

Blastocystis Friend of Foe?

Blastocystis Research Foundation

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What is Blastocystosis?

Blastocystosis (BLAST-oh-sis-TOS-is) is an illness caused by a microscopic parasite, Blastocystis 'hominis' (also known as Blastocystis 'hominis' hominis). Once a person or animal has been infected with Blastocystis 'hominis', 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 in some cases.

During the past 2 decades, Blastocystis 'hominis' infection has become recognized as a common cause of waterborne disease in humans in the United States. Blastocystis 'hominis' can be found worldwide and within every state of Australia.

How do you get Blastocystosis and how is it spread?

The Blastocystis 'hominis' parasite lives in the intestine of infected humans or animals (e.g., cats, dogs, pigs, horses, cattle). Millions of germs can be released in a bowel movement of an infected human or animal. Blastocystis 'hominis' is found on surfaces or in soil, food, or water that has been contaminated with the feces from infected humans

or animals. You can become infected after accidentally swallowing the parasite; you cannot become infected through contact with blood. Blastocystis 'hominis' can be spread by:

- Accidentally swallowing Blastocystis 'hominis' picked up from surfaces (such as bathroom fixtures, changing tables, diaper pails, or toys) contaminated with feces from an infected person or animal.

- Drinking water or using ice made from contaminated sources (e.g., lakes, streams, shallow [less than 50 feet] or poorly monitored or maintained wells).

- Swallowing recreational water contaminated with Blastocystis 'hominis'. Recreational water includes water in swimming pools, water parks, hot tubs or spas, fountains, lakes, rivers, springs, ponds, or streams that can be contaminated with feces or sewage from humans or animals.

- Eating uncooked food contaminated with Blastocystis 'hominis'.

- Having contact with someone who is ill with Blastocystosis.

- Traveling to countries where Blastocystosis is common

and being exposed to the parasite as described in the bullets above.

What are the symptoms of Blastocystosis?

Blastocystis 'hominis' infection can cause a variety of intestinal signs or symptoms, which include

- Abdominal pain
- Diarrhea
- Constipation
- Gas or flatulence
- Greasy stools that tend to float
- Upset stomach or nausea

Patients also report fatigue, skin rashes, and joint pain. Some people with Blastocystis 'hominis' infection have severe symptoms, while others have no symptoms at all. In this class of disease, researchers have found that people with more severe symptoms may be infected with more virulent types of microbes, and also may have a genetic



Blastocystis hominis

Who is at risk?

Who is most likely to get Blastocystosis?

Anyone can get Blastocystosis.

Persons more likely to become infected include

- International travelers.
- Close contacts (such as those in the same family or in the same household or child care setting) or caregivers of infected people.
- People who drink water or use ice made from contaminated sources (e.g., lakes, streams, shallow or poorly monitored or maintained wells). Contaminated water may include water that has not been boiled, filtered, or disinfected with chemicals.
- Children in child care settings, including diaper-aged children.
- Backpackers, hikers, and campers who drink untreated or insufficiently treated water or who do not practice good hygiene (e.g., proper hand washing).
- People who swallow contaminated water while swimming, especially in lakes, rivers, springs, ponds, and streams. Several community-wide outbreaks of Blastocystosis have been linked to drinking water contaminated with Blastocystis 'hominis'.
- People exposed to human feces through sexual contact.

What is the treatment for Blastocystosis?

Chronic Blastocystis infections have been found to be unresponsive to conventional antibiotics like metronidazole and tinidazole, and, as yet there has been no real consensus on treatment. The many asymptomatic carriers, the lack of understanding of Blastocystis's complexities, life cycle and immune resistance to common treatments, have all contributed to c

There is no FDA approved treatment for Blastocystis 'hominis' infection. Physicians have reported success in some patients with several prescription drugs, but the success rates for treatment of Blastocystis 'hominis' are much lower than for other diseases. Many patients remain symptomatic after treatment.

Despite this, Blastocystis infection is commonly treated in all countries by many physicians. However, medical culture varies, and in some parts of the world it can be frustrating and difficult to find a physician to treat the infection. This is especially true in Australia, Canada, the Northeast states in the United States, and the United Kingdom. Additionally, if first-line treatment fails, some doctors may be reluctant to prescribe other drugs to treat the infection.

Dr Froomes has years of experience treating difficult and resistant cases of blastocystis infection, and can guide you through all the different options available. In addition, you do not have to waste time and money on multiple consultations to discuss the general issue of where or not blastocystis causes illness or not. Dr Froomes is well versed in the current medical literature that confirms it does and can assist you in getting on with treatment from the very first consultation.

At the Essendon Endoscopy and Gastroenterology Clinic, we have three levels of treatment to eradicate Blastocystis.

Beginning with first line oral therapy, we use a combination of oral anti-parasite drugs in either double or triple therapy formats. These treatments go for ten days. These treatments have a success rate of 50-70% and are associated with various levels of side effects, which include nausea, headache, malaise, diarrhea, bloating and rash. These treatments cannot be used with alcohol. We use a specific probiotic with anti-parasite properties together with the drugs.

Second line treatment is quadruple oral drug therapy, which involves taking four different strong anti-parasite drugs. These medications should also be taken with food and preferably taken at the same time every day.

Finally, for resistant infections we use a third-line approach, which involves colonoscopy and single infusion of three high-dose liquid anti-parasite drugs directly into the colon.

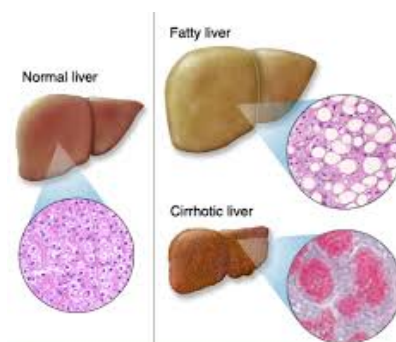
How is a Blastocystis 'hominis' infection diagnosed?

Your health care provider will likely ask you to submit stool samples to check for the parasite. Because Blastocystis 'hominis' can be difficult to diagnose, your provider might ask you to submit multiple stool specimens collected over a few days. Even in that case, the diagnostics may fail to detect the infection. Researchers have developed more reliable diagnostics, but those are not widely available to patients. BRF is working to make more reliable diagnostics available to patients.

Lab Testing

Pathology companies provide a stool PCR test on a fresh wear specimen of faeces. This test is the most sensitive and specific diagnostic test available and has a 24hr turn round. It is also bulk billed.

To ensure successful treatment of B. hominis it is important that the patient complete the entire 10 day medication schedule.



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Dr Paul Froomes

The next wave of anti-obesity therapy looks set to involve changing the gut micro biome with faecal microbial transplant.

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