

## *Giardia* infection

### What is *Giardia*?

*Giardia* is a parasite that infects the intestines of humans and animals. When a person gets sick, the infection is called giardiasis or is sometimes referred to as 'beaver fever'.

Giardiasis is one of the more common infectious causes of diarrhea lasting more than 2 weeks. It is a common cause of diarrhea among individuals who drink water that has not been properly filtered, treated or boiled.

### How can I become infected with *Giardia*?

*Giardia* cysts can spread by water, food or fecal-oral transmission between infected individuals. Fecal-oral transmission occurs when contaminated feces particles are ingested.

Contaminated water is a major source of the spread of giardiasis. *Giardia* cysts can survive in lakes, ponds, creeks and streams. You can become infected if you drink or accidentally swallow contaminated water while you swim. You can also become infected by eating raw or undercooked food contaminated with cysts.

*Giardia* can also spread from person-to-person in settings such as child care centers. The risk is greatest for young children who are not yet toilet-trained where there is poor hygiene. These children can also spread the infection to other people in their families.

*Giardia* can also spread during sexual activity when there is contact with feces.

### What are the symptoms of giardiasis?

Giardiasis may cause diarrhea, stomach cramps, gas, bloating, frequent loose and pale greasy stools, nausea, weight loss and fatigue.

Symptoms start about 1 to 3 weeks after exposure to the parasite. Symptoms can last from 2 to 4 weeks or longer. Often you can be infected and have no symptoms. In some cases, symptoms can return after you have started to get better.

Prolonged and/or severe infection can result in reactive arthritis and damage to the cells lining the intestinal tract. This damage may cause your body to have trouble absorbing nutrients. These types of severe or prolonged infections are rare.

### How is giardiasis diagnosed and treated?

If you think you have giardiasis, see your health care provider for testing, advice and treatment. You may be asked to submit a stool sample for testing. *Giardia* can be difficult to detect so you may have to submit more than 1 sample.

Some *Giardia* infections get better without treatment. Your health care provider will decide if treatment with anti-parasitic medication is necessary.

### What should I do if I become infected with *Giardia*?

If you have diarrhea from a *Giardia* infection, you should not go to work or school.

Do not swim in lakes, ponds, streams, rivers, swimming pools or hot tubs for at least 48 hours after the diarrhea and/or vomiting has stopped or as instructed by your local health authority. This will help to ensure that other swimmers do not become infected.

Wash your hands well with soap and water after using the toilet and before eating or preparing foods. Dry your hands with disposable towels.

If you are a food handler, health care worker or childcare worker it is possible for you to spread *Giardia* to others. Stay home if you have diarrhea or vomiting. Do not return to work until at least 48 hours after your last episode of vomiting or diarrhea (whichever comes last) or as advised by your local health authority. Wash your hands well and often to help lessen the chance of spreading the infection to others.

Children in daycare who have diarrhea can be cared for in a supervised area away from other children until picked up by their parents. Children should not return to daycare until at least 48 hours after their

last loose stool or episode of vomiting (whichever comes last) or as advised by your local health authority.

Children in daycare settings should be supervised by an adult when washing their hands. To learn about proper handwashing, see [HealthLinkBC File #85 Hand washing: Help stop the spread of germs](#).

Even after you feel better, *Giardia* may still be in your feces for several weeks if you are untreated and you can still infect others. After using the toilet and before eating or preparing foods wash your hands thoroughly with liquid soap and water.

### How can giardiasis be prevented?

To help prevent giardiasis, follow this advice:

- If a Boil Water Notice has been issued for your community water system, take the advice seriously and follow the instructions provided
- Do not drink untreated surface water from springs, streams, rivers, lakes, ponds, shallow wells or ground water at risk of containing pathogens. It may be contaminated with animal feces
- When camping do not urinate or have a bowel movement within 30 metres of a water source
- If you have a *Giardia* infection, do not swim in lakes, ponds, streams, rivers, swimming pools and hot tubs while you have diarrhea and until at least 48 hours after the diarrhea has stopped. Avoiding this activity will help to ensure that other swimmers do not become infected
- Do not drink unpasteurized milk or juices
- Wash your hands before eating or handling food
- Wash your hands after using the toilet, changing diapers or touching animals
- Wash your hands before preparing or eating food
- Avoid uncooked food or drinks prepared with untreated water, especially during international travel
- Use safe sex practices and try to avoid contact with feces during sexual activity

### How can *Giardia* cysts be removed from water?

If your water supply comes from an untreated surface water source or from ground water at risk of

containing pathogens, you will need to disinfect water used for drinking, making ice cubes, washing uncooked fruits and vegetables, making baby formula, brushing teeth or rinsing dentures. You can remove *Giardia* by using the following disinfection methods:

- **Boiling:** Bring water to a full rolling boil for at least 1 minute. If using an automatic shut-off kettle, make sure the water has boiled for 1 minute. If you are over 2,000 metres (6,500 feet) above sea level, boil water for at least 2 minutes to disinfect. Let the water cool. Always store your clean water in clean containers made for storing food or water. Boiling will not purify water that is heavily polluted or chemically contaminated
- **Filtering:** To remove *Giardia* cysts filters must have an absolute pore size of 1 micron or less and be certified by the National Sanitation Foundation (NSF) International or another accredited third party agency. Jug-type water filters (such as Brita®) will not remove *Giardia*. Some built-in water filtration systems will remove *Giardia* but they need regular and thorough maintenance to work well
- **Ultraviolet (UV) Treatment:** UV units for disinfection are also available. Check with local water purification suppliers or your local environmental health officer for more information. Similar to filters, the UV treatment unit should be certified by NSF International or another accredited third party agency for cyst removal or inactivation
- **Other Treatment:** Distillation units and combination (filtration and UV) units are also available. Check with local water purification suppliers or your local environmental health officer for more information

It is important to note that *Giardia* is moderately resistant to chlorine so treating water with chlorine is generally not effective in removing the parasite.

### For more information

For more information on disinfecting water, see [HealthLinkBC File #49b Disinfecting drinking water](#) or contact your local environmental health officer.

For more information on the National Sanitation Foundation (NSF), visit [www.nsf.org/](http://www.nsf.org/).



BC Centre for Disease Control  
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