

Entamoeba histolytica - Life cycle

(Part -2)



By Dr. Shashi Prabha
HOD , Zoology Dept.
Karim City College

Semester - VI, Paper CC-14

Entamoeba histolytica - Life cycle



E. histolytica occurs in three stages

1. Trophozoite stage
2. *Pre-cystic stage*
3. *Cystic Stage*

Entamoeba histolytica - Life cycle



Pre-cystic stage

- Pre-cystic form is also known as Minuta form
- It resembles to trophozoite in structure except that it is smaller and having no pseudopodia and food vacuoles

Entamoeba histolytica - Life cycle



Pre-cystic stage

- It is the intermediate stage between the trophozoite and cyst
- It is smaller in size (10-20 microns)
- It is round or slightly ovoid with blunt pseudopodium projecting from periphery

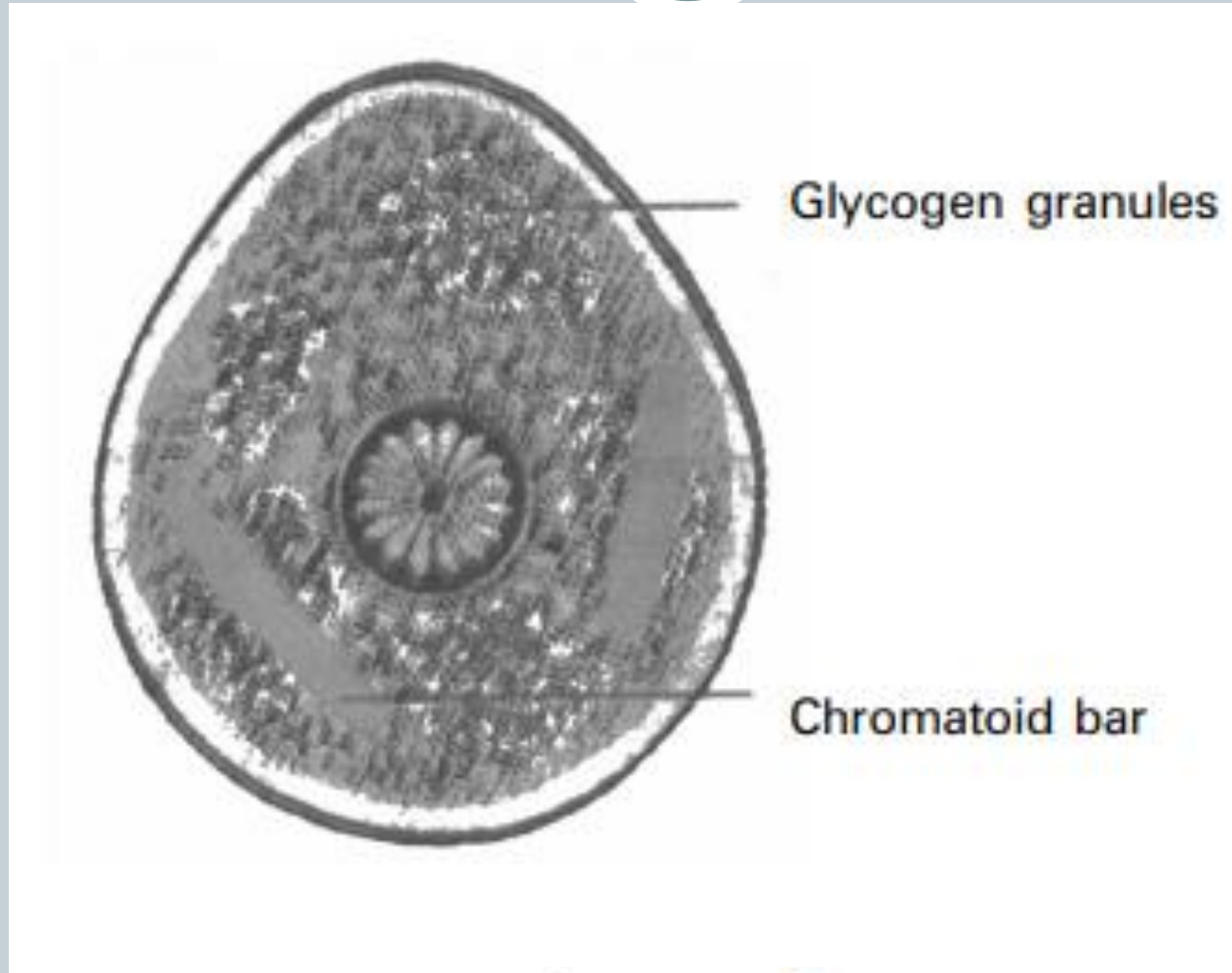
Entamoeba histolytica - Life cycle



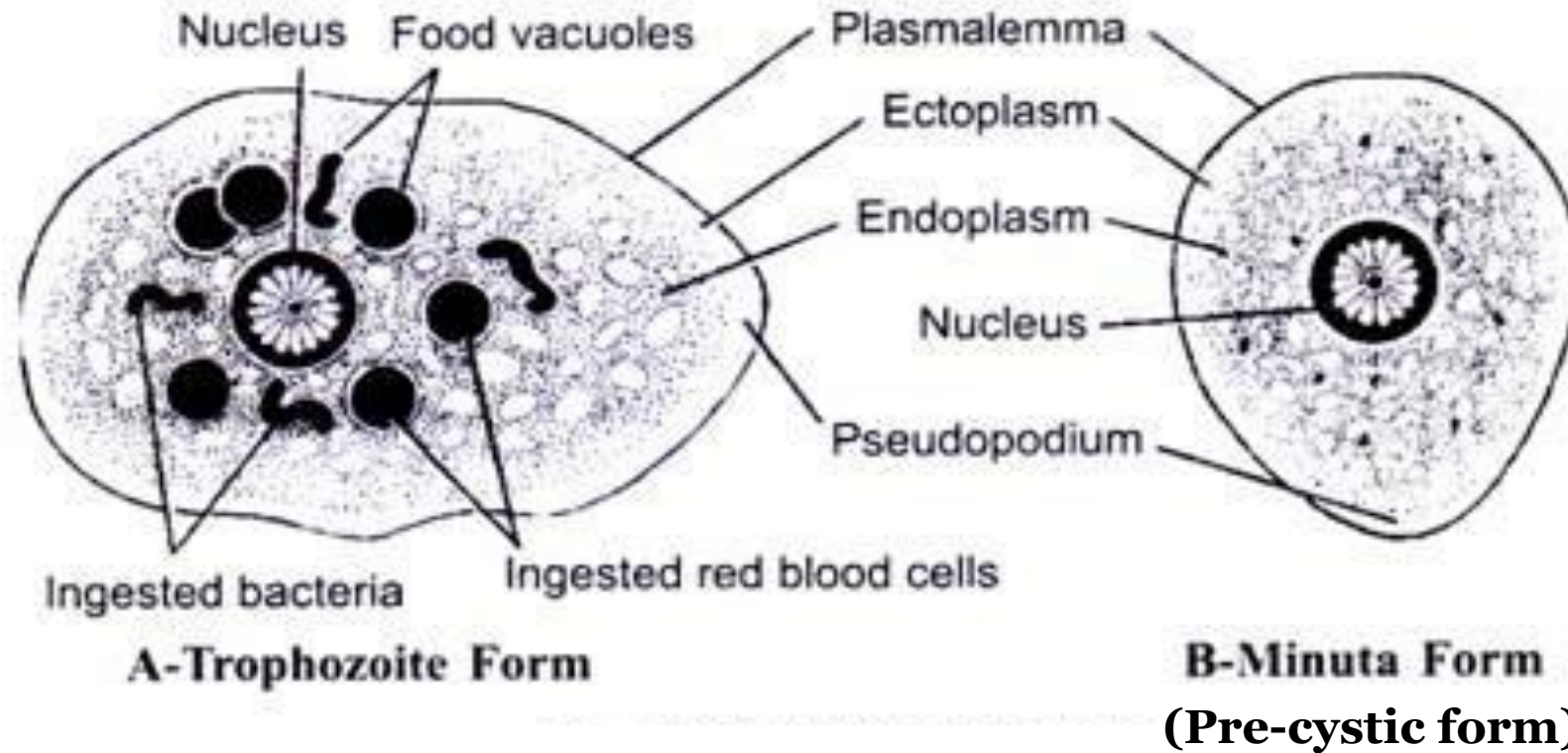
Pre-cystic stage

- No RBC , or food materials are found in its endoplasm
- Nuclear structure is same as that of trophozoite

Pre-cystic stage



Comparison between Trophozoite and Pre-cystic forms



Entamoeba histolytica - Life cycle



Cystic stage

- It is the infective form of the parasite
- It is round or oval in shape
- It's size is 12-15 microns in diameter

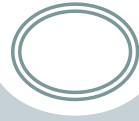
Entamoeba histolytica - Life cycle



Cystic stage *contd..*

- It is surrounded by a highly retractile membrane called cyst wall
- The cyst wall is resistant to digestion by gastric juice in stomach
- Cytoplasm shows chromatid bars and glycogen masses but no RBC or food particles

Entamoeba histolytica - Life cycle



Cystic stage *contd..*

- The early cyst contains a single nucleus and two other structures
- A mass of glycogen and 1 to 4 chromatid bodies
- As the cyst matures the glycogen mass and chromatid bars disappear, and the nucleus undergoes two successive mitotic divisions to form four nuclei

