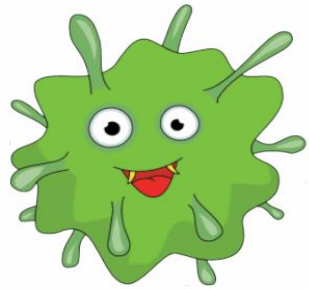


Gastro Intestinal System



Stool Collection



& culture



❑ Stool should be collected in clean wide mouth container

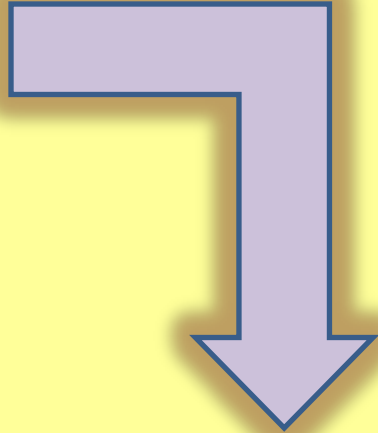
not sterile

لو كنت
Sterile
مستعمل
مستعمل



Stool should be added to Selenite broth

↳ liquid media



Why? ?



Microbiom.

- Inhibits the growth of coliforms
- Enhances the growth of Pathogen



❖ Most common pathogens (Bacteria) :

» **E.coli**

» Salmonella

» **Shigella**

» Vibrio

» **Proteus**

» Yersinia , Campylobacter , Clostridium,
Bacillus ...etc



Stool sample should be cultured on the following media using streak plate method

نورثا بول اچينا الجيند ، بزاع نزرعها في دوسو من دوسو



S-S agar



Hekton agar



T.C.B.S



*Definitive
medium.

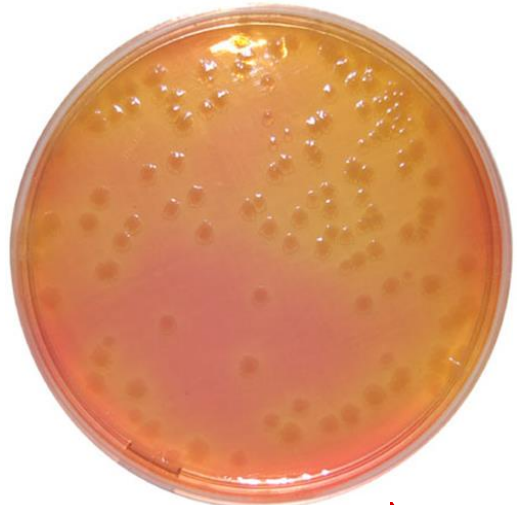
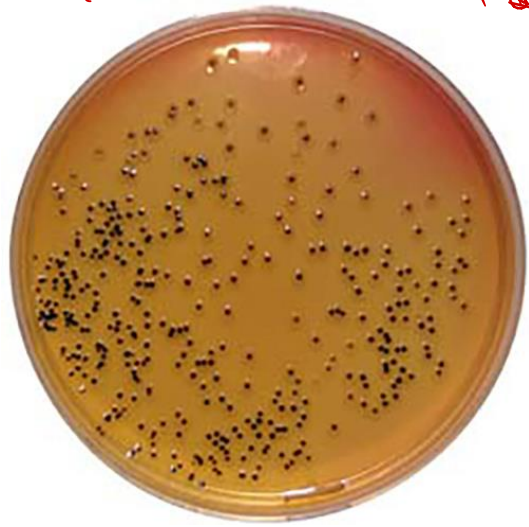
S-S agar



H₂S production → * لورنگه *



SS Agar Plate
(Salmonella-Shigella Agar)

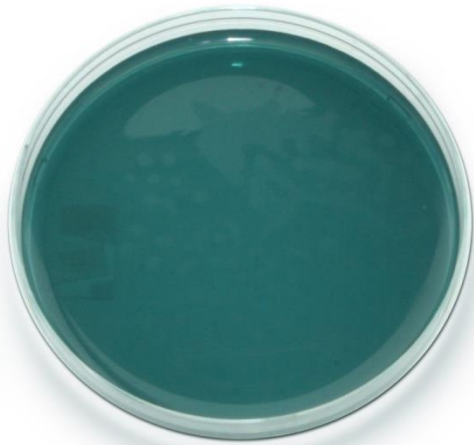


transparent colonies

* 24 ساعته 25-30 درجه سانتیگراد
ما نوری

Hekton enteric agar

differential media



Salmonella



Black dots related to H₂S production.

Shigella

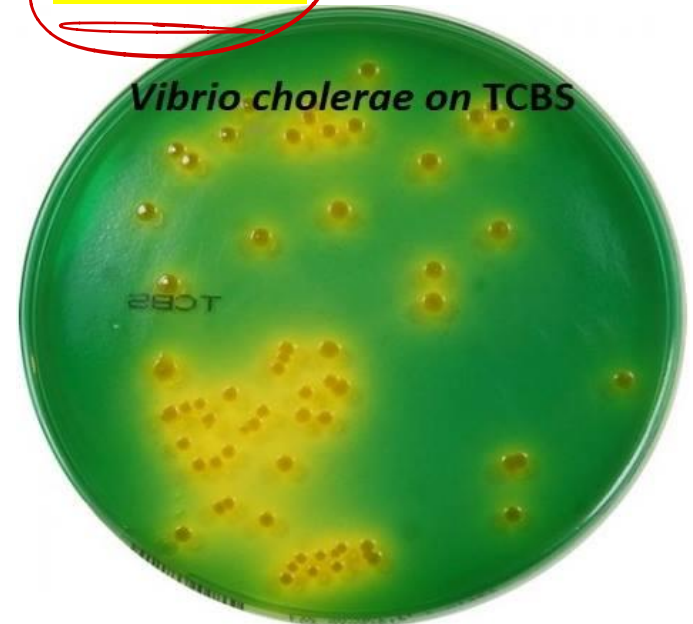
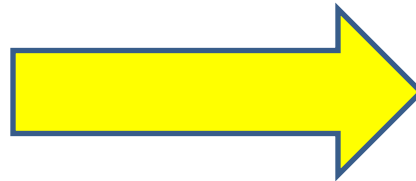


**selective
medium*

T.C.B.S media



- **Selective for Vibrio Spp.** *معدية في صوب و*
- Ph (8.5-10) *البي*
- When Vibrio ferment sucrose it turns the media from **green** to **Yellow** *Permentation*



Salmonella

* Those are 4
Biochemical
test.

