

Genital flagellates

Trichomonas Spp.

T. Vaginalis (pathogenic)

T. Hominis , *T. tenax* (nonpathogenic)

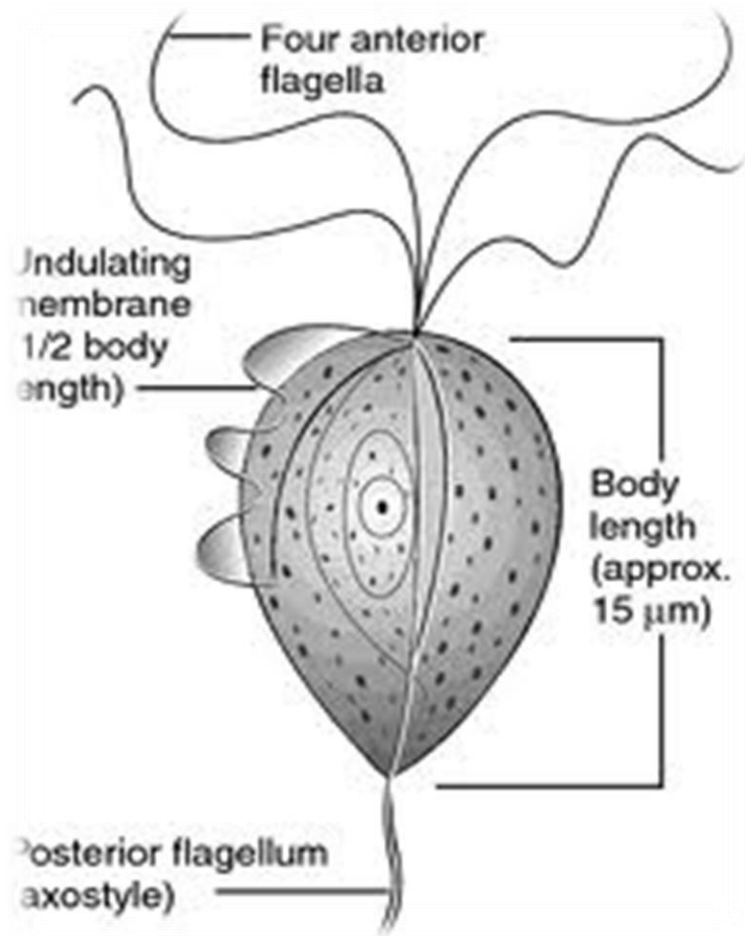
Trichomonas Vaginalis

Disease :- Trichomoniasis, T. Vaginitis

It exists only as a Trophozoite form. Found in the urethra and Vagina in women and the urethra and prostate gland in men. transmission by sexual intercourse.

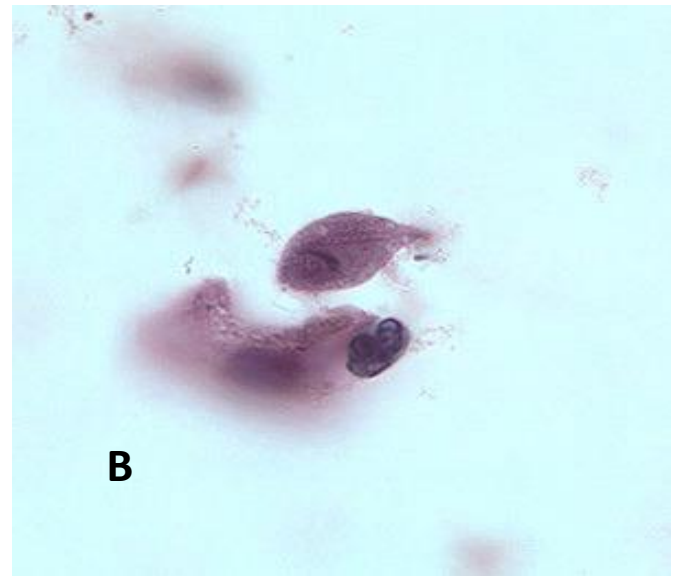
Morphology of Trophozoite :

is a pear-shaped or oval , It is slightly larger than a white blood cell, measuring 7-23 Mm long & 5-15 Mm wide,with nucleus,Four anterior flagella extend outside the cell produce movement , while the fifth flagellum backwards along the surface of the organism. Known as undulating membrane .In addition, axostyle projects opposite the four-flagella bundle; the axostyle may be used for attachment to surfaces and may also cause the tissue damage ,jerky movement





