

Lab.5 (non-pathogenic amoeba)

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Entamoeba coli

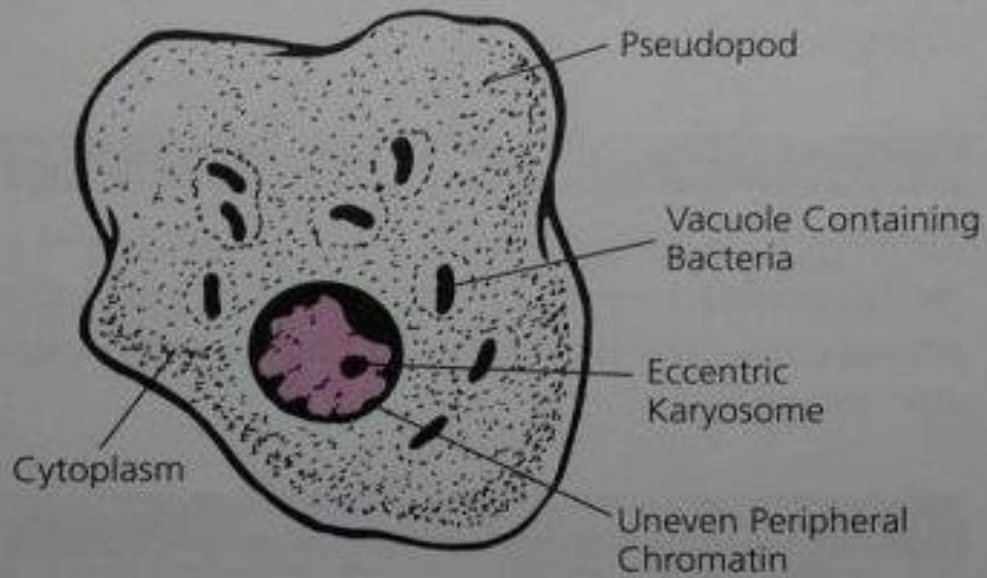
It is considered to be a nonpathogenic with worldwide distribution. That frequently exists as a commensal parasite in the human gastrointestinal tract. As with the other intestinal amoeba, *E.coli* is transmitted through the ingestion of the infected cyst through contamination food or water or drink. Its life cycle is similar to that of *E.histolytica* but it does not have an invasive stage and does not ingest red blood cells. There is no clinical symptoms during and after infection by this parasite. This parasite have two stages:

1-Trophozoite stage

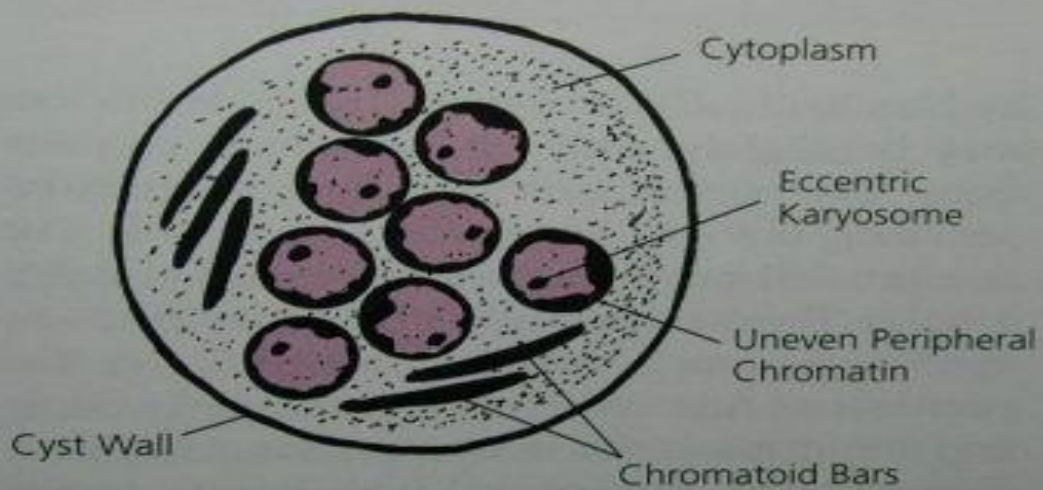
It is move sluggishly by short pseudopodia, non progressive motility. The single nucleus is consist of large irregular shape, ccentric karyosome and unevenly distributed peripheral chromatin. The cytoplasm is coarse and contain food vacuoles filled with bacteria, yest cell, but no RBCS.