الاشارة الحمراء

• **Kligler**: red/Yellow + H₂S

المنطقة التي فوق + المنطقة التي تحت

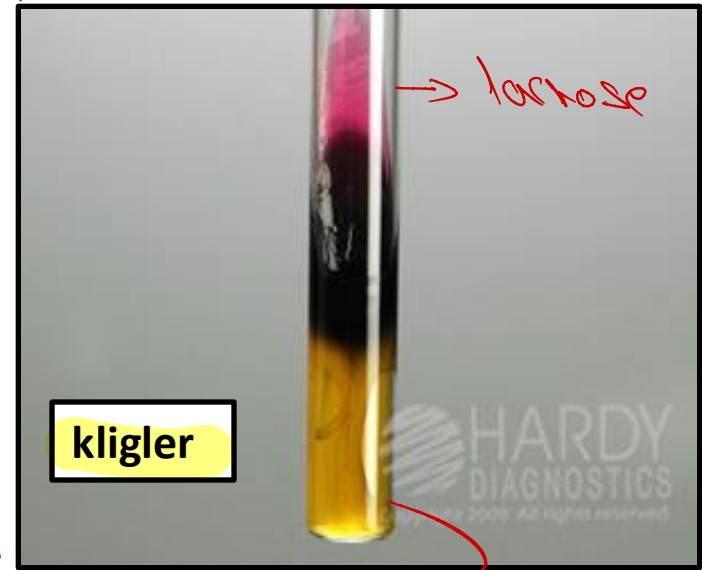
• **Urease**: Negative

الاشارة لونها اصفر، اذا تحولت pink يكون +

• **Citrate**: Positive

الاشارة لونها green ويتحول لـ blue يكون +

• **SIM**: Positive / Negative / Positive



kligler

→ lactose

glu

H₂S production → indole → motility

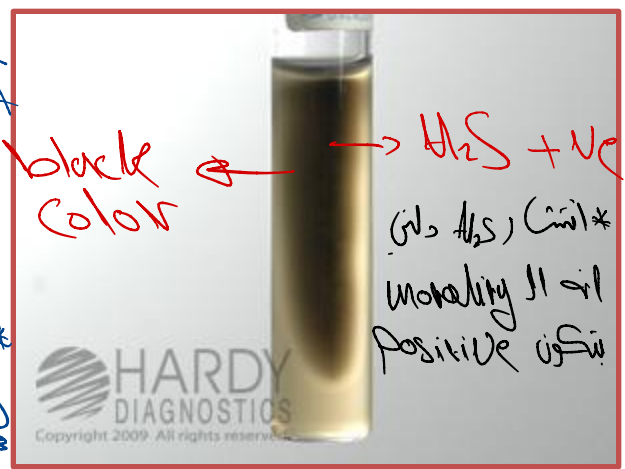


Urease test



citrate test

color ← نتيجة
الاجزاء reagent
الاجزاء pink
indole + H₂S
motility
H₂S production
motility



SIM test

black color

→ H₂S + ve
(indole, Citrate)
motility all are
positive



Proteus

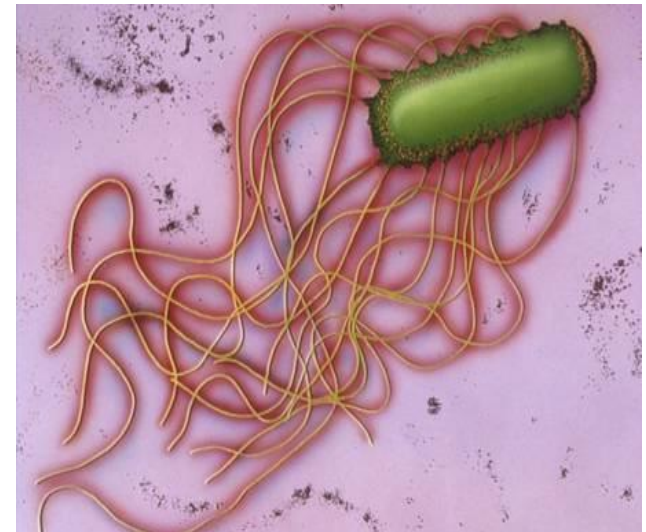
- Gram negative rods , non lactose fermenter

↳ by MacConkey agar

- Swarming motility (flagellated)

