



Infection – General Public

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Note:

You may not be able to tell by looking whether something has been in contact with stool.

What is cryptosporidiosis?

Cryptosporidiosis is a diarrheal disease caused by microscopic parasites, *Cryptosporidium*, that can live in the intestine of humans and animals and is passed in the stool of an infected person or animal. Both the disease and the parasite are commonly known as "Crypto." The parasite is protected by an outer shell that allows it to survive outside the body for long periods of time and makes it very resistant to chlorine-based disinfectants. During the past 2 decades, Crypto has become recognized as one of the most common causes of waterborne disease (recreational water and drinking water) in humans in the United States. The parasite is found in every region of the United States and throughout the world.

How is cryptosporidiosis spread?

Cryptosporidium lives in the intestine of infected humans or animals. An infected person or animal sheds Crypto parasites in the stool. Millions of Crypto germs can be released in a bowel movement from an infected human or animal. Shedding of Crypto in the stool begins when the symptoms begin and can last for weeks after the symptoms (e.g., diarrhea) stop. You can become infected after accidentally swallowing the parasite. *Cryptosporidium* may be found in soil, food, water, or surfaces that have been contaminated with the feces from infected humans or animals. Crypto is not spread by contact with blood.

Crypto can be spread:

- By putting something in your mouth or accidentally swallowing something that has come into contact with stool of a person or animal infected with Crypto.

- By swallowing recreational water contaminated with Crypto. Recreational water is water in swimming pools, hot tubs, Jacuzzis, fountains, lakes, rivers, springs, ponds, or streams. Recreational water can be contaminated with sewage or feces from humans or animals.
- By swallowing water or beverages contaminated with stool from infected humans or animals.
- By eating uncooked food contaminated with Crypto. Thoroughly wash with uncontaminated water all vegetables and fruits you plan to eat raw. See below for information on making water safe.
- By touching your mouth with contaminated hands. Hands can become contaminated through a variety of activities, such as touching surfaces (e.g., toys, bathroom fixtures, changing tables, diaper pails) that have been contaminated by stool from an infected person, changing diapers, caring for an infected person, changing diapers, caring for an infected person, and handling an infected cow or calf.
- By exposure to human feces through sexual contact.

What are the symptoms of cryptosporidiosis?

The most common symptom of cryptosporidiosis is watery diarrhea. Other symptoms include:

- Stomach cramps or pain
- Dehydration
- Nausea
- Vomiting
- Fever
- Weight loss

Some people with Crypto will have no symptoms at all. While the small intestine is the site most commonly affected, Crypto infections could possibly affect other areas of the digestive tract or the respiratory tract.

How long after infection do symptoms appear?

Symptoms of cryptosporidiosis generally begin 2 to 10 days (average 7 days) after becoming infected with the parasite.

How long will symptoms last?

In persons with healthy immune systems, symptoms usually last about 1 to 2 weeks. The symptoms may go in cycles in which you may seem to get better for a few days, then feel worse again before the illness ends.

Who is most at risk for cryptosporidiosis?

People who are most likely to become infected with *Cryptosporidium* include:

- Children who attend day care centers, including diaper-aged children
- Child care workers
- Parents of infected children
- People who take care of other people with cryptosporidiosis
- International travelers
- Backpackers, hikers, and campers who drink unfiltered, untreated water
- People who drink from untreated shallow, unprotected wells.
- People, including swimmers, who swallow water from contaminated sources
- People who handle infected cattle

- People exposed to human feces through sexual contact

Contaminated water may include water that has not been boiled or filtered, as well as contaminated recreational water sources (e.g., swimming pools, lakes, rivers, ponds, and streams). Several community-wide outbreaks of cryptosporidiosis have been linked to drinking municipal water or recreational water contaminated with *Cryptosporidium*.

Who is most at risk for getting seriously ill with cryptosporidiosis?

