

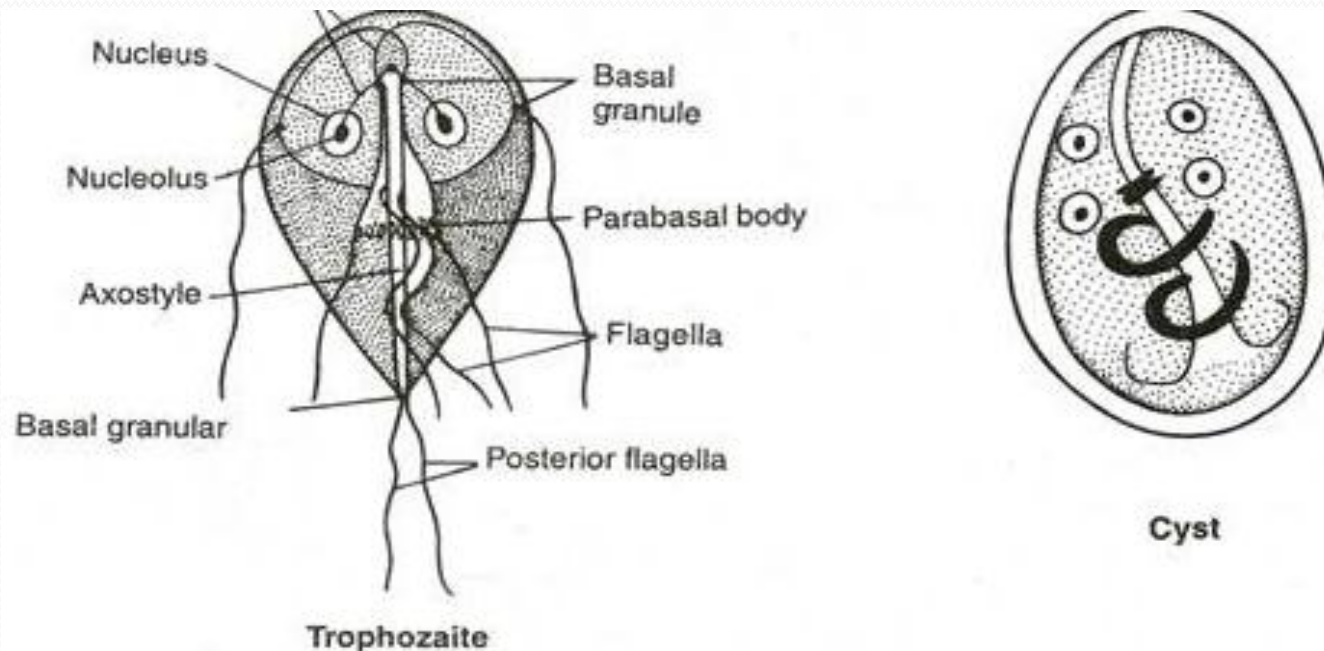
Flagellated protozoans: Giardia and Trichomonas

Giardia lamblia

- ***Scientific names:***
- *Giardia intestinalis,*
- *Giardia duodenalis*
- *Lambliia intestinalis*
- ***Geographic distribution:***
- *Worldwide*
- ***Habitat:***
- *Duodenum and upper part of jejunum*