↳ سباحة في السوائل
blood agar & bacitracin — tests

- Prevent swarming by culturing it on CLED or MacConkey media



Parasites that are pathogenic to GI system



shutterstock.com • 1584635656



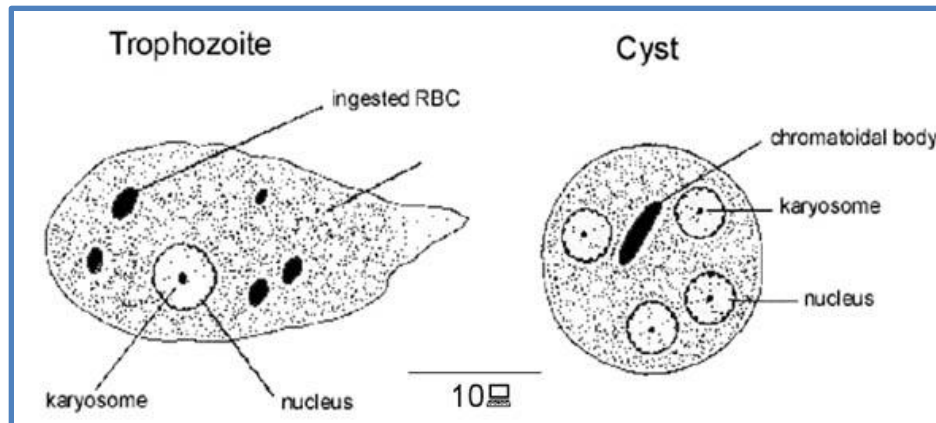
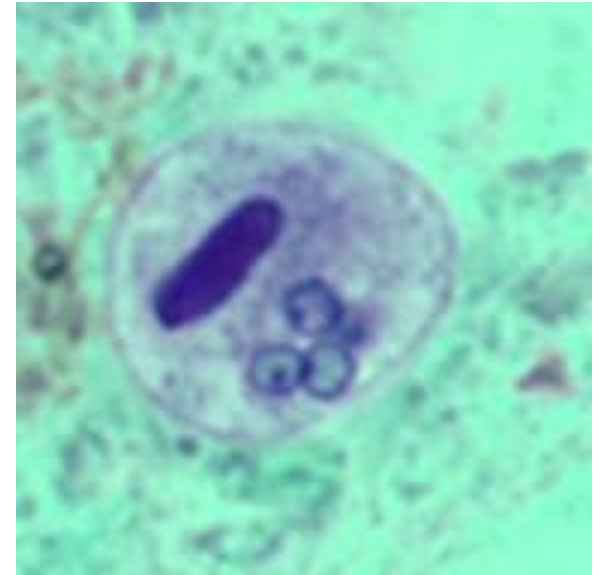
Entamoeba histolytica

Trophozoite



- trophozoites
- 15-20 μm
- extended pseudopodia
- progressive movement

Cyst

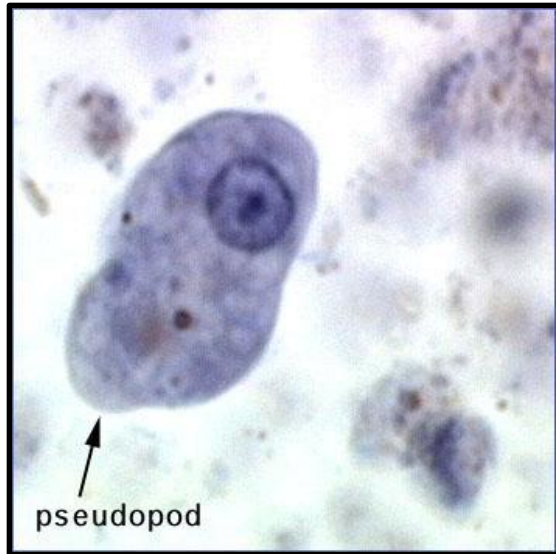


- cysts
- 12-15 μm
- 4 nuclei (mature)
- blunt chromatoid bodies

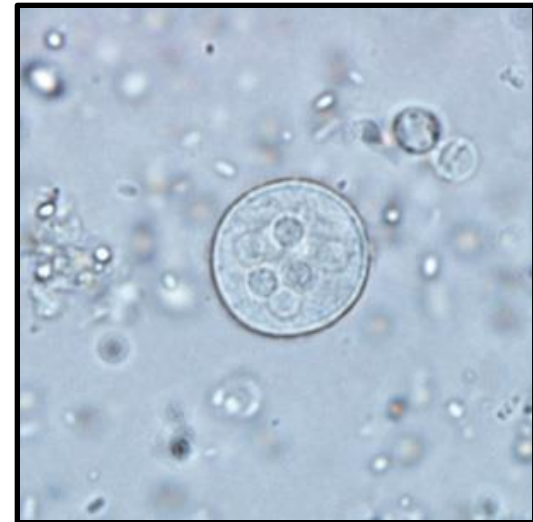
Entamoeba Coli

Trophozoite

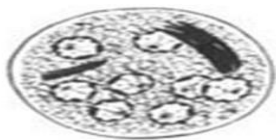
- trophozoites
- 20-25 μm
- broad blunt pseudopodia



