinse: rinse before reassembling.



## 3 Spas

The temperature of the water in spas promotes the growth of *Legionella*.

Spas require thorough maintenance and cleaning, as per the manufacturer's recommendations.

The physico-chemical parameters (e.g., chlorine or bromine, pH) must also be checked and adjusted regularly. See the information on best maintenance practices for public spas ([www.environnement.gouv.qc.ca](http://www.environnement.gouv.qc.ca)).



## 4 Home humidifier

See the manufacturer's recommendations to know when to change the water, and clean and disinfect the humidifier according to the recommended schedule (e.g., every day, every week). It is preferable to use a humidifier that boils the water to produce a vapour rather than produces aerosols from non-sterile water (e.g., ultrasonic humidifier).



## 5 Respiratory equipment

Follow the manufacturer's recommendations for maintenance of respiratory equipment (e.g., oxygen therapy, vapourizer, oxygen concentrator or sleep apnea machines (e.g. CPAP, BiPAP)). It is usually recommended to empty the water, clean and disinfect the machine each day, and to use distilled or demineralized water to prevent limescale from forming.



## 6 Other household appliances

To date, no cases of Legionnaires' disease have been directly linked to other household appliances (e.g., furnaces, heat pumps, wall or window air conditioners, central air conditioners in single-family homes, humidifiers connected to central heating systems, dehumidifiers). However, these appliances must be maintained, inspected and cleaned regularly, ideally by a professional and as per the manufacturer's recommendations.

## 7 Individuals with immunosuppression

People with weakened immune systems (e.g., people who have had a transplant or are undergoing cancer treatment) must avoid spas. Aerosols generated by spas can contain *Legionella* bacteria.



Here are some recommendations for people with weakened immune systems who need individual respiratory therapy devices:

- Use only sterile water to fill and maintain your device (rinsing tubes and reservoir).
- Empty, clean and disinfect your respiratory equipment every day.
- Fill the reservoir just before using it (to ensure the water doesn't stagnate).

For more information, talk to your healthcare provider.

FOR MORE INFORMATION ABOUT LEGIONNAIRES' DISEASE

[www.healthunit.com/legionnaires-disease](http://www.healthunit.com/legionnaires-disease)  
[www.ontario.ca/page/legionella-prevention-workplace](http://www.ontario.ca/page/legionella-prevention-workplace)