2-Cyst stage

It is round to spherical in shape, surrounded by thick cell all. The cytoplasm granular in appearance. Food vacuoles are not present. having (1-8) nuclei, There is large, irregular-shaped and ccentric position of the karyosome can amoebae. Chromatin bars are thin with pointed end, peripheral chromatin be frequently stinguished even in unstained are coarse and unevenly distributed.



Size Range: 12 – 55 μm
 Average Size: 18 – 27 μm



Size Range: 8 – 35 μm
 Average Size: 12 – 25 μm

Genus : *Entamoeba gingivalis*

Entamoeba gingivalis is a non-pathogenic protozoa and is known to be the first amoeba in humans to be described. It is found only in the mouth between the gingival pockets and near the base of the teeth. *Entamoeba gingivalis* is found in 95% of people with gum disease and in 50% of people with healthy gums. The cyst formation is not present, therefore transmission is direct from one person to another by kissing, or by sharing eating utensils. Only the trophozoites are formed and the size is usually 10 micrometer to 20 micrometer in diameter. *Entamoeba gingivalis* have pseudopodia that allow them to move quickly. Their spheroid nucleus is 2 micrometer to 4 micrometer in diameter and contains a small central endosome. There are numerous food vacuoles and contain cellular debris, blood cells and bacteria.