Cyst



Entamoeba coli



Cyst

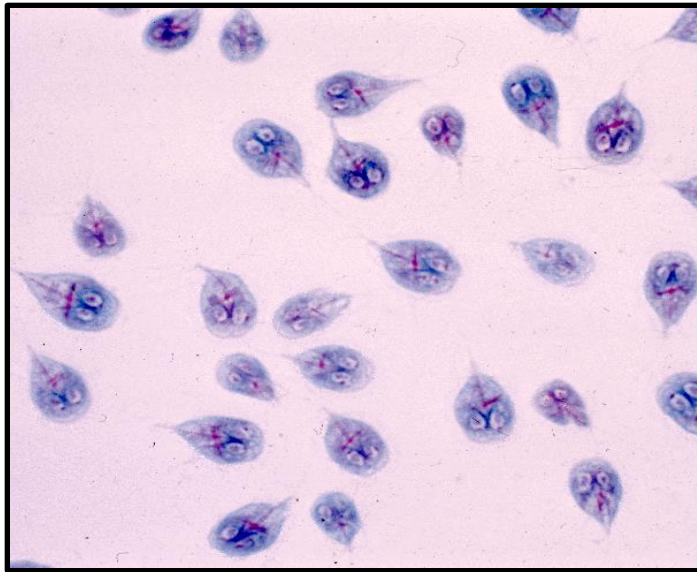


Trophozoite

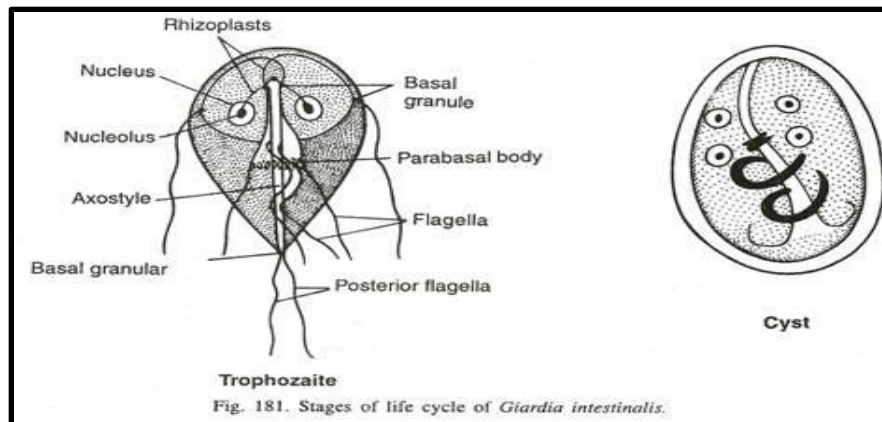
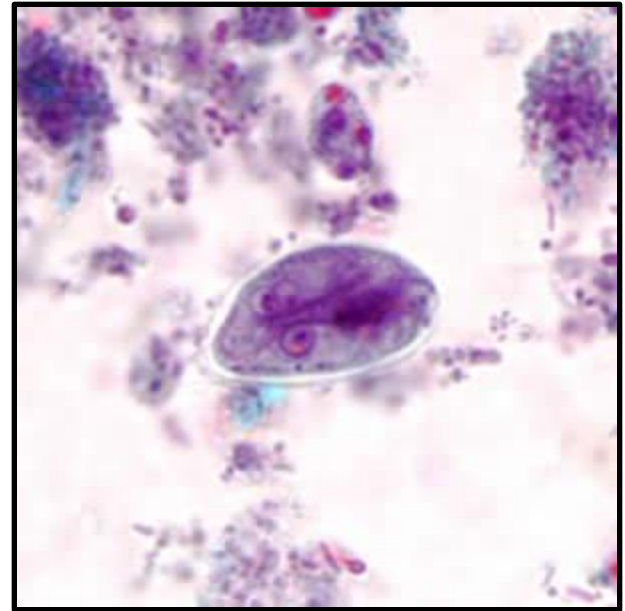
- cysts
- 15-25 μm
- 8 nuclei (mature)
- pointed chromatoid bodies (less prominent)

