



Who

Giardiasis is especially common in areas with poor sanitary conditions, but infection occurs worldwide. Apart from international travelers, other high-risk groups include infants, international adoptees, immunocompromised individuals, and patients with cystic fibrosis.



What

It is caused by *Giardia duodenalis*, also known as *Giardia lamblia*, a protozoan parasite. After ingestion of the infectious cyst stage by consumption of contaminated food or water or after fecal-oral transmission, the trophozoite stage settles in the first part of the small bowel. Trophozoites which do not adhere there move forward to the large intestine, where they revert to infectious cysts that are passed back into the environment in excreted stool.



Where and when

Giardiasis is an important cause of water- and foodborne related diarrhea and may cause outbreaks in daycare centers and illness in international travelers.

Prevention

Measures for prevention of giardiasis include sanitation control interventions and water purification. Hand hygiene with soap and water is preferred over alcohol-based hand disinfection. There is no vaccine available for the prevention of giardiasis.



Treatment

Tools for diagnosis of giardiasis include antigen or nucleic acid detection assays, and stool microscopy. Treatment includes antimicrobial therapy, in the Netherlands preferably tinidazole or metronidazole, and supportive care if necessary. Infections are sometimes self-limited. Treatment of asymptomatic people is may be recommended to prevent transmission.

Symptoms

Many persons with *Giardia* in stool samples are asymptomatic. Symptoms of acute disease may develop after an incubation time of 7-14 days and include diarrhea, foul-smelling and fatty stools, abdominal cramps, flatulence, nausea, and weight loss. Chronic giardiasis has less pronounced symptoms and may follow the acute phase or develop without an antecedent acute illness.



In case of infection

Complicated disease rarely occurs. Some patients may have persistent infection after initial treatment. This may be attributable to drug resistance, inadequate adherence, or a hampered immune system. Chronic infection is associated with development of malabsorption, lactose intolerance, and weight loss. In resource-limited settings chronic giardiasis may be associated with stunted growth in children.