

Giardiasis

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Giardiasis is an infection primarily of the small intestine caused by the parasite *Giardia lamblia*. The parasite exists in cyst and trophozoite forms; the infective stage is the cyst.¹ While infection is often asymptomatic, it may be associated with diarrhea, abdominal pain, flatulence, fatigue, anorexia, and weight loss.² Frequent loose and pale greasy stools are characteristic due to malabsorption of fats.² The incubation period is 3 to 25 days or longer (median 7 to 10 days).² In patients with chronic giardiasis, diarrhea can lead to dehydration, malabsorption, and impairment of pancreatic function.³ Diagnosis in acute cases is established by the direct microscopic examination of stool for the presence of cysts or trophozoites, or detection of *G. lamblia* antigens in these specimens.³ In chronic cases, excretion is irregular, requiring repeated stool examination. Alternatively, duodenal contents – obtained with a nylon string or by endoscopic aspiration – can be examined for trophozoites.⁴

Humans are the principal reservoir, but *Giardia* can infect beavers, cats, dogs, and other domestic and wild animals.¹ This organism is the most common cause of intestinal parasitic infection in humans world-wide.³ The infectious dose is low: humans can be infected with as few as 10 cysts.⁵ Person-to-person transmission occurs by hand to mouth transfer of cysts from the feces of an infected person; this is the principal mode of spread in institutions and day care centers. Person to person transmission also can occur by anal intercourse.² Other modes of transmission include fecally contaminated food, drinking water, and recreational water.¹ Cysts can remain viable for 2-3 months in cold water and are resistant to killing by routine chlorine treatments.³ They are, however, destroyed by boiling water for 1 minute.¹ Public water supplies that are exposed to human or animal feces should be treated with a combination of filtration, chlorination and stringent maintenance of distribution systems.⁵ Persons at greatest risk of exposure to infection are children in day care, their close contacts, men who have sex with men, backpackers and campers (via ingestion of unfiltered, untreated drinking water), travelers to disease-endemic areas, and persons drinking water from shallow wells.⁵ Most community-wide outbreaks result from contaminated water supplies.¹ Handwashing after toilet use and before handling food or eating is an important preventive measure, especially in the day care setting.² Adams and Perkin⁶ found that 29% of 65 children living in a rural northern Florida tested positive for *G. lamblia*, and 56% of the youngest (<5 years of age) children were found to be infected. Inadequate water supplies were found for 70% of the families; all the children were born in Florida and had not traveled outside the U.S.

In 2000, 1520 cases of giardiasis were reported in Florida (9.7 cases per 100,000 population) with the highest incidence (47.6 per 100,000) in children 1-4 years of age.⁷ The last five year average of reported cases was 1,777. Consistent with national data, cases occurred throughout the year with peaks in July and August. The majority of cases reported in the state appear to be related to person to person transmission with outbreaks in day care settings not uncommon.

References

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