Giardia lamblia

Trophozoite



Cyst

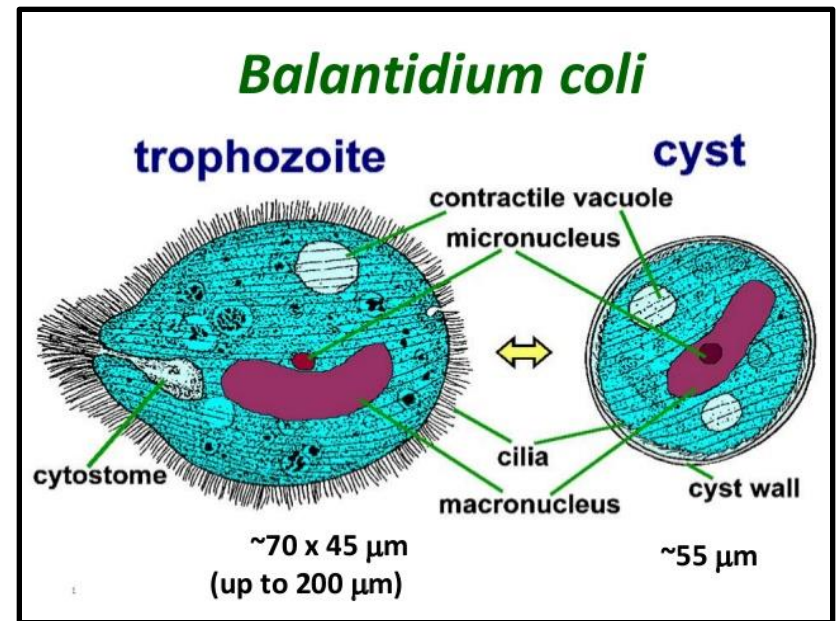


Balantidium coli

Trophozoite



Cyst

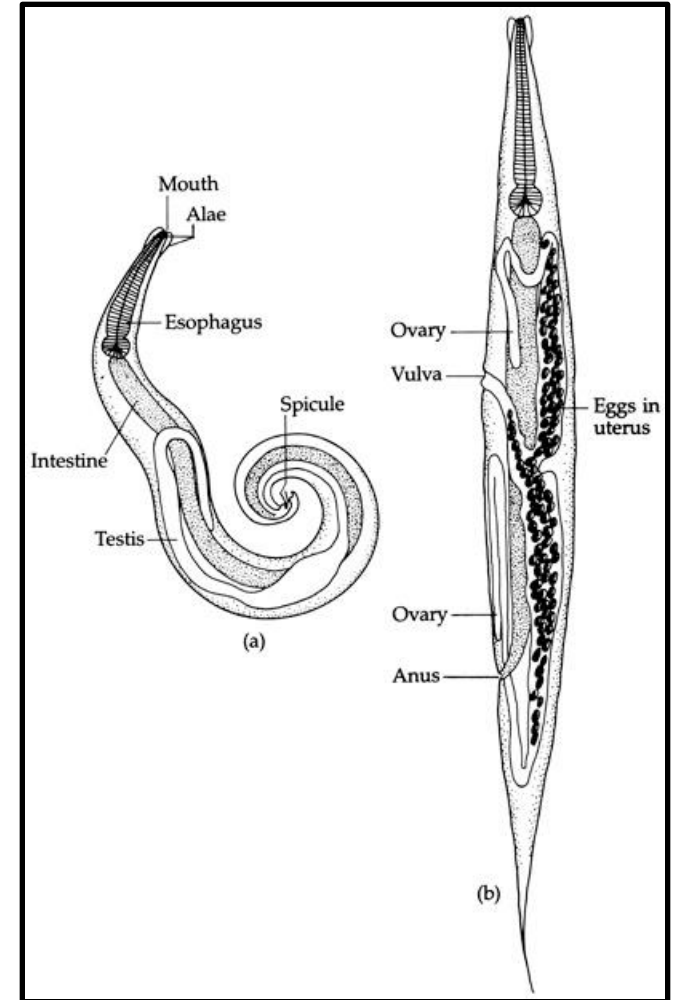


Enterobius Vermicularis

Worm

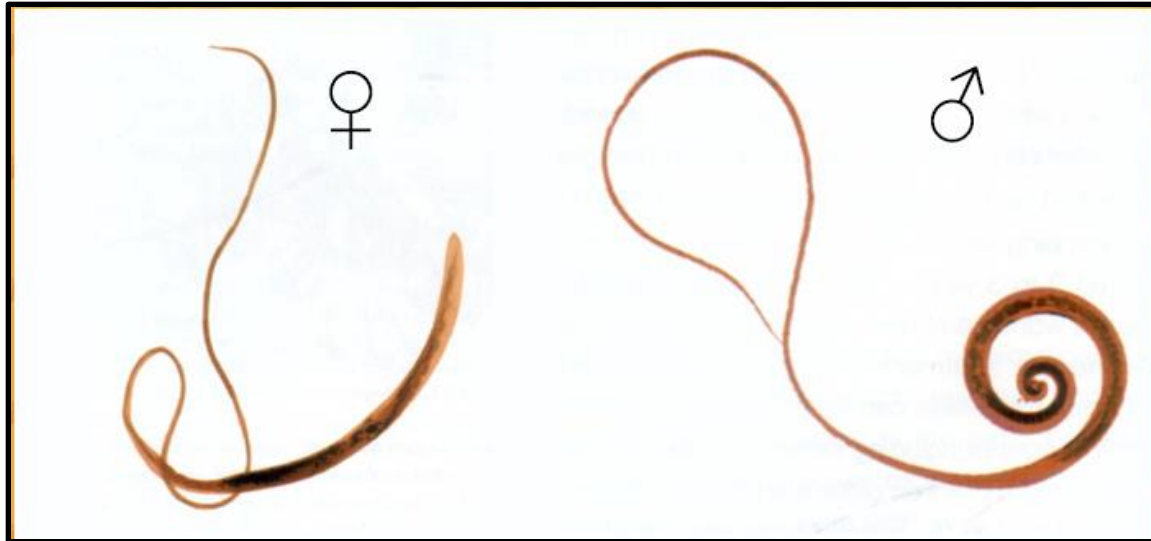


Egg



Trichuris Trichiura

Worm



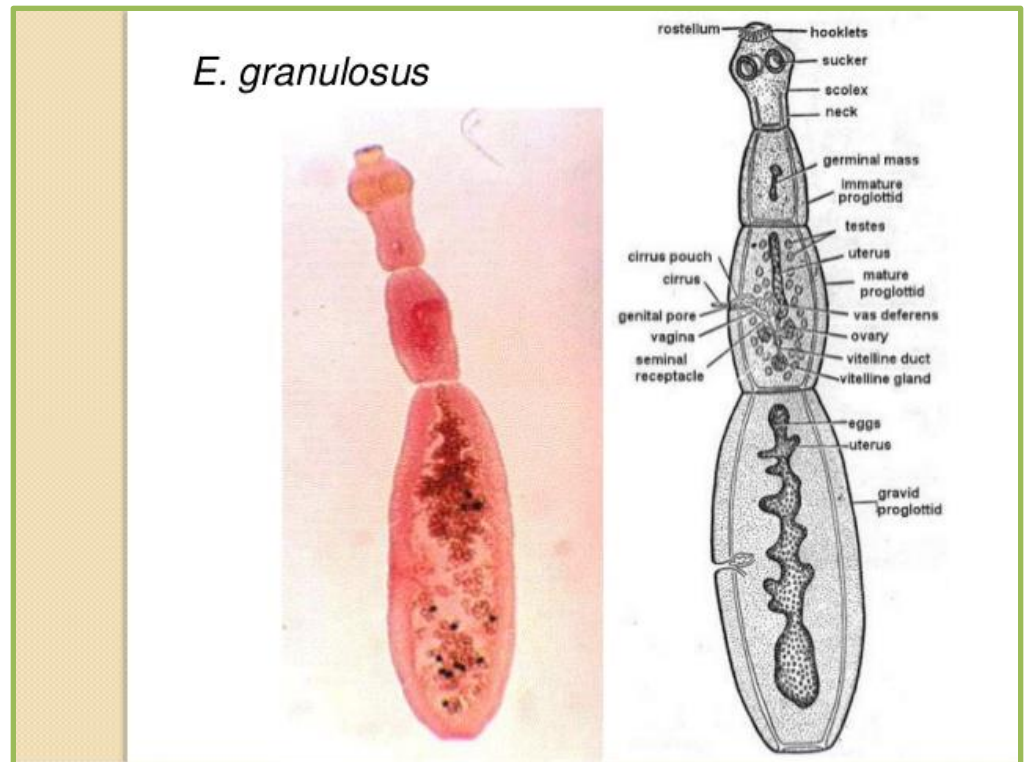