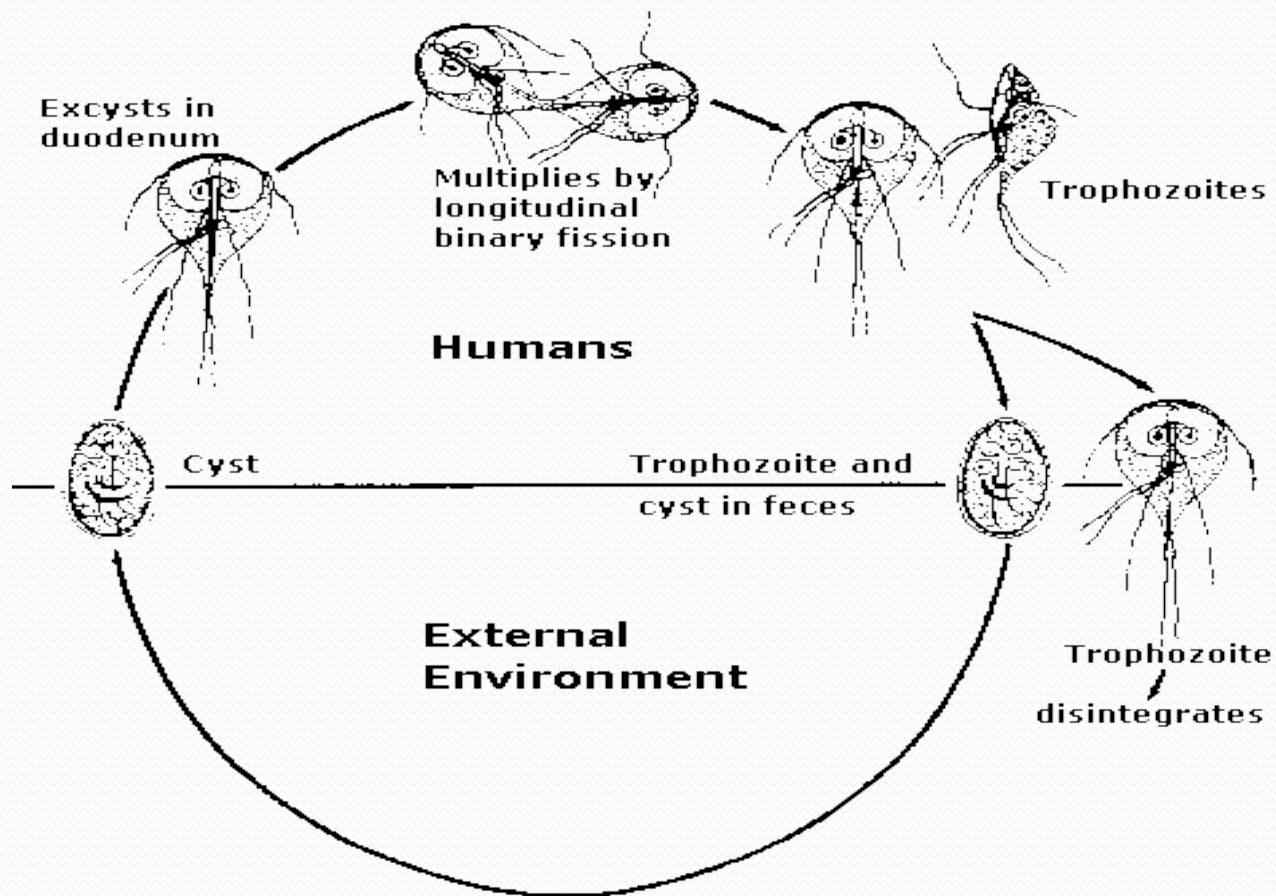
Morphology

- Trophozoite and cyst



<https://www.google.com.pk/search?q=morphology+of+giardia&tbm=isch&ve>

Life cycle



Clinical features

Clinical signs and symptoms of giardiasis include the following:

Clinical signs and symptoms		
○ Diarrhea	○ Nausea	○ Low-grade fever (infrequent)
○ Malaise, weakness	○ Malodorous, greasy stools	○ Various neurologic symptoms (e.g., irritability, sleep disorder, mental depression, neurasthenia)
○ Abdominal distention	○ Anorexia	
○ Flatulence	○ Weight loss	
○ Abdominal cramps	○ Vomiting	○ Urticaria

<https://www.google.com.pk/search?q=clinical+features+of+giardia&tbm=isch&ved=2ahUKEwjAt6S>

Diagnosis

- Demonstration of cyst and trophozoite (ENTEROTEST)
- Intestinal biopsy
- Immunoassays (ELISA and IFAT)

Prevention and control

- Effective elimination of fecal contamination
- Safe water supply
- Health education at individual and community level
- Identify source of infection

Trichomonas

- Three Human species
- *T. vaginalis* (Causes UTI)
- *T. hominis* (Pathogenicity not established yet)
- *T. tenax* (commensal)

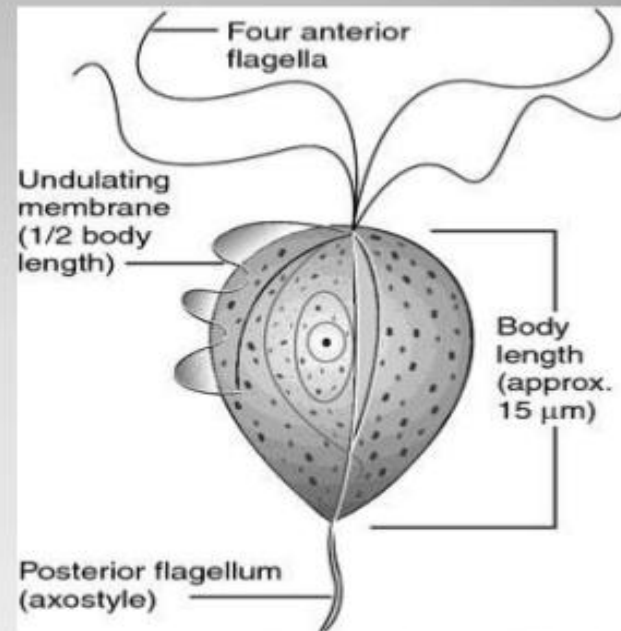
Trichomonas vaginalis

- Morphology:

Characteristics

Trichomonas shows the following important characteristics:

- **An anterior tuft of flagella**
- **Undulating membrane (1/2 body length)**
- **An axostyle**
- **Only trophozoite stage.** (It can survive outside the body at temp as low as 15 C for up to 48 hours.)