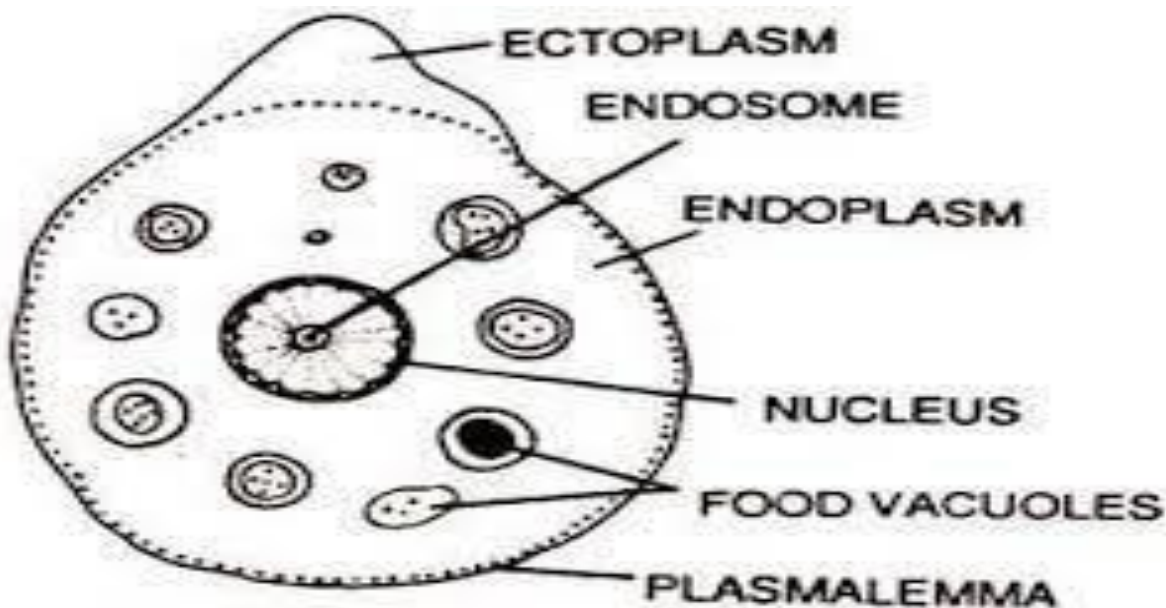


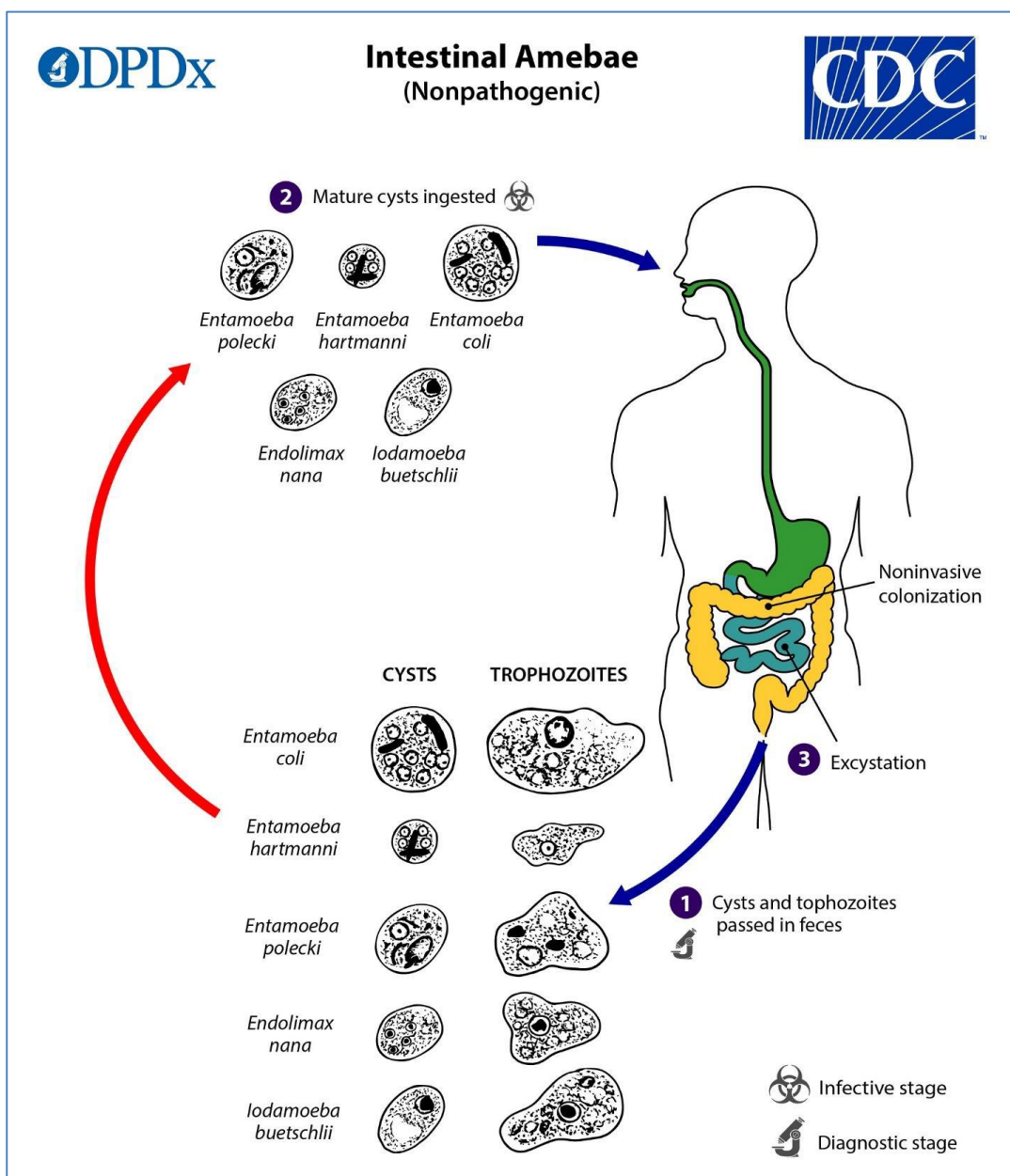
Fig. 6.3 *Entamoeba gingivalis*.