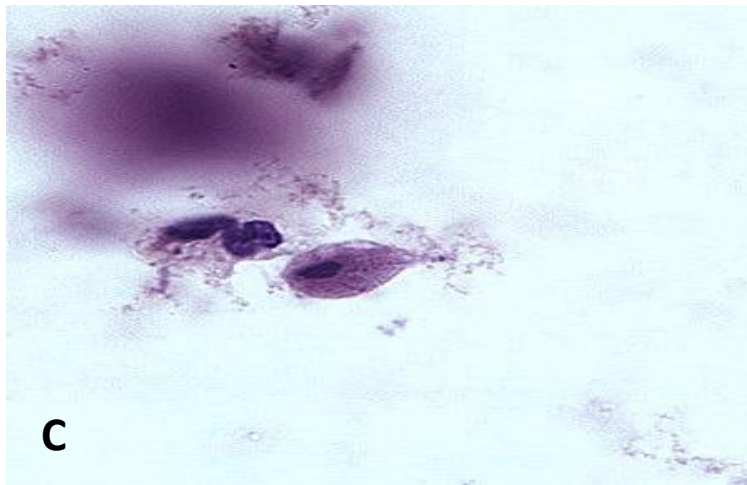
A



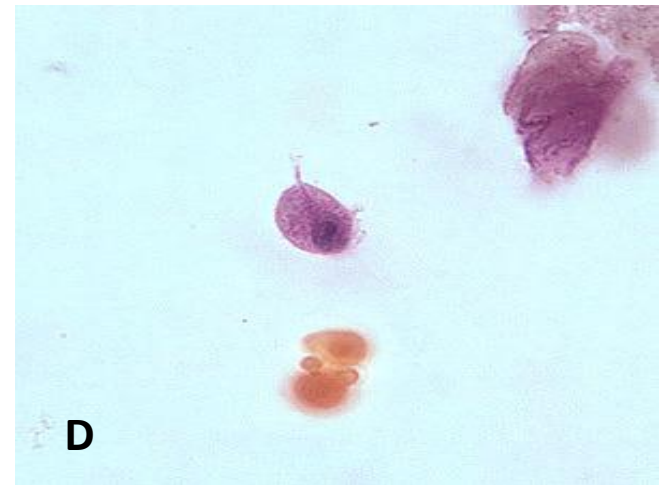
B

A: *T.vaginalis* obtained from in vitro culture, stained with Giemsa.

B: *T. vaginalis* in a vaginal smear, stained with Giemsa



C



D

C,D :Troph. of *T. vaginalis* in a vaginal smear, stained with Giemsa.

• Life Cycle

Human are only natural host for *T.vaginalis* and the troph. Transmitted directly from one person to another usually by sexual intercourse, the evidence that *T.vaginalis* is a STD (sexually transmitted disease). In women, the most commonly infected part of the body is the lower genital tract (vulva, vagina, or urethra), and in men, the most commonly infected body part is the inside of the penis (urethra), but it can also be passed from a vagina to another vagina. It is not common for the parasite to infect other body parts, like the hands, mouth, or anus. It is unclear why some people with the infection get symptoms while others do not, but it probably depends on factors like the person's age and overall health. Infected people without symptoms can still pass the infection on to others. Incubation Period is typically 5 to 28 days, but may survive in a host for 2+ years.

