

Cryptosporidium and Giardia Fact Sheet

What are Cryptosporidium and Giardia?

Cryptosporidium (krip-toe-spo-ri-dee-um) or Crypto, is a microscopic parasite that is 4 – 6 microns in diameter. It is responsible for an intestinal illness called cryptosporidiosis. The egg of this parasite is called the oocyst.

Giardia is a slightly bigger parasite that can cause similar illness commonly called “Beaver Fever”. The egg of this parasite is called the cyst.



How are these diseases spread?

Both diseases are spread by putting something in the mouth that has been contaminated with the stool of an infected person or animal. A person can become infected by drinking contaminated water, eating raw or undercooked food contaminated with the cysts or oocysts, direct contact with the droppings of infected animals or stool of infected humans, or hand-to-mouth transfer of the oocysts/cysts from surfaces that may have been contaminated. High-risk activities would include camping, farming and diaper changing.

What are the symptoms?

Two to twelve days after infection by Crypto, you may have diarrhea, nausea, cramping, low-grade fever and vomiting. Symptoms usually last from 10 days to two weeks. For those with weakened immune systems such as HIV/AIDS patients, patients on chemotherapy and patients on immunosuppressive medication, this infection may be life-threatening. There is no effective medical treatment for Cryptosporidium.

For Giardia, symptoms are similar, with diarrhea, abdominal cramps, gas, malaise and weight loss happening within 3 – 25 days of initial contact, and can continue as long as a month.

Who is at risk of being infected with Giardia or Crypto?

- ✧ Those who drink inadequately treated surface water.
- ✧ Those who have contact with farm animals.
- ✧ Those in close contact with an individual* ill with Crypto or Giardia. (*Especially a diaper-aged child with diarrhea.)

Why are these diseases a problem in drinking water?

Tests have found these parasites in over 90% of all surface water. Although wildlife can contaminate surface waters with both parasites, cattle appear to be the primary source of Crypto. Waste discharge by septic tanks or wastewater plants also contribute to the problem. Giardia can be removed from drinking water through the use of disinfectants such as chlorine along with filtration. Crypto, however, is not inactivated by chlorine, and can only be removed through the use of approved filters or filtration systems, and disinfection by special ultraviolet lights or disinfectants that are proven to be effective against Crypto. Because it is difficult to remove these parasites from water, watershed protection is the best way to prevent Crypto and Giardia contamination of drinking water supplies.

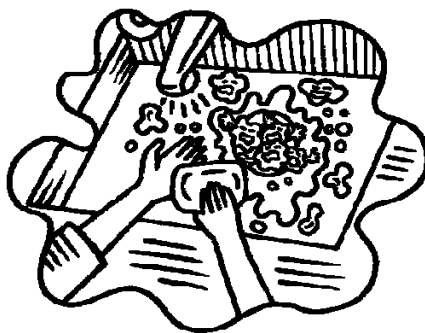


Cattle are the most common source of *Cryptosporidium*. Human waste is a major source of *Giardia* in surface water.

Many outbreaks have occurred because, in some situations, water treatment plants cannot fully remove these parasites from drinking water, especially during spring run-off time. A Crypto outbreak in Milwaukee, USA in 1993, affected 403,000 and 104 immunocompromised individuals died. Crypto outbreaks have occurred in Canada: an outbreak in Kelowna, BC in 1997 affected 15,000 and a boil water advisory was declared in North Battleford, Saskatchewan in 2001.

How can Crypto and Giardia infections be prevented?

- ✧ Avoid drinking untreated water.
- ✧ Wash your hands:
 - ✧ after using the toilet
 - ✧ after changing diapers
 - ✧ after contact with animals
 - ✧ before handling food
- ✧ Protect the watershed by preventing discharge of sewage or feed-lot waste into any surface water source.



For more information, please contact your nearest Environmental Public Health Services office.

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