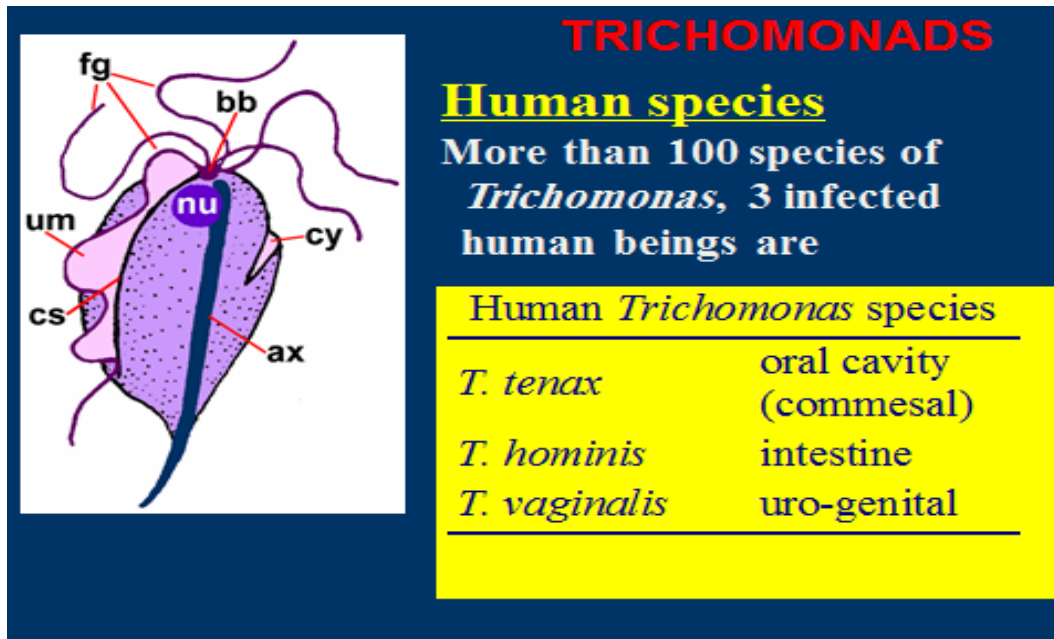


## *Trichomonas vaginalis*



- *T.vaginalis* is a protozoan with flagella that is capable of surviving in an **anaerobic environment**.
- It is the most common pathogenic protozoan infection of **humans in industrialized countries**.
- *T.vaginalis* is one of the most **frequently sexually transmitted organisms**.

*Trichomonas vaginalis* is the causative organism of trichomoniasis or urethritis. **Size** : 7-23 Mm x 5-12Mm