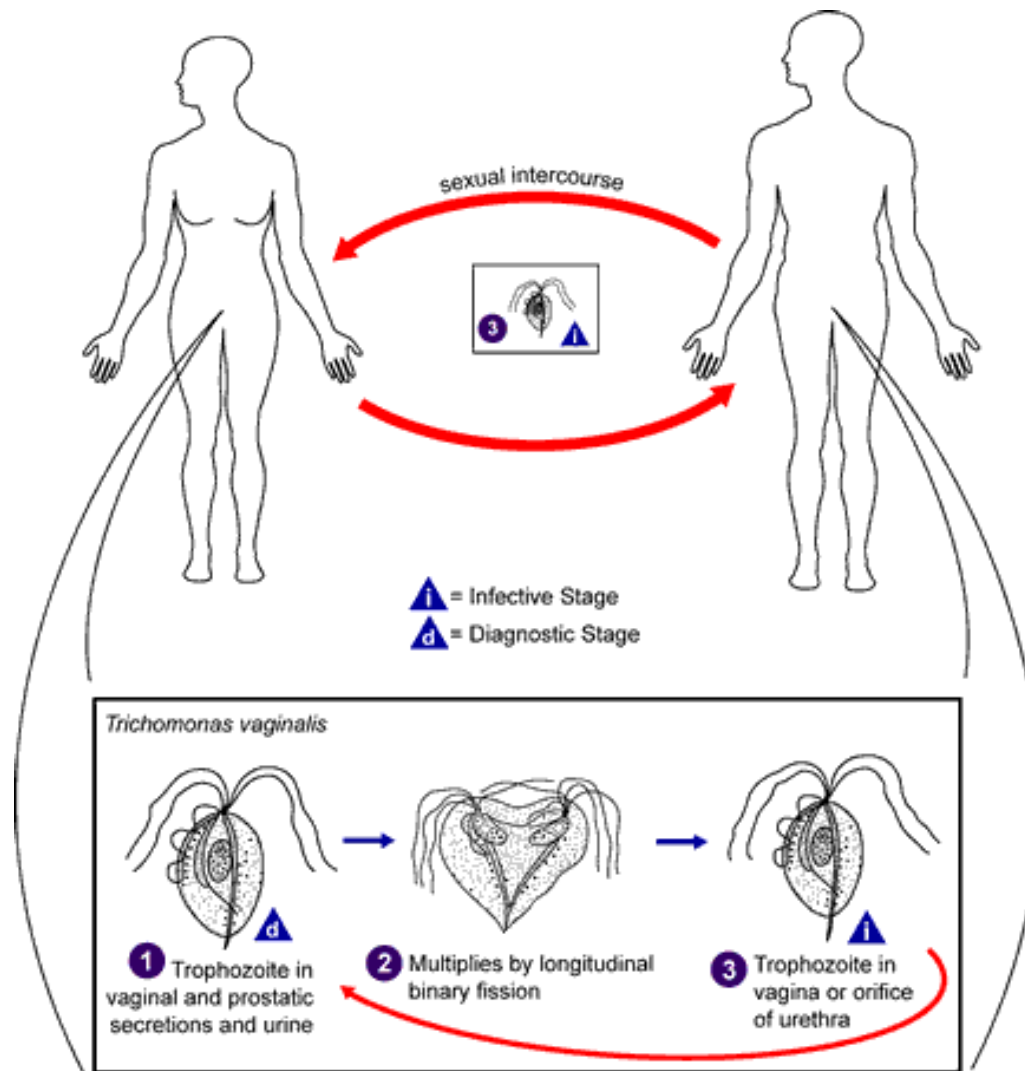


Fig : life cycle of *Trichomonas vaginalis*

Symptoms :

- Up to half of infected men and women will have not any signs or symptoms at all. Signs and symptoms usually show up within a month of coming into contact with Trichomonas. You might notice:

1 – Women

- Soreness, inflammation and itching in and around the vagina. This can cause discomfort when having sex.
- A change in vaginal discharge – there may be a small amount or a lot, and it may be thick or thin, or frothy and yellow. You may also notice a strange smell that may be unpleasant.
- Pain when passing urine.

2 – Men

- A discharge from the penis, which may be thin and whitish.
- Pain, or a burning sensation, when passing urine.

Laboratory Diagnosis

- In females, *T. vaginalis* may be found in urine sediment, wet preparations of vaginal secretions or vaginal scrapings.
- In males it may be found in urine, wet preparations of prostatic secretions or following massage of the prostate gland.
- commercially available kits for the immunodetection of *T. vaginalis* antigens in specimens include EIA (enzyme immuno assay) ,DNA probe, DFA(direct fluorescent antibody),
- Treatment
- Metronidazole is the drug of choice. If resistant cases occur, re-treatment with higher doses is required.

Trichomonas hominis

This flagellate is non-pathogenic although it has been associated with diarrhoeic stools. *T. hominis* do not have a cystic stage. The trophozoites measure from 5-15 μm in length by 7-10 μm in width. The shape is pyriform and has an axostyle which runs from the nucleus down the centre of the body and extends from the end of the body undulating membrane which extends the entire length of the body and projects from the body like a free flagellum. The characteristic number of flagella is five, there is some deviation from this number. They also have a single nucleus at the anterior end. wobbly movement,