<https://www.google.com.pk/search?q=clinical+features+of+Trichomonas+vaginalis&tbm=isch&v>

CLINICAL MANIFESTATION

- STI
- Common cause of vaginitis in women and urethritis in Men.
- Trichomoniasis presents a wide variety of clinical patterns. The spectrum of clinical trichomoniasis in women ranges from the asymptomatic carrier state to flagrant vaginitis, with 1/3rd of the asymptomatic infected patients becoming symptomatic within 6months.

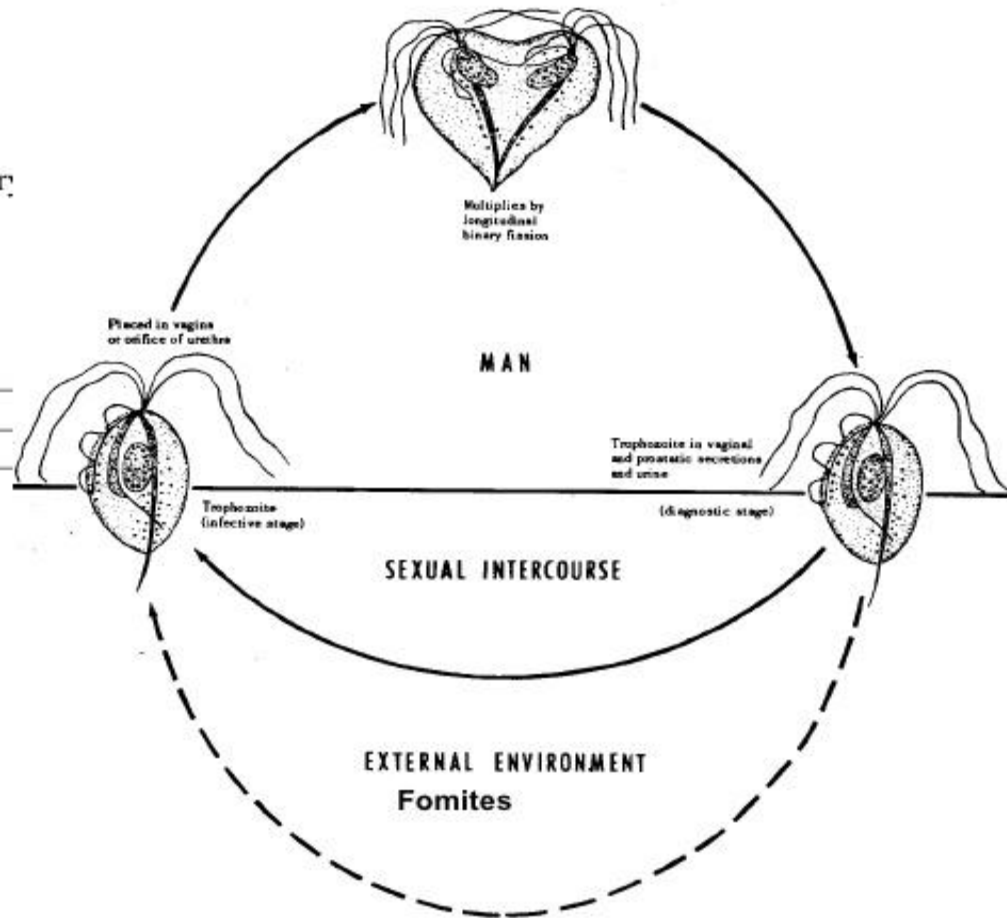


<https://www.google.com.pk/search?q=clinical+features+of+Trichomonas+vaginalis&tbm=isch&ved=2ahUKewj6m>

Life Cycle of *Trichomonas vaginalis*

1. Trophozoites occur in the urogenital system.
2. Trophozoites multiply by binary fission.
3. Trophozoites are transmitted from one person to another by

(washcloths, towels, etc.).



<https://www.google.com.pk/search?q=life+cycle+of+Trichomonas+vaginalis&tbm=isch&ved=2ahUKE>