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## ***Giardia intestinalis***

### **Morphology**

The cysts of *Giardia intestinalis* are 8 - 12 µm in size and are ellipsoid in shape. They contain 4 nuclei which do not tend to be obvious. Longitudinal fibrils consisting of the remains of axonemes and parabasal bodies may also be seen. Cysts may appear to shrink from the cell wall.

The trophozoites of *Giardia intestinalis* are pear shaped and are an average size of 9 - 20 µm. When stained, the trophozoite is seen to have 2 nuclei, 2 slender median rods (axostyles), and 8 flagella arising from the anterior end. The movement of the trophozoite is described as tumbling leaf motility.

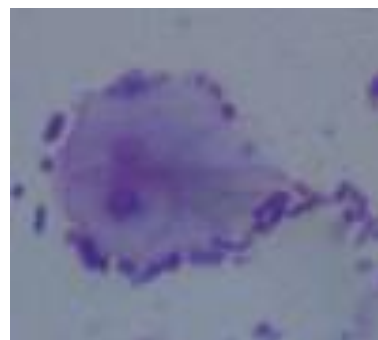
### **Pathogenesis**

*Giardia intestinalis* colonises the small intestine where the trophozoites adhere to the mucosal surface by means of their sucking disc. Cysts are produced as the parasites descend the intestinal tract although trophozoites can be passed in the faeces in severe infections. *Giardia intestinalis* is transmitted through ingestion of cysts in contaminated water or food. The main symptoms are abdominal pain, flatulence, and episodic diarrhoea with steatorrhoea in severe cases. However 50% of *Giardia intestinalis* infections are symptomless.

### **Diagnosis**

Cysts can be found by examination of the deposit of a formol-ether concentrate of a stool preparation. Cysts may be excreted intermittently, therefore it is important to examine more than one stool.

Trophozoites are found by examination of saline wet preparations of fresh, diarrhoeic stool, duodenal or jejunal aspirate.



Trophozoite of *Giardia* stained with Giemsa