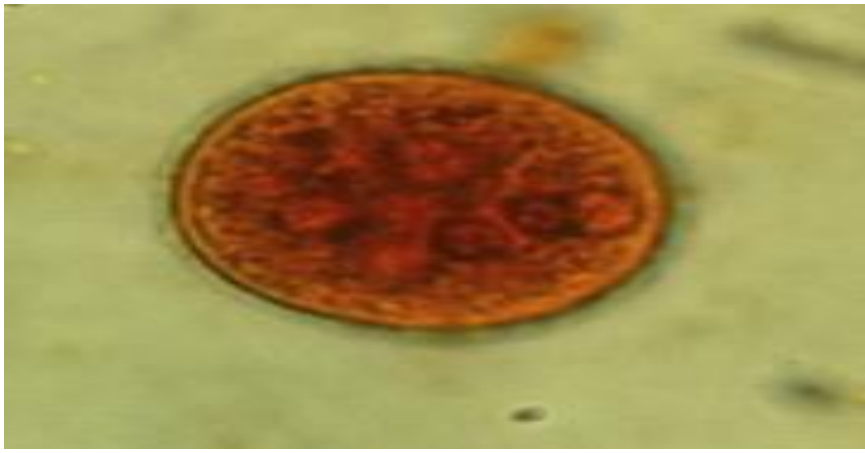
Laboratory diagnosis:

Examination of mouth scraping, particularly from the gingival area. Also material from the tonsillar crypts and pulmonary abscess as well as sputum may also be examined. In addition the examination of vaginal / cervical material may be performed to diagnose *E.gingivalis* present in the vaginal / cervical area.

Notes:

- Both *E.histolytica* and *E.gingivalis* may be found in the sputum and in pulmonary abscess.
- *E.gingivalis* may also be found in the mouths of individuals who practice good oral hygiene.
- There is no clinical symptoms during and after infection by *E.gingivalis*.





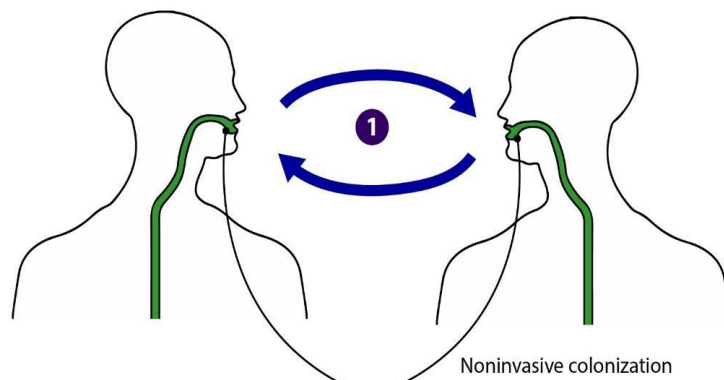
E. coli(cyst)



E.coli(trophozoite)




Entamoeba gingivalis



Noninvasive colonization

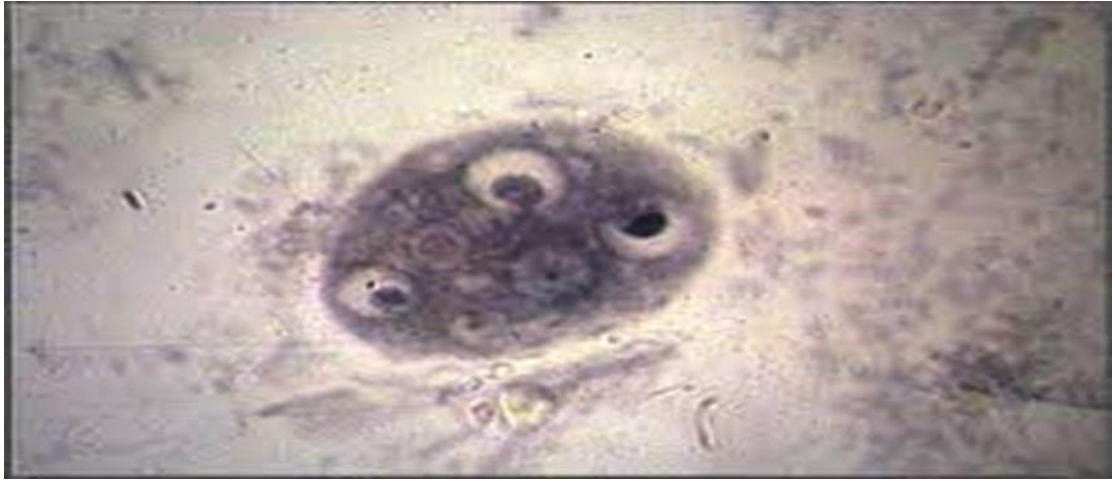
 Infective stage

 Diagnostic stage



Trophozoite





Entamoeba gingivalis (trophozoite)