

Disease Fact Sheet Cryptosporidiosis

What is cryptosporidiosis? Cryptosporidiosis is a diarrheal disease caused by *Cryptosporidium* species, a single-celled parasite. This parasite affects both animals and humans. It produces oocysts which are shed in feces of infected persons or animals. The oocysts are the infectious form of the parasite. They are microscopic in size and are extremely hardy.

Who gets cryptosporidiosis? Anyone can get cryptosporidiosis. Risk of this disease is increased by drinking unfiltered water from rivers, lakes or streams, and from close association with infected persons or animals.

How is this parasite spread? Cryptosporidiosis is contracted by swallowing oocysts of this parasite in contaminated food or water. The infectious oocysts are often present in surface water (creeks, streams, rivers, lakes and ponds). The oocysts resist chlorination and are difficult to filter. Person-to-person transmission of infective oocysts may occur as a result of inadequate hand washing (fecal-oral transmission) or sexual activities. Direct contact with infected animals, such as cattle and sheep, can also lead to infection.

What are the symptoms of cryptosporidiosis? The most common symptom is diarrhea, which is usually watery and profuse. The diarrhea is often accompanied by abdominal cramping. Nausea, vomiting, low-grade fever, headache and loss of appetite may also occur. In an otherwise healthy person, symptoms usually continue for one to two weeks. A person whose immune system is weakened by HIV infection, cancer chemotherapy, steroid therapy or who is otherwise immunocompromised may experience persistent, even life-threatening, illness.

How soon after exposure do symptoms appear? Symptoms usually appear one week after exposure. A person with a healthy immune system usually clears this parasite within two to three weeks. Three to four weeks after becoming well symptoms sometimes return for about one week, then disappear entirely. Immunocompromised individuals whose disease is persistent continue to shed oocysts for the duration of their infection.

How is cryptosporidiosis diagnosed? Diagnosis is based on microscopic identification of the oocysts in the stool of a symptomatic or asymptomatic (clinically well but infected) person.

What is the treatment for cryptosporidiosis? Treatment is primarily supportive and directed toward preventing dehydration. Most people with healthy immune systems will recover with fluid rehydration alone. A new antiprotozoal medication, nitazoxanide (Alinia®) has been approved for treatment of diarrhea caused by *Cryptosporidium* in people with healthy immune systems. People with weakened immune systems are at higher risk of more severe and prolonged illness. The effectiveness of nitazoxanide in immunocompromised individuals is unclear. For persons with AIDS, anti-retroviral therapy that improves immune status will also decrease or eliminate symptoms of cryptosporidiosis. However, even if symptoms disappear, cryptosporidiosis is usually not curable in immunosuppressed individuals and symptoms may return if immune status worsens.

How is cryptosporidiosis prevented? The most effective means of preventing *Cryptosporidium* transmission is washing hands with soap and water, particularly after using the bathroom, changing diapers, and before handling food. Wash and/or cook food. Cooking kills *Cryptosporidium*. Do not eat or drink the following items unless they are pasteurized: milk, dairy products, juice and cider. Wash hands thoroughly after working in soil and after handling household pets, farm animals (especially those less than 6 months old) or stray animals. Do not drink or swallow water directly from rivers, lakes, streams, springs or pools. Bottled water from a wide range of sources is marketed. Read the labels carefully. Only bottled water that has been distilled or treated by reverse osmosis can be considered free of oocysts. To remove oocysts of *Cryptosporidium*, filters must have an absolute filtration range of 1 µm or less. Bringing water to a rolling boil for one minute destroys oocysts. Ground water (well water) from an approved well is ordinarily safe. Chlorination alone will not destroy oocysts in surface water or in well water that is contaminated by surface water.