**Shape** : pear-shaped colorless.

**Motility** : jerky, rapid , rotate on long axis lashing flagella at anterior end ( wobbling or rotatory ) movement

**Nucleus** : 1 near anterior, well defined ,many chromatin granules.

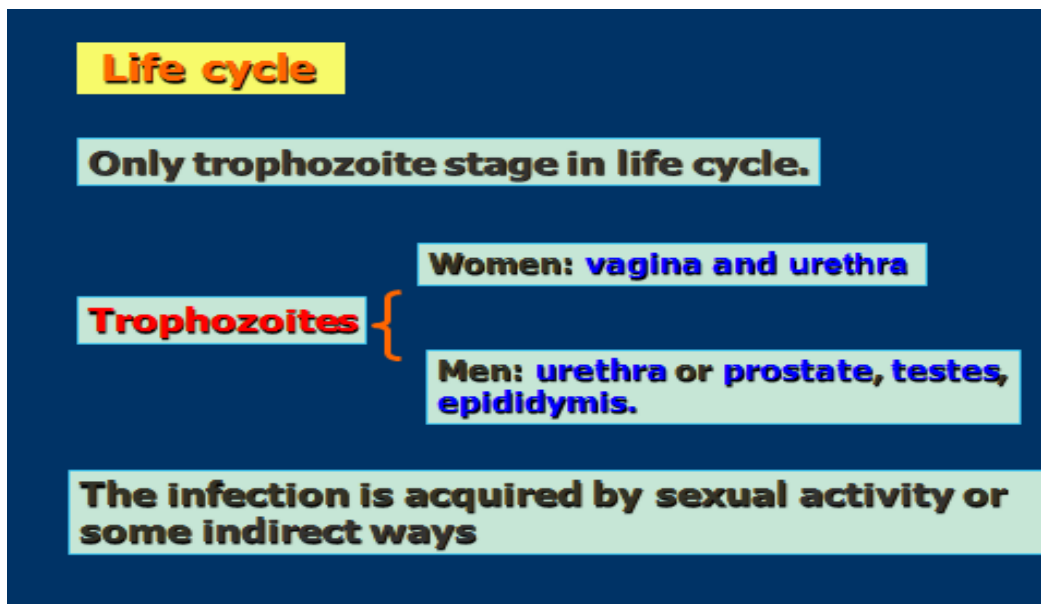
**Flagella**: 3-6 anterior, an undulating membrane extends ½ length of body.

Axostyle extend posteriorly as long spindle

**Chromatin ( siderophil)** : granules are present in the cytoplasm which numerous around the costa and exostyle.

## Mode of transmission

- It is a venereal disease. In the absence of cystic stage ,transmission is possible only from direct person to person contact, sexual intercourse.
- Women can acquire the disease from infected men or women , whereas men usually contract it only from infected women.
- Humans and monkeys
- *T vaginalis* inhabits the vagina in women, the prostate and seminal vesicles in men, and the urethra in both sexes.



## **Diagnosis:-**

- To diagnose Trichomoniasis , a health care provider must perform a physical examination and laboratory test (microscopic examination).
- In women, a pelvic examination can reveal small red ulcerations on the vaginal wall or cervix. Suitable clinical specimens include , vagina endo cervical smear

### **Laboratory diagnosis**

#### **Direct microscopy smear :**

Microscopic examination of a wet mount preparation is the most reliable technique for making the diagnosis because it readily demonstrates the active, pear shaped trophozoite with their jerky movement.

Specimens collected from the **posterior fornix of female and from urethra of male.** A urine specimen is centrifuged and deposited examined

#### **Stained smear examination:**

To improve the sensitivity of microscopic evaluations , staining techniques have been used . **The use of acridine orange, periodic acid-Schiff and Giemsa stains,** have been shown to be more sensitive in some , other have not found this technique to be as helpful

pH evaluation with pH paper can help to rapidly differentiate *T. vaginalis* from yeast .The vaginal pH, **which is normally pH 4.5,** is not altered by yeast infection but is elevated in bacterial vaginitis and often **rises above pH 6 in trichomoniasis**

#### **Culture media :**

Culture has been considered the standard method for diagnosing *T. vaginalis* infection. Several different media are available for culture (**Diamond's modified**) .

**Culture is more sensitive than wet mount preparation** because of the lower minimum concentration of organism required for a positive result (100 organisms/mL).

The drawbacks to culture include greater cost and prolonged time to diagnosis (3–7 days) .

**Serological tests and PCR** *T. vaginalis* has an estimated eight serotypes

(a wide variety of antigenic markers have been seen) .

The serological response to *T.vaginalis* is variable among different people who could react to different parasitic antigens. **These are not specific in determining recent from remote infection.**

Nucleic acid amplification methods such as polymerase chain reaction (PCR) have been used .

**Identification of *T.vaginalis* in men**. Because the majority of men are asymptomatic carriers, the diagnosis of *T.vaginalis* is usually not made .

In the small number of males who are symptomatic urethral discharge collected with a swab would provide the best results using the broth culture technique, with sampling ideally done before first-voided morning urine.

