

FACT SHEET

Giardia and Drinking Water from Private Wells

What is giardiasis?

Giardiasis (GEE-are-DYE-uh-sis) is a diarrheal illness caused by a microscopic parasite, *Giardia intestinalis* (also known as *Giardia lamblia* or *Giardia duodenalis*). Once an animal or person is infected with *Giardia*, the parasite lives in the intestine and is passed in feces. Because the parasite is protected by an outer shell, it can survive outside the body and in the environment for long periods of time (i.e., months).

During the past 2 decades, *Giardia* infection has become recognized as a common cause of waterborne disease in humans in the United States. *Giardia* can be found worldwide and within every region of the United States.

How do I become infected with *Giardia*?

Giardia may be found in soil, food, water, or surfaces that have been contaminated with feces from infected humans or animals. You can become infected after accidentally swallowing the parasite. *Giardia* is not spread by contact with blood.

Where and how does *Giardia* get into drinking water?

Millions of *Giardia* parasites can be released in a bowel movement of an infected human or animal. Feces from these humans or animals can get into your well through different ways including sewage overflows, polluted storm water runoff, and agricultural runoff.

What are the symptoms of giardiasis?

Giardia infection can cause a variety of intestinal signs or symptoms, which include

- Diarrhea
- Gas or flatulence
- Greasy stools that tend to float
- Stomach or abdominal cramps
- Upset stomach or nausea

These symptoms may lead to weight loss and dehydration. Some people with *Giardia* infection have no symptoms at all.

Symptoms of giardiasis normally begin 1 to 2 weeks (average 7 days) after becoming infected. People with weakened immune systems (e.g., persons with HIV/AIDS, cancer patients, and transplant patients) or the elderly may have a more serious infection that can lead to severe illness or death.

What should I do if I think I have giardiasis?

Contact your health care provider.

How is a *Giardia* infection diagnosed?

Your health care provider will likely ask you to submit stool samples to check for the parasite. Because *Giardia* can be difficult to diagnose, your provider might ask you to submit multiple stool specimens collected over a few days.

What is the treatment for giardiasis?

Several prescription drugs are available to treat *Giardia* infection. Although *Giardia* can infect all people, young children and pregnant women might be more susceptible to dehydration resulting from diarrhea and should, therefore, drink plenty of fluids while ill. Rapid loss of fluids from diarrhea can be especially life threatening to infants. Therefore, parents should talk to their health care providers about fluid replacement therapy options for infants.

How can I remove *Giardia* from my drinking water?

Heat the water to a rolling boil for at least 1 minute (at altitudes greater than 6,562 feet [$>2,000$ meters], boil water for 3 minutes). Water should then be stored in a clean container with a lid and refrigerated.

An alternative to boiling water is using a point-of-use filter. Not all home water filters remove *Giardia*. Filters that are designed to remove the parasite should have one of the following labels:

- Reverse osmosis,
- Absolute pore size of 1 micron or smaller,
- Tested and certified by NSF Standard 53 for cyst removal, or
- Tested and certified by NSF Standard 53 for cyst reduction.

Although *Giardia* is larger than one micron in size, filters with pore sizes of absolute one micron can filter out *Giardia* as well as *Cryptosporidium*. If you want to know more about these filters, please contact NSF International, an organization for public health and safety through standards development, product certification, education, and risk-management.

NSF International
789 N. Dixboro Road
P.O. Box 130140
Ann Arbor, Michigan 48113-0140
Phone number: 800-673-8010 or 888-99-SAFER
Fax: 734-769-0109
Email: info@nsf.org
Web site: <http://www.nsf.org>

As you consider ways to disinfect your well, it is important to note that *Giardia* is moderately chlorine resistant. Contact your local health department for recommended procedures. Remember to have you well water tested regularly after disinfection to make sure the problem does not happen again.

From <http://www.cdc.gov/ncidod/dpd/healthywater/factsheets/giardia.htm>

Last revised: December 29, 2008



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