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((علم الطفيليات))

2 stage

المحاضرة الثانية

**Intestinal Flagellate \ Giardia lamblia or  
Giardia Duodenalis**

**By**

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### Protozoal Parasite

- 1Trophozoat *Giardia lamblia* bi-nucleated( Two with two nucleoli ) 4 pairs flagella , two parabasal bodies and axostyle .
- 2Well developed cytoskeleton ( Mitochondria , Golgi complex , Endoplasmic reticulum. (
- 3This parasite infect human , sheep , cattle.
- 4Spread with contaminated food and water , or direct from person to person bodies
- 5Flagellate inhabit upper parts of small intestine ( Duodenum. (
- 6Parasite found in streams , lakes , swimming pool and also present in public water supply.
- 7Cause a disease called Giardiasis , Giardiasis is a common disease all over the world. ,
- 8Giardiasis is a disease of dirty environment , poor sanitation.
- 9Children ( especially under 4 years old ) are susceptible to this infection more than other ages.

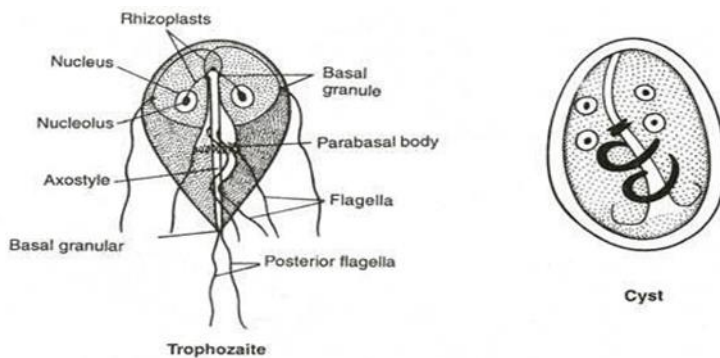


Fig. 181. Stages of life cycle of *Giardia intestinalis*.

## Pathologic stage Infective stage

### Transmission:

1- This parasite transmitted directly by touch or by clothes.

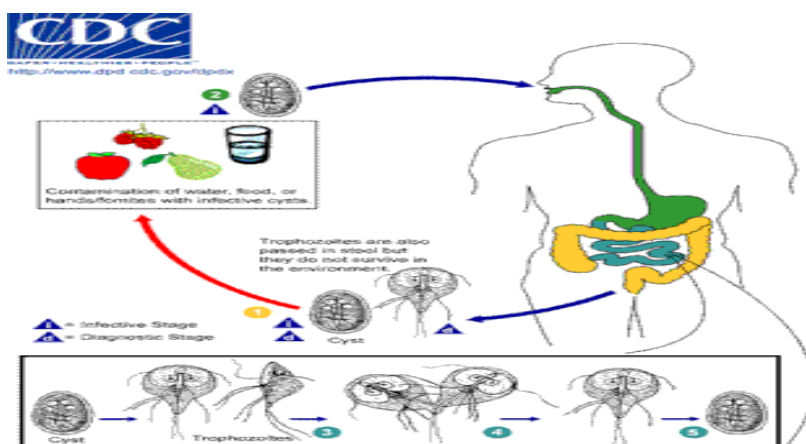
2-with contaminated food and water .

3-Infected stage is the cyst form which ex- cystation occur in duodenum and liberate trophozoite , trophozoite consider as pathologic stage.

### Symptoms:

#### Infection of Giardia marked by:“

- 1Stomach cramp , bloating , Nausea,
- 2Watery diarrhea , Foul smell greasy stool.
- 3Loss of appetite , loss of weight,
- 4Itchy skin , Hives and swelling around eyes . swelling joints.
- 5Jaundice sometimes occur due to parasite entering bile duct and block the passage of bile.
- 5Incubation period 1 - 14 days for acute giardiasis while chronic giardia lasting to 6 weeks.





### Diagnosis:

1. Stool specimens , Microscopic examination , trophozoite and cyst stage can be noticed.

2. Immunological test , Elisa ( Enzyme linked Immunosorbent assay).

3. Duodenum Biopsy for detection Giardia Host defense:

1. Mucous , bile salts and enzymes provide protection against the parasite

2. Antibodies such as IgA ( Immunoglobulin alpha ) normally present in secretion ( milk , Mucous , Saliva ) these secretions protect children against Giardia.

### Treatment:

1. Metronidazole ( Flagyl )

2. Trimethoprim

3. Antibiotics





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### **Prevention:**

- 1Boiling water
- 2Chemical disinfectant or filtering

**Note : Pregnancy / Allergy )(Penicillin ) must ask your doctor .**