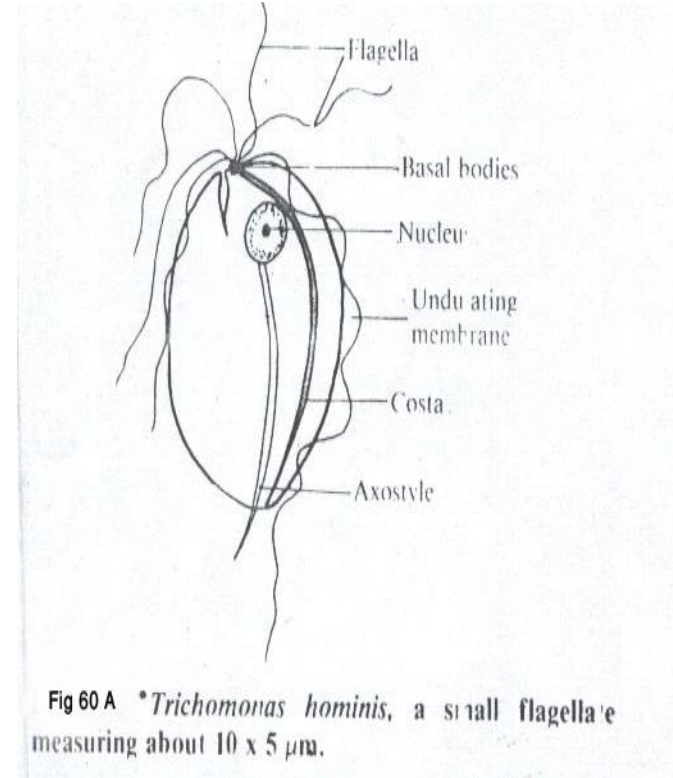
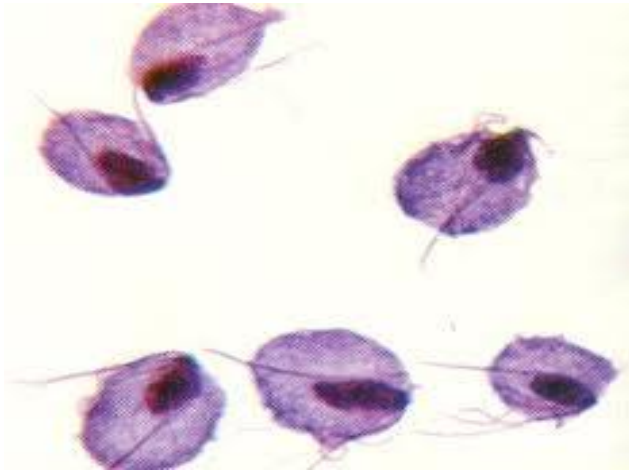


Diagram 5. Systematic diagram of a *Trichomonas hominis* trophozoite. Undulating membrane runs the whole length of the body and the recurrent flagellum trailing posteriorly. (Adapted and redrawn from J.D.Smyth)



Trichomonas vaginalis



Trichomonas hominis

- **Lab. Diagnosis**

In a fresh stool, the flagellates move very rapidly in a wobbly, non-directional manner. The axostyle and undulating membrane are diagnostic. the axostyle can be seen on a stained preparation and is diagnostic.

- *Trichomonas tenax*

it is resemble to *T. vaginalis* ,it is small averag only 6 to 10 Mm,it occure most frequently in mouth and tonsillar crypts

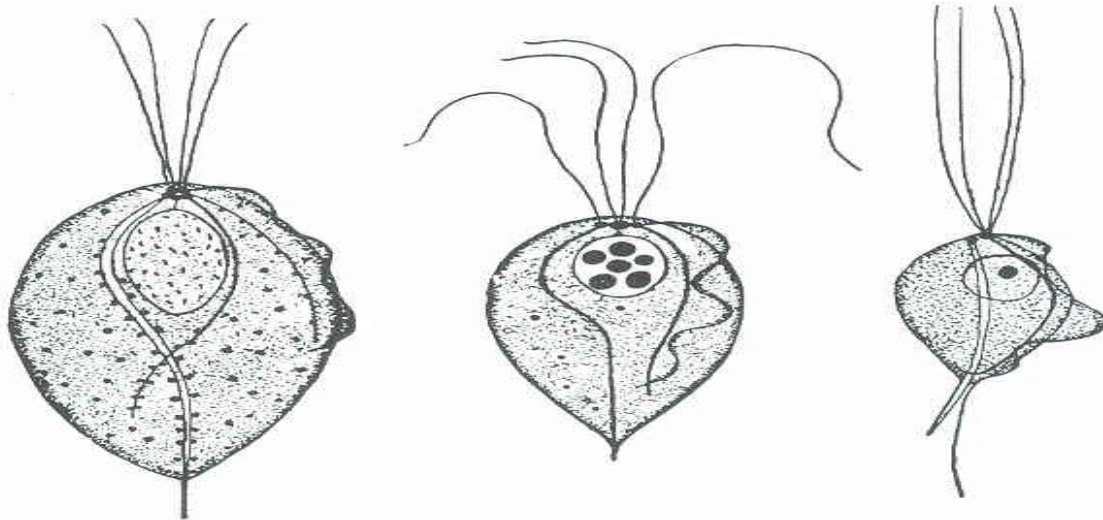


Fig. 19-12. *Trichomonas vaginalis*, *Trichomonas tenax* y *Trichomonas hominis*. $\times 2.000$. (Powell.)