

# Waterborne Infections in British Columbia

## What are waterborne infections?

Waterborne infections are any illnesses caused by drinking water contaminated with certain germs or “pathogens” like bacteria, viruses or parasites. Examples include *E.coli*, *Campylobacter*, *Salmonella*, *Giardia* and *Cryptosporidium*.

## How are waterborne infections spread?

Waterborne infections happen when animal or human waste (feces) containing these germs gets into drinking water. Infected animals can include pets, livestock, poultry or wild animals like beaver, deer and rodents.

Runoff from landfills, septic fields, sewer pipes, residential/human waste or industrial developments can also contaminate surface water that is used for drinking water. This is more likely when public and private drinking water systems get their water from surface water, such as lakes, streams, rivers, springs, creeks or ponds.

## What is an outbreak?

When many people get sick from an infection it’s called an ‘outbreak’. Outbreaks can happen when the source of drinking water is not properly treated or when water storage tanks or reservoirs become infected with germs.

Occasional cases of waterborne infections that happen outside of an outbreak are difficult to identify. Most types of illnesses spread by water can also be spread by food, or directly from other people or animals.

## What are the symptoms of waterborne infections?

Many people who get infected with a waterborne infection will have no symptoms at all, and probably will not know they have been infected. Over time, the germs move through the digestive system and leave the body through feces (waste).

If you do get sick, how you feel depends on the type of infection. For many waterborne infections, you start feeling sick 2 to 10 days after drinking infected

water. You might have diarrhea, stomach cramps, nausea, vomiting, a fever, or foul smelling gas or feces. If you have fever, swollen glands or changes in your vision, you should see your health care provider immediately.

## Who is more likely to get sick?

People who have a greater chance of getting sick include:

- People with weakened immune systems, such as those who have HIV/AIDS, an organ or bone marrow transplant, or who have had cancer treatment
- Infants and young children
- Pregnant women
- Older adults
- People with a chronic disease

People more sensitive to waterborne illnesses can have severe reactions and serious complications, including death. Speak to your healthcare provider if you have a weakened immune system, or are concerned about the quality of the drinking water in your community. For more information, see [HealthLinkBC File #56 Preventing Water-borne Infections For People with Weakened Immune Systems](#).

Although the risk is relatively low of getting Toxoplasmosis through drinking water, this disease is a concern for pregnant women. For more information, see [HealthLinkBC File #43 Toxoplasmosis](#).

## What should I do if I think I have a waterborne infection?

See your health care provider as soon as possible if:

- You are very sick
- Your symptoms do not go away within a few days
- You have a weakened immune system

Notify your local public health unit so that the source of infection can be located and controlled.

## How can I keep from getting a waterborne infection?

Do not drink water directly from lakes, streams, rivers, springs, creeks or ponds. This water may be infected by the feces (waste) of infected animals or humans.

If your community has a boil water advisory or notice, or you are concerned about the quality of the water in your community, see [HealthLinkBC File #49b Disinfecting Drinking Water](#).

If you have concerns about the quality of the water you are drinking, contact the local environmental health officer at the health authority. Visit [www2.gov.bc.ca/gov/topic.page?id=F220C3323A3B42D594A07A81947392BF](http://www2.gov.bc.ca/gov/topic.page?id=F220C3323A3B42D594A07A81947392BF) or contact your local health authority by phone at:

- First Nations Health Authority 604 693-6500, toll free 1 866 913-0033
- Fraser Health 604 587-4600
- Interior Health 250 862-4200
- Island Health 250 370-8699
- Northern Health 250 565-2649
- Vancouver Coastal Health 604 736-2033

## Who is in charge of safe drinking water?

The local water supplier is responsible for providing safe drinking water. A water supplier is the local agency or person who owns and operates the drinking water system, and who collects and delivers safe drinking water.

The water supplier may be your local or regional government. Many smaller public drinking water systems in British Columbia are owned and run by private owners or water companies.

If you own your home and have your own water supply, such as a well, then you are your own water supplier.

No matter who the water supplier is, they must take responsibility to make sure drinking water is properly treated before delivering it to those who drink it. For more information, see [HealthLinkBC File #05b Well Water Testing](#) or contact your local environmental health officer.

## How do water suppliers protect me from waterborne illnesses?

Water suppliers use primary disinfection to kill or remove germs from water. Primary disinfection might include one or more of the following treatment technologies: filtration, chlorination, ozonation or ultraviolet light disinfection. After primary disinfection is done, a low concentration of disinfectant is maintained in water, known as secondary disinfection, to protect it as it travels through the water distribution system to your home.

## Should I treat my water?

Always treat your water if:

- Your community is given a ‘boil water’ or ‘water quality’ advisory
- Your drinking water comes directly from a stream, river, lake, creek or a shallow or improperly constructed well, or your well is at risk of containing pathogens
- Samples of your water test positive for “fecal coliform” or *E. Coli* bacteria. This may indicate that human or animal waste is present. This is a cause for concern because many germs are spread through feces
- A flood, earthquake, fire or other disaster has disrupted your drinking water supply
- You are traveling in an area where water is not well treated, or unsure of the quality of drinking water
- You have a weakened immune system. For more information see [HealthLinkBC File #56 Preventing Water-borne Infections For People with Weakened Immune Systems](#)

Boiling is the best way to kill bacteria, viruses and parasites. Generally, water must be boiled for at least 1 minute, or 2 minutes if you are at an altitude over 2000m. For more information, see [HealthLinkBC File #49b Disinfecting Drinking Water](#).



BC Centre for Disease Control  
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