Giardia lamblia trophozoites live in the small intestine of the host. Cysts, which are resistant to adverse environmental conditions, are passed in the feces of an infected host, and the next host is infected when it ingests cysts in food or water contaminated with feces.

Giardiasis is a disease caused by a protozoa called Giardia Lamblia, and is otherwise known as “beaver fever”. It is the most frequent cause of non-bacterial diarrhea in North America.

Giardiasis occurs where there is inadequate sanitation or inadequate treatment of drinking water. Giardiasis is one of the causes of “travelers diarrhea” that occurs during travel to less-developed countries.

Removal of Giardia requires a water filter with an "absolute" pore size of 0.1 to 1-micrometer and may also remove most other diarrhea-causing bacteria. The highest removal by granular filters is achieved when coagulation is optimized. Once water is filtered it is best to follow with chlorine or iodine to kill remaining bacteria and viruses.