CONDITION

# Amebiasis

Learn how amebiasis spreads, what symptoms it can cause, how doctors diagnose and treat it, and when diarrhea or abdominal pain needs urgent care.

**WHAT IT IS**
Parasitic infection of the large intestine

**BODY SYSTEM**
Digestive

**MAIN SYMPTOMS**
Diarrhea, abdominal pain, bloody stool, urgent bowel movements

**WHAT CAUSES IT**
Entamoeba histolytica infection

**HOW IT IS DIAGNOSED**
Stool PCR or species-specific antigen testing

**MAIN TREATMENT**
Prescription antiparasitic medicine

**CAN IT BE CURED?**
Yes, treatment is usually successful

**IS IT AN EMERGENCY?**
Sometimes, with sudden intense abdominal pain

**LONG-TERM OUTLOOK**
Usually successfully treated with possible serious invasive complications

## Overview

Amebiasis is an infection caused by Entamoeba histolytica , a microscopic parasite that can live in the large intestine. It spreads when a person swallows the parasite, usually through food, water, hands, or objects contaminated with tiny amounts of stool.

Many people with the infection have no symptoms. Others develop diarrhea, abdominal pain, or inflammation of the colon, called colitis. In some cases, the diarrhea contains blood. Less often, the parasite moves through the intestinal wall and reaches another organ. The liver is the most common site outside the intestine.

Amebiasis is more common in places where sanitation systems do not reliably separate human waste from food and drinking water. It can also occur after travel, through sexual contact involving stool exposure, or among people living in crowded settings with limited sanitation.

The infection matters because untreated invasive disease can damage the intestine or cause a liver abscess, which is a pocket of infected material. Accurate testing is important because other parasites that look similar under a microscope, such as Entamoeba dispar , do not cause the same illness and usually do not require treatment.

## Symptoms

Symptoms may begin days to months after exposure. They can develop gradually and may come and go. Some people remain well even though the parasite is present in their intestine.

Intestinal symptoms may include:

When amebiasis causes bloody diarrhea and inflammation of the colon, it is sometimes called amebic dysentery. Blood in the stool should be discussed promptly with a healthcare professional because many infections and noninfectious conditions can cause it.

A liver abscess may cause steady pain in the upper right side of the abdomen. Fever, sweating, chills, nausea, reduced appetite, or weight loss may also occur. Most people with a liver abscess do not have diarrhea at the same time.

Seek urgent medical care for bloody diarrhea, persistent vomiting, severe abdominal pain, a swollen or very tender abdomen, high fever, or signs of dehydration such as very little urine, marked dizziness, or difficulty keeping fluids down.

Call emergency services for confusion, fainting, severe weakness, trouble breathing, chest pain, or sudden intense abdominal pain. These symptoms can have many causes, but they require immediate assessment.

- Loose stools or diarrhea
- Abdominal pain or cramping
- An urgent need to have a bowel movement
- Blood or mucus in the stool
- Reduced appetite or unintended weight loss
- Tiredness
- Fever, although fever may be absent

## Causes and risk factors

A person becomes infected by swallowing the hardy cyst form of E. histolytica . Cysts pass in

stool and can survive outside the body long enough to contaminate water, food, hands, or surfaces. Inside the intestine, they release active forms of the parasite. These may remain in the colon or invade its lining.

Amebiasis does not usually spread through ordinary contact such as sitting near someone or sharing the same room. Transmission requires the parasite to move from contaminated stool to another person's mouth, even when the amount of stool is too small to see.

Factors that can increase exposure include:

A person without symptoms can still pass the parasite to others. Careful handwashing with soap and water after using the toilet, changing diapers, and before preparing food helps reduce spread. Alcohol-based hand sanitizer may not reliably remove or kill all intestinal parasites, so it should not replace handwashing when soap and safe water are available.

When traveling where water safety is uncertain, use sealed bottled water or appropriately treated water for drinking and brushing teeth. Avoid ice unless it was made with safe water. Food is generally safer when it is thoroughly cooked and served hot. Fruit that can be washed with safe water and peeled by the person eating it may also lower exposure.

- Living in or traveling to an area with inadequate sanitation
- Drinking untreated water or using unsafe ice
- Eating raw produce that was washed with contaminated water
- Eating food handled by an infected person who did not wash their hands properly
- Sexual activity that may involve oral contact with stool
- Living in a crowded setting where hygiene is difficult to maintain

## Diagnosis

Symptoms alone cannot confirm amebiasis. Diarrhea, bloody stool, and abdominal pain may come from bacterial infections, inflammatory bowel disease, medication effects, or other parasites. A healthcare professional will consider recent travel, food and water exposure, sexual practices, symptom duration, and whether anyone else is ill.

