



Cryptosporidiosis

Health Education Facts

What is cryptosporidiosis?

Cryptosporidiosis, sometimes abbreviated as “crypto,” is caused by a one-celled parasite, *Cryptosporidium parvum*. Cryptosporidia attack the lining of the digestive and respiratory systems. After infection, it takes between one and 12 days before becoming ill, with an average of seven days.

Cryptosporidium was first found in humans in 1976; before that, it was thought to only infect animals and be a veterinary problem. The parasite, which is found in animal and human feces, was relatively unknown before 1993, when about 400,000 persons in the Milwaukee, WI area became sick from the municipal water.

What are the symptoms?

The most common symptoms are diarrhea and stomach cramps. The diarrhea can be profuse and watery. Infection can also cause loss of appetite and vomiting. For persons with weakened immune systems such as those with AIDS, the disease can be very severe and result in death.

In a healthy person, symptoms normally last two weeks or less. Some people with crypto may not get sick, but can still pass the disease to others.

How is cryptosporidiosis diagnosed?

Diagnosis is made by the identification of the parasite in stool specimens or by intestinal biopsy.

How is cryptosporidiosis spread?

The disease is spread by fecal-oral contact. People with cryptosporidiosis have parasites in their feces. If they do not wash their hands properly after going to the toilet, their hands can spread the parasites to surfaces, objects, and foods that will be touched by others. Crypto is very hardy; it has a protective capsule or shell and can survive outside the body for up to six months.

Persons also can become infected by consuming food or water contaminated with the organism. Outbreaks have also been associated with contaminated swimming pools and lakes and drinking unpasteurized apple cider contaminated with cow manure. Hands can become contaminated with parasites when a person changes the diaper of an infant with cryptosporidiosis. Pets, farm animals, drinking water and unpasteurized milk also can contain the parasite.

How can I keep from spreading it?

Food handlers, child care workers, and health care workers with cryptosporidiosis must not work until symptoms have stopped. Children must not attend child care centers, kindergartens or school until symptoms have stopped.

It is very important that people with cryptosporidiosis not prepare or handle food that will be eaten by other people and not share their towel or facecloth.

People infected with cryptosporidium should wash their hands regularly, especially before preparing food and after going to the toilet, avoid close contact with anyone who may have a weakened immune system, and avoid swimming in public bathing areas while they have diarrhea and for at least two weeks after it clears up.

How does crypto get into drinking water?

Health officials point to polluted water as the source of several known outbreaks. Cryptosporidia that pollute the water come from human or animal feces. Most cities get their drinking water from surface water such as rivers and reservoirs, and rain washes waste from livestock, wildlife, and urban sources into this water. Chlorine treatment does not destroy the parasite.

Private well water can become contaminated if wells are near feedlots, downhill from manure, or don't have adequate casings or caps. It also can seep into drinking water supplies from inadequate sewage systems or septic tanks.

How is cryptosporidiosis treated?

There is no drug that can cure cryptosporidiosis. Healthy individuals will recover on their own. Persons with diarrhea should drink plenty of fluids and may want to drink an oral rehydration therapy mix to avoid dehydration. They may also wish to take anti-diarrheal medicine. Persons with weakened immune systems should consult their health care provider.

Treatment for the symptoms can include immodium, octreotides or opiates for the diarrhea. Intravenous feeding is sometimes recommended to replace nutrients.

continued on reverse

High-fat foods should be avoided as they are hard to digest and increase diarrhea. Dairy products produce similar effects.

How can I avoid getting crypto?

The most important prevention measure is careful hand washing with soap and hot running water for at 20 ten seconds:

- C before preparing food;
- C before eating;
- C after going to the toilet or changing diapers;
- C after smoking;
- C after using a tissue or handkerchief;
- C after working in the garden; and
- C after playing with pets.
- C after changing diapers.

Food handlers should use disposable paper towels or an air dryer to dry their hands. Cloth towels get dirty quickly and can spread germs.

Safe food storage and handling

1. Thoroughly cook all raw foods.
2. Thoroughly wash raw vegetables before eating.
3. Reheat food until its internal temperature reaches at least 60 degree C.

Vegetables and fruit that touch dirt should be washed with water that has been boiled or filtered or bottled water that does not contain cryptosporidium. Unpasteurized milk or dairy products may not be safe.

Household cleaning

Bathrooms and toilets must be cleaned often to avoid the spread of infections. Pay particular attention to toilet seats and handles, taps, and diaper change tables.

Sand boxes can become contaminated with animal feces and urine. Rake the sand frequently and remove any animal feces. Cover the area when not in use.

Water from untreated sources

Untreated water from lakes or rivers probably is contaminated by feces from people or animals; the American Water Works Association estimates 97 percent of the nation's surface water contains crypto. Boil water from these sources for at least 10 minutes before drinking it. After the water cools, it can be stored in a clean, sealed bottle or pitcher with a lid and used normally. Individuals should be careful not to touch the inside of their water bottles.

Lakes, rivers, streams, pools and Jacuzzis may be contaminated. Swallowing this water when swimming or drinking it may cause cryptosporidiosis, as crypto is not killed by chlorine.

Water can also be filtered to remove crypto. Only filters labeled as "reverse osmosis," and/or "tested and certified by NSF Standard 53 for cyst reduction" and/or "absolute micron size of one micron or smaller" are guaranteed to remove cryptosporidium. Persons drinking bottled water should look for evidence of these treatments on the bottled water label, or buy distilled water. Canned and bottled bubbly drinks, such as sodas and beer, are usually heated and filtered enough in the factory to remove or kill cryptosporidium. Hot tea and coffee also have no live cryptosporidia.

Stool, objects, and animals

Cryptosporidium can be found on clothing, bedding or other things used by infected persons, such as persons with diarrhea or children in diapers. Persons should always wash their hands after touching these things and before touching food or the mouth. Sex that may involve contact with stool, especially oral sex, can also pass cryptosporidia. Individuals should always wash their hands after touching animals or cleaning up their stool or visiting barns and areas where these animals live. The stool of domestic and farm animals, especially animals less than six months old or animals with diarrhea, can contain crypto.

Dirt in the garden and other places can become contaminated when an animal leaves its stool there. Any object, such as a faucet handle, diaper table or bed pan, that is touched by an infected person who did not wash well after using the toilet can be contaminated. Individuals should always wash their hands well after working in dirt or touching anything that could have been contaminated by a person with crypto.

For more information:

The U.S. Centers for Disease Control has started a cryptosporidiosis phone and fax service. Callers can listen to recorded messages, or receive printed information by fax. The phone number is 404-330-1242. They also can call the CDC AIDS Hotline at 1-800-342-2437 for more information on cryptosporidiosis.