

## **Amebiasis (Amoebiasis): A Primer**

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Amebiasis is an infection caused by the protozoan parasite *Entamoeba histolytica* [1]. *Entamoeba histolytica* is an amoeba. It should not be confused with *Entamoeba dispar*, which is morphologically identical to *Entamoeba histolytica*, but is nonpathogenic. *Entamoeba coli* and *Entamoeba hartmanni* are also nonpathogenic but these species can be differentiated from *E. histolytica* by morphology [2]. *E. histolytica*, *E. dispar*, *E. coli*, and *E. hartmanni* occur only in humans [3].

*E. histolytica* exists in two forms: the hardy, infective cyst, and the more fragile, potentially pathogenic trophozoite [1]. Transmission occurs when fecally contaminated food or water containing cysts is ingested. The trophozoite, or active form, principally inhabits the large intestine [3]. Intestinal amebiasis may be asymptomatic or have nonspecific or mild signs and symptoms such as flatulence, constipation, and loose stools [2]. Some may develop dysentery, which is characterized by abdominal cramps, tenesmus, and blood and mucus in the stool [2, 3]. An ameboma (a chronic granulomatous lesion) develops most frequently in the cecal or rectosigmoid region, and may be mistaken for a colonic carcinoma [2, 3].

Extraintestinal amebiasis occurs in a small percentage of patients and may involve various organs including the liver, lungs, and brain [2]. The most common extraintestinal manifestation is a hepatic abscess [4]. Signs and symptoms of a liver abscess include fever, abdominal pain, and weight loss [2]. A rupture of an abscess may lead to death.

An acute case of amebic dysentery does not play a major role in transmission since trophozoites cannot survive long outside the body of the host; however, asymptomatic patients generally produce only cysts and therefore are important sources of infection [3]. The incubation period of amebiasis is variable, ranging from a few days to months or years, but is usually one to four weeks. A diagnosis may be made by examining stool. Other diagnostic tests include antigen detection in stool, polymerase chain reaction, and various serologic assays [3]. The antibody tests are most helpful in the diagnosis of extraintestinal amebiasis with liver involvement [2]. Cases may be treated with various drugs [1, 2, 3].

At one time, *E. histolytica* was considered to infect approximately 10% of the world's population; however, this estimate may have been inflated due to the confusion with the much more frequently encountered *E. dispar* [3]. The true worldwide prevalence of *E. histolytica* is closer to one percent. The prevalence of infection is highest in areas of crowding, poor sanitation, and the tropics. In temperate climates, the majority of cases are usually asymptomatic. In the United States, amebiasis is more common in rural areas and in areas of low socioeconomic status. Oral-anal sex is a risk factor for infection [1].

In 1997, 68 cases of amebiasis were reported to the Florida Department of Health [5]. The incidence rate in 1997 was 0.46 cases per 100,000. The incidence in males was 0.57 per 100,000, and 0.36 per 100,000 in females (a relative risk of 1.58). Ninety-one cases were reported in 1998. The reported incidence of amebiasis in 1998 was 0.60 cases per 100,000. In 1998, the gender difference in morbidity decreased: 0.68 per 100,000 males, and 0.52 per 100,000 females (a relative risk of 1.31).

## References

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