If you have a severely weakened immune system, talk to your health care provider for additional guidance. You can also call CDC INFO toll-free at 1-800-232-4636. Also see CDC's Fact Sheets on **Infection** (/parasites/crypto/gen_info/infect_ic.html) and **Prevention** (/parasites/crypto/gen_info/prevent_ic.html) for Immunocompromised Persons.

Although Crypto can infect all people, some groups are likely to develop more serious illness.

- Young children and pregnant women may be more susceptible to the dehydration resulting from diarrhea and should drink plenty of fluids while ill.
- If you have a severely weakened immune system, you are at risk for more serious disease. Your symptoms may be more severe and could lead to serious or life-threatening illness. Examples of persons with weakened immune systems include those with AIDS; cancer and transplant patients who are taking certain immunosuppressive drugs; and those with inherited diseases that affect the immune system.

What should I do if I think I may have cryptosporidiosis?

If you suspect that you have cryptosporidiosis, see your health care provider.

How is a cryptosporidiosis diagnosed?

Your health care provider will ask you to submit stool samples to see if you are infected. Because testing for Crypto can be difficult, you may be asked to submit several stool specimens over several days. Tests for Crypto are not routinely done in most laboratories. Therefore, your health care provider should specifically request testing for the parasite.

What is the treatment for cryptosporidiosis?

Nitazoxanide has been FDA-approved for treatment of diarrhea caused by *Cryptosporidium* in people with healthy immune systems and is available by prescription. Consult with your health care provider for more information. Most people who have healthy immune systems will recover without treatment. Diarrhea can be managed by drinking plenty of fluids to prevent dehydration. Young children and pregnant women may be more susceptible to dehydration. Rapid loss of fluids from diarrhea may be especially life threatening to babies. Therefore, parents should talk to their health care provider about fluid replacement therapy options for infants. Anti-diarrheal medicine may help slow down diarrhea, but a health care provider should be consulted before such medicine is taken.

People who are in poor health or who have weakened immune systems are at higher risk for more severe and more prolonged illness. The effectiveness of nitazoxanide in immunosuppressed individuals is unclear. HIV-positive individuals who suspect they have Crypto should contact their health care provider. For persons with AIDS, anti-retroviral therapy that improves immune status will also decrease or eliminate symptoms of Crypto. However, even if symptoms disappear, cryptosporidiosis is often not curable and the symptoms may return if the immune status worsens.

I have been diagnosed with cryptosporidiosis, should I worry about spreading the infection to others?

Yes, *Cryptosporidium* can be very contagious. Infected individuals should follow these guidelines to avoid spreading the disease to others:

1. Wash your hands frequently with soap and water, especially after using the toilet, after changing diapers, and before eating or preparing food.

Note:

You may not be protected in a chlorinated recreational water venue (e.g., swimming pool, water park, splash pad, spray park) because *Cryptosporidium* is chlorine-resistant and can live for days in chlorine-treated water.

1. Do not swim in recreational water (pools, hot tubs, lakes, rivers, oceans, etc.) if you have cryptosporidiosis and for at least 2 weeks after the diarrhea stops. You can pass Crypto in your stool and contaminate water for several weeks after your symptoms have ended. You do not even need to have a fecal accident in the water. Immersion in the water may be enough for contamination to occur. Water contaminated in this manner has resulted in outbreaks of cryptosporidiosis among recreational water users.
2. Avoid sexual practices that might result in oral exposure to stool (e.g., oral-anal contact).
3. Avoid close contact with anyone who has a weakened immune system.
4. Children with diarrhea should be excluded from child care settings until the diarrhea has stopped.

This information is not meant to be used for self-diagnosis or as a substitute for consultation with a health care provider. If you have any questions about the parasites described above or think that you may have a parasitic infection, consult a health care provider.

Page last reviewed: November 2, 2010

Page last updated: November 2, 2010

Content source: [Centers for Disease Control and Prevention](#)

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[Division of Foodborne, Waterborne, and Environmental Diseases \(DFWED\)](#)

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