

PFAS in Drinking Water

What are PFAS?

Referred to as “forever chemicals”, per- and polyfluoroalkyl substances, commonly known as “PFAS”, are a group of thousands of synthetic chemicals. PFAS are called “forever chemicals” because they can be found almost everywhere and they break down very slowly in the environment.

PFAS are typically used for their oil and water repellent properties. They are often found in fire-fighting foams, cosmetics, non-stick pans, clothing, and other common consumer and industrial goods.

People may be exposed to PFAS by drinking water or eating food which is contaminated with PFAS. Other sources of exposure include using products made with PFAS, or breathing air that contains PFAS.

Studies have shown that only a small amount of PFAS can get into your body through skin; therefore, bathing and showering are not likely to be primary routes of PFAS exposure.

What are the health effects of PFAS exposure?

Current and ongoing research suggests that exposure to certain PFAS is linked to negative health impacts on liver, kidney, thyroid, immune and nervous systems, development and reproductive systems, metabolism, and weight. Some individual PFAS chemicals such as perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) are considered carcinogenic (cancer-causing) or possibly carcinogenic.

According to Health Canada, if someone is exposed to an amount of PFAS above the objective, it does not necessarily mean that health problems will occur. The potential health

risks depend on how much PFAS you are exposed to and for how long.

How can PFAS get into my drinking water?

Surface water such as lakes and rivers and groundwater are sources for drinking water supply systems.

PFAS can potentially enter into this water through run-off or discharge from contaminated sites, industrial sites, wastewater treatment plants, landfills or fire training sites such as airports.

PFAS can travel long distances through soil, water, and air.

What is the Health Canada drinking water objective for PFAS in drinking water?

Health Canada has an objective of 30 ng/L for the total combined concentrations of 25 different PFAS in drinking water, with the recommendation to keep concentrations as low as reasonably achievable. This objective is intended as interim guidance for agencies responsible for public health while Health Canada works to develop a more comprehensive health-based guideline.

How do I know if there is PFAS in my drinking water?

PFAS have no odour or taste in water and can only be detected with testing.

If you are concerned about PFAS in your drinking water, contact your local drinking water supplier to find out more about whether PFAS is a concern in your water system, and whether it is part of its regular monitoring. As this is a new objective, many drinking water suppliers may not have this information at this time.

Owners of private wells are responsible for testing their own water quality and should do this regularly. For more information about private well water testing, visit [HealthLinkBC File #05b Well water testing](#).

If you choose to take a sample yourself for testing at a lab, it is important to use a certified laboratory using an EPA-developed testing method. Suggested sampling methods include:

- EPA Method 533
- EPA Method 537.1
- EPA Method 1633

Contact your local public health unit or environmental health officer at your regional health authority for more information on testing in B.C.

What can I do if there are elevated PFAS levels in my drinking water?

If you know there are elevated levels of PFAS in your drinking water, consider using a different drinking water source or installing treatment.

The most effective treatment options for PFAS include granular activated carbon filters, reverse osmosis systems, and anion exchange systems. To achieve the objective value, more than one type of treatment may be required, and repeated treatment may be necessary to ensure effective removal.

You can purchase a device certified as meeting the applicable NSF/ANSI performance standard for PFAS removal, including:

- NSF Standard 53 (activated carbon)
- NSF Standard 58 (reverse osmosis)

Check the instructions provided by the manufacturer to know where the treatment device is most appropriately installed (e.g. at the tap or where the water enters the house) and how many PFAS the device can remove.

For more information

Objective for Canadian Drinking Water Quality (Health Canada)

<https://www.canada.ca/en/health-canada/services/publications/healthy-living/objective-drinking-water-quality-per-polyfluoroalkyl-substances.html>

Water Talk (Health Canada)

<https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/water-talk-per-polyfluoroalkyl-substances-drinking-water.html>