Stool testing is central to diagnosis. Because the parasite may not appear in every bowel movement, a clinician may request samples collected on different days. Available tests include:

Microscopy alone has important limits. E. histolytica can resemble non-disease-causing species, including E. dispar . PCR or a species-specific antigen test can help tell them apart. Finding an Entamoeba species on a report does not always mean that invasive amebiasis is

present.

Blood tests may be used when a liver abscess or another infection outside the intestine is suspected. Antibody tests look for an immune response to E. histolytica . They can support the diagnosis of invasive disease, but antibodies may remain detectable after an older infection, especially in people from areas where amebiasis is common.

Imaging such as ultrasound, CT, or MRI may be needed when symptoms suggest a liver abscess. Imaging can show an abscess but cannot always prove which organism caused it. In selected cases, a clinician may obtain fluid from the abscess or perform an endoscopic examination of the colon to exclude other conditions.

- Molecular tests , such as polymerase chain reaction, or PCR, which detect the parasite's genetic material
- Antigen tests , which detect proteins from the parasite
- Microscopy , in which a laboratory specialist looks for parasites in stool

## Treatment and management

Amebiasis is treated with prescription medicine. The treatment plan depends on whether the parasite is confined to the inside of the intestine or has invaded intestinal tissue or another organ.

For infection without invasive symptoms, clinicians generally use a medicine that acts within the intestinal space. These are often called luminal agents . Paromomycin is one example. The availability of other luminal medicines varies by country.

Invasive intestinal disease or a liver abscess usually requires a tissue-active medicine, commonly metronidazole or tinidazole. This is followed by a luminal agent to clear parasites that may remain inside the intestine. The second step is important because a tissue-active medicine alone may not fully remove intestinal infection.

The exact medicine and treatment length depend on the type and severity of illness, available products, pregnancy status, other medical conditions, and possible medicine interactions. A clinician or pharmacist can explain side effects and precautions. Patients should take the full treatment course as directed rather than stopping when symptoms improve.

Supportive care is also important. Fluids replace water lost through diarrhea, and oral rehydration solutions provide a useful balance of water, salts, and sugar. Severe dehydration may require intravenous fluids.

Do not rely on an over-the-counter medicine that slows the bowel when diarrhea is bloody or

accompanied by fever unless a healthcare professional has advised it. Slowing the intestine can be unsafe with some forms of infectious colitis. Antibiotics like amoxicillin or doxycycline intended for other causes of diarrhea may also fail to treat amebiasis.

Most amebic liver abscesses improve with medicine and do not need drainage. A specialist may consider drainage if the diagnosis is uncertain, the abscess is at risk of rupturing, symptoms do not improve as expected, or its location creates added concern.

People preparing food for others, working in healthcare or childcare, or living in a group setting may need public health guidance before returning to usual duties. Local requirements differ.

## Complications

Most recognized infections can be treated successfully, but invasive amebiasis can sometimes lead to serious problems.

Severe inflammation may cause extensive injury to the colon. Rare complications include major bleeding, a dangerously enlarged colon, or a hole in the intestinal wall. A perforation can allow intestinal contents to enter the abdomen and requires emergency treatment.

A liver abscess can enlarge or rupture. Infection may then spread into the abdomen, the space around a lung, or, less commonly, the sac surrounding the heart. These complications can cause worsening pain, breathing difficulty, or severe illness.

Long-lasting intestinal inflammation may occasionally form a mass called an ameboma. It can resemble a tumor or inflammatory bowel disease on imaging or endoscopy, so tissue testing may be needed to identify the cause.

Prompt reassessment is important if symptoms worsen or fail to improve during treatment.

## Follow up

Follow-up depends on the form of amebiasis and how well symptoms respond. Keep scheduled appointments and tell the clinician if diarrhea, blood in the stool, fever, or abdominal pain continues after treatment.

A clinician may order repeat stool testing to check whether the infection has cleared. The need for testing can depend on the original test, ongoing symptoms, risk of transmission, and local public health rules. Do not use leftover medicine or repeat treatment without medical advice because persistent symptoms may have another cause.

After treatment for a liver abscess, symptoms and blood test results usually guide recovery.

Imaging changes can take longer to disappear than pain or fever, so an abnormal scan does not necessarily mean that active infection remains. The treating clinician will decide whether repeat imaging is useful.

To reduce reinfection and protect others, wash hands carefully, follow food and water precautions, and avoid sexual practices that may expose a partner to stool until treatment is complete and a clinician has advised that transmission risk has passed.

Seek routine medical follow-up for mild symptoms that persist, medication side effects, or questions about testing household or sexual contacts. Seek urgent care for new bloody diarrhea, worsening abdominal pain, repeated vomiting, dehydration, or fever. Severe pain, fainting, confusion, breathing difficulty, or a rigid or swollen abdomen requires emergency evaluation.

## Sources

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