Egg



Echinococcus granulosus

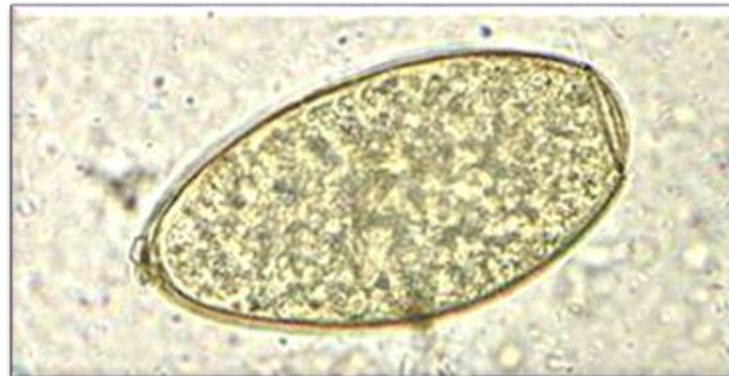
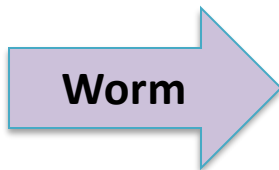
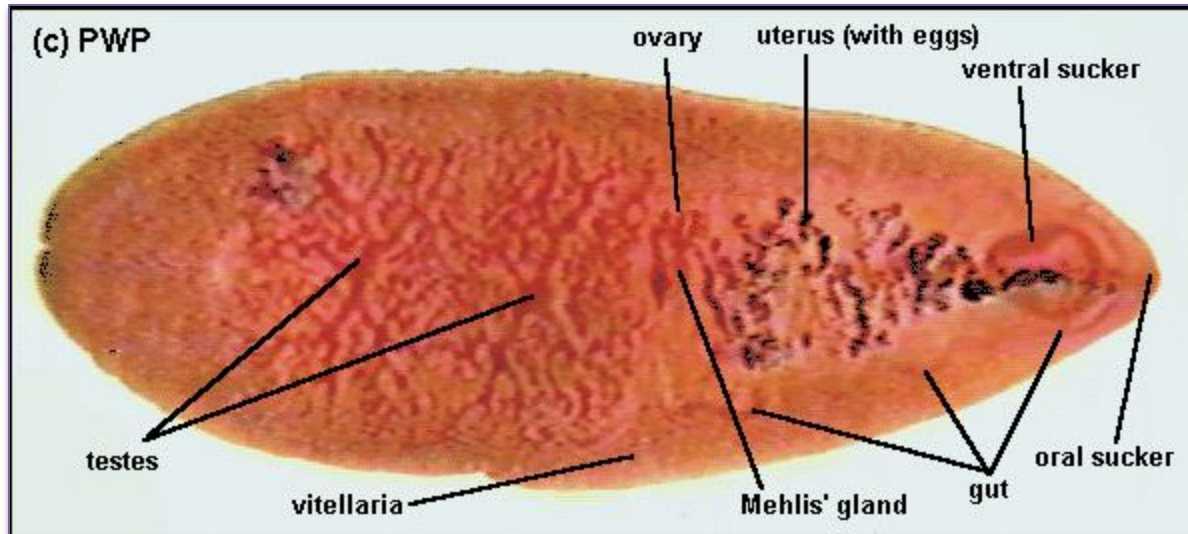
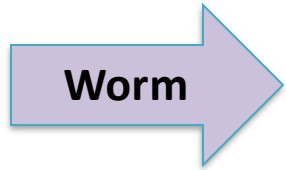


Ova



Worm

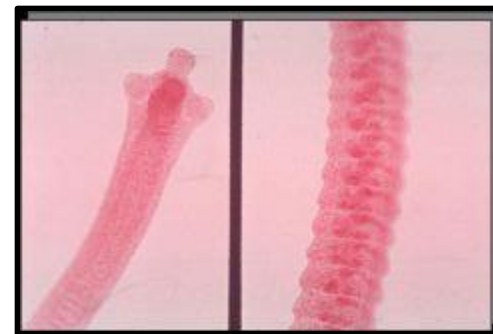
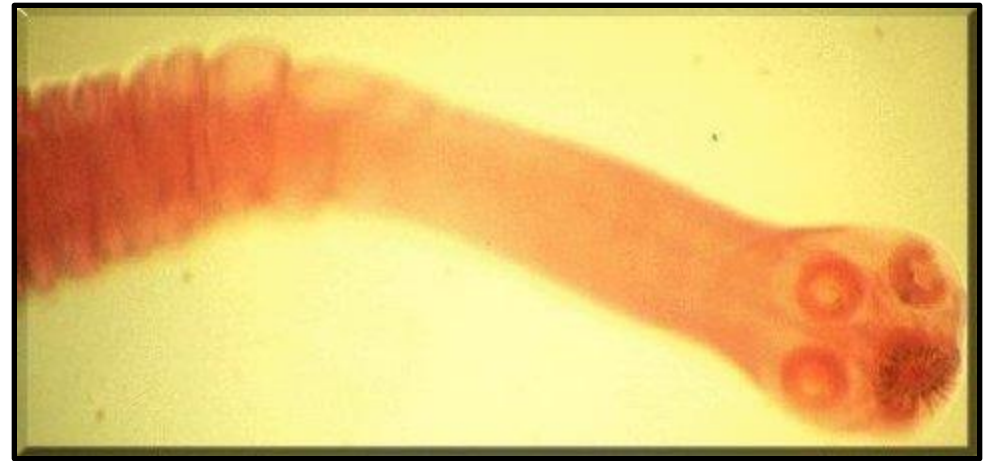
fasciolosis buski