Entamoeba histolytica - Life cycle



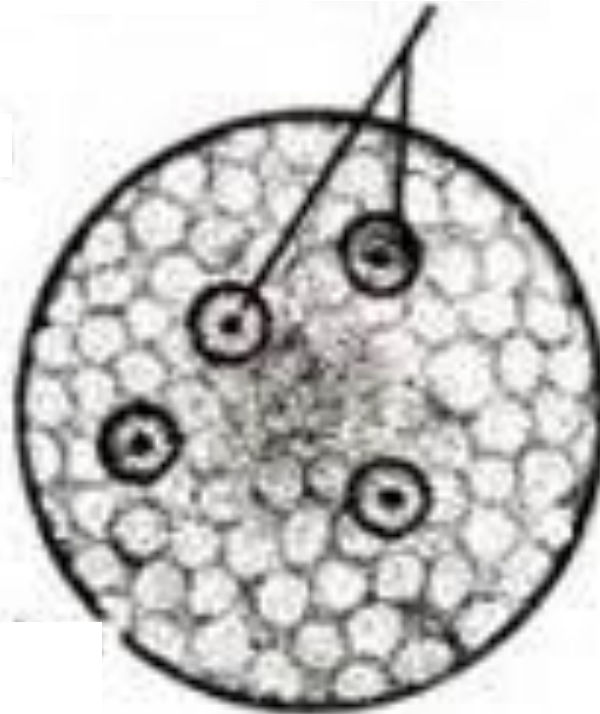
Cystic stage *contd..*

- Thus the mature cyst is quadri-nucleated
- Mature cyst is passed out in stool from infected person and remains without further development in soil for few days

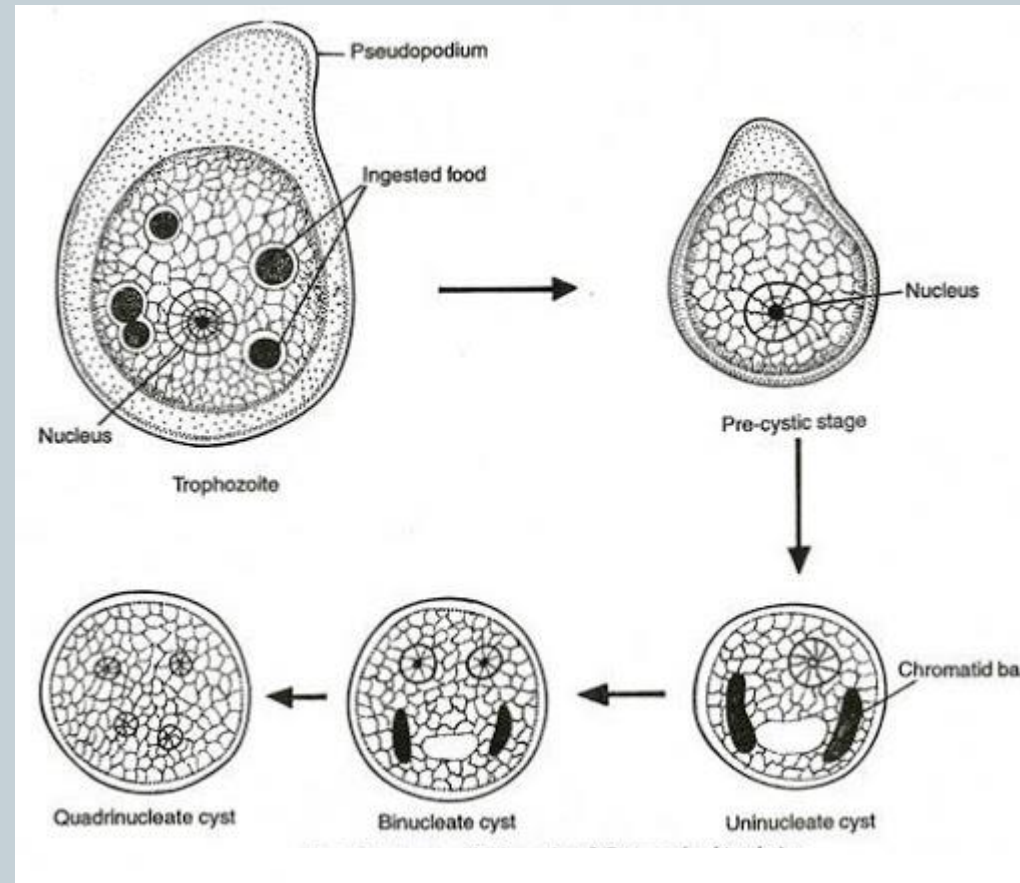
Cystic stage



**Mature Cyst
with four nuclei**



Different stages of *Entamoeba histolytica*



Thank You