Hymenolepis Nana

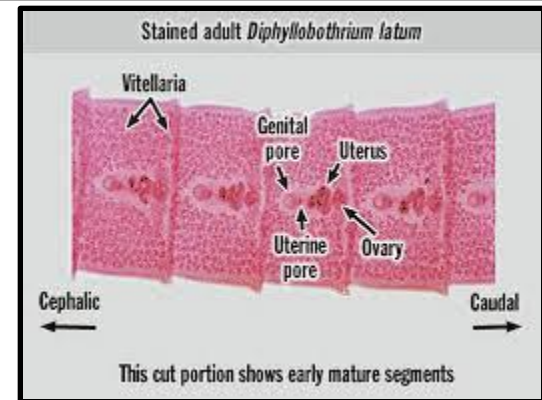
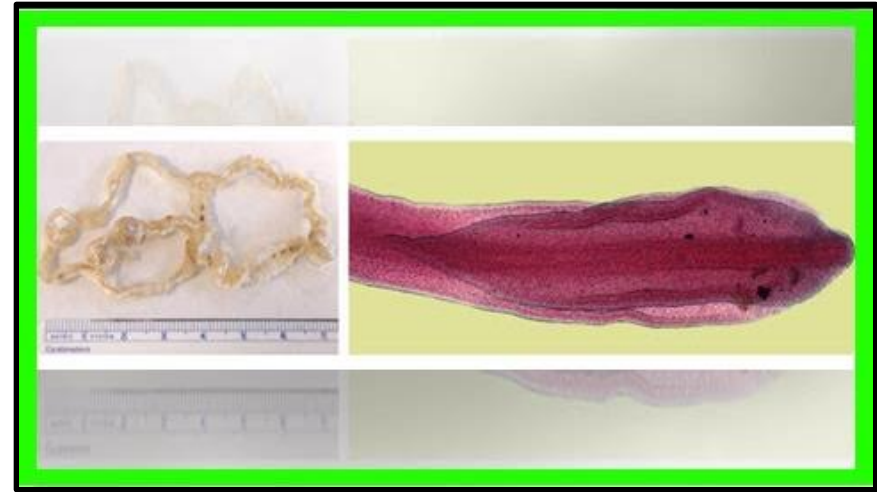
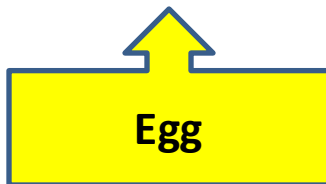


Ova

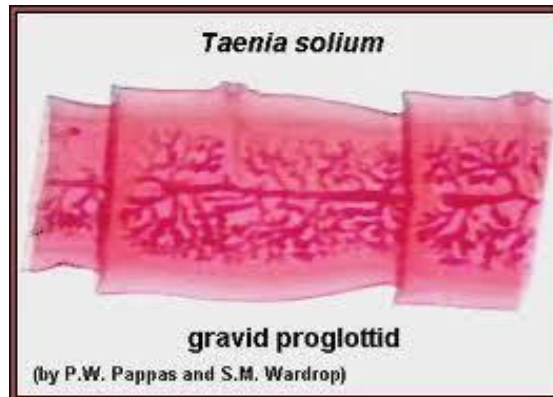
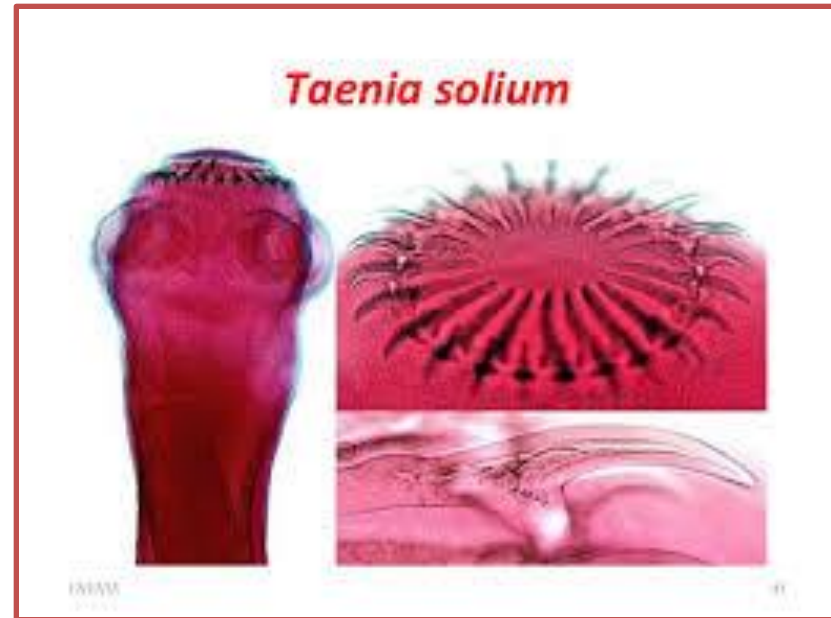


Worm

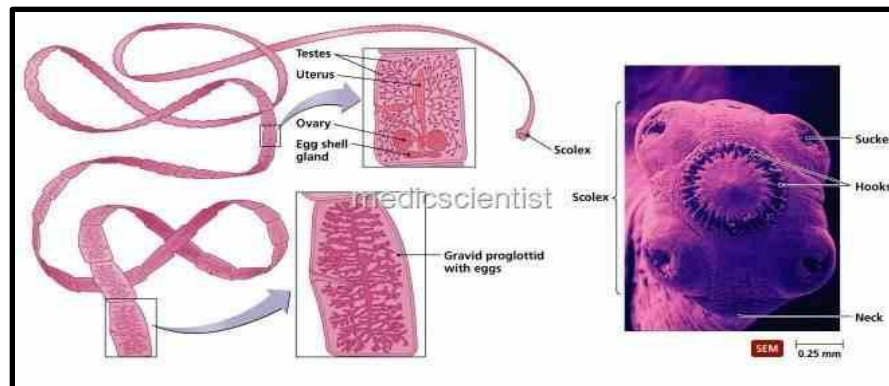
Diphyllobothrium latum

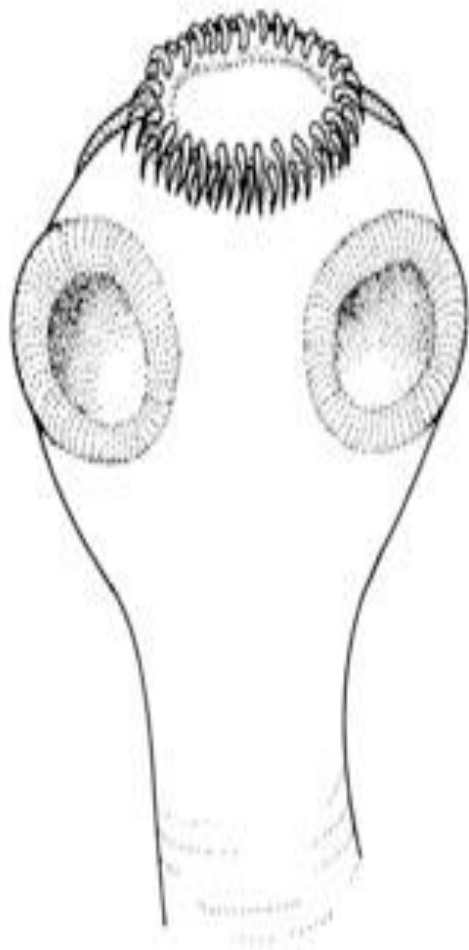


Taenia solium

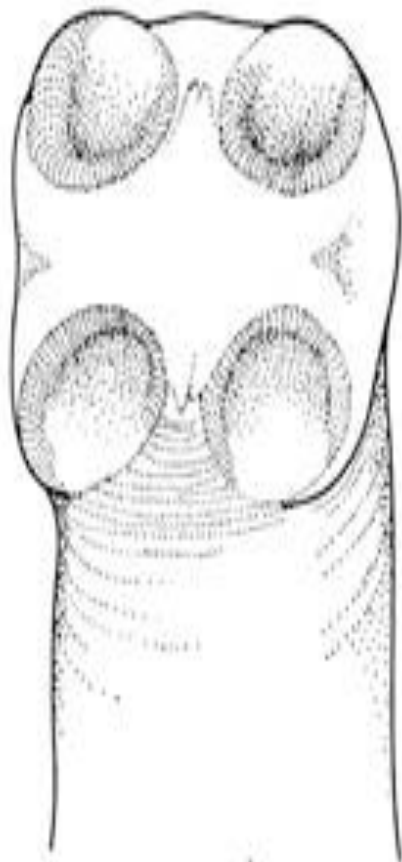


Taenia saginata





Taenia solium



Taenia saginata

(a)



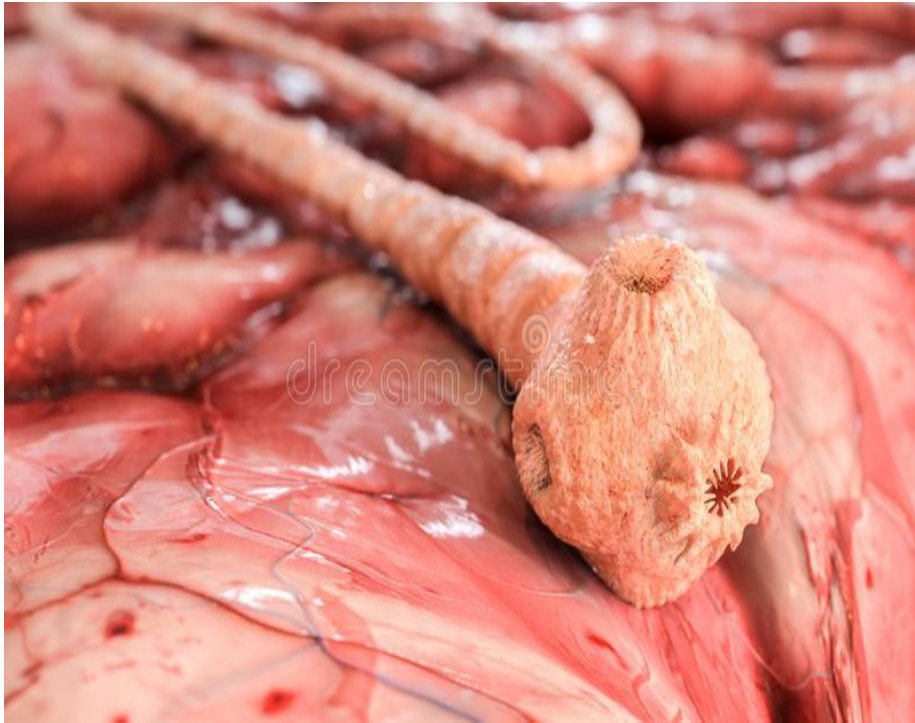
Taenia solium



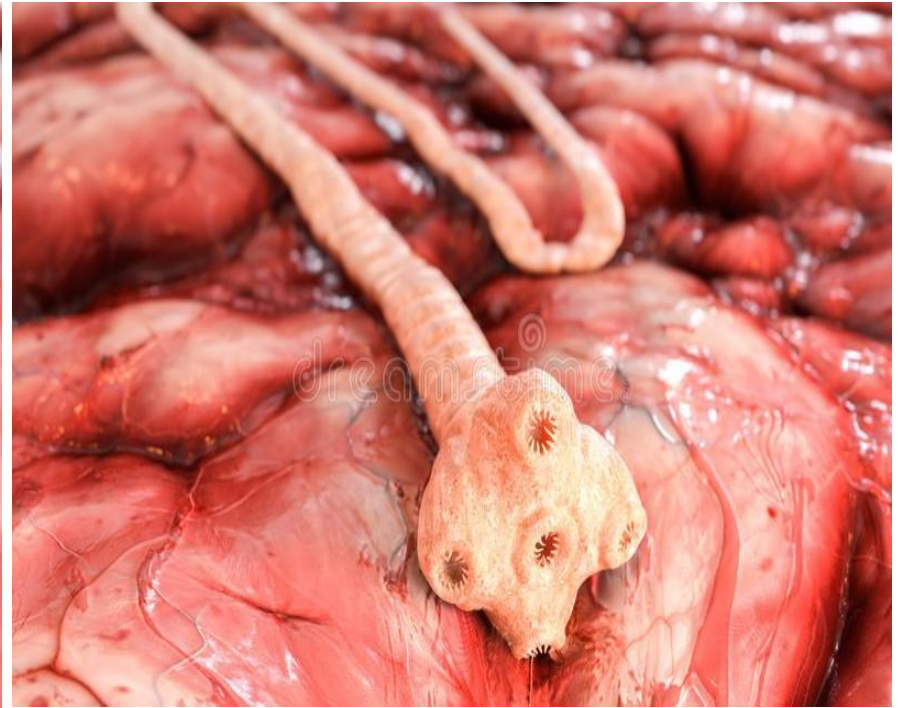
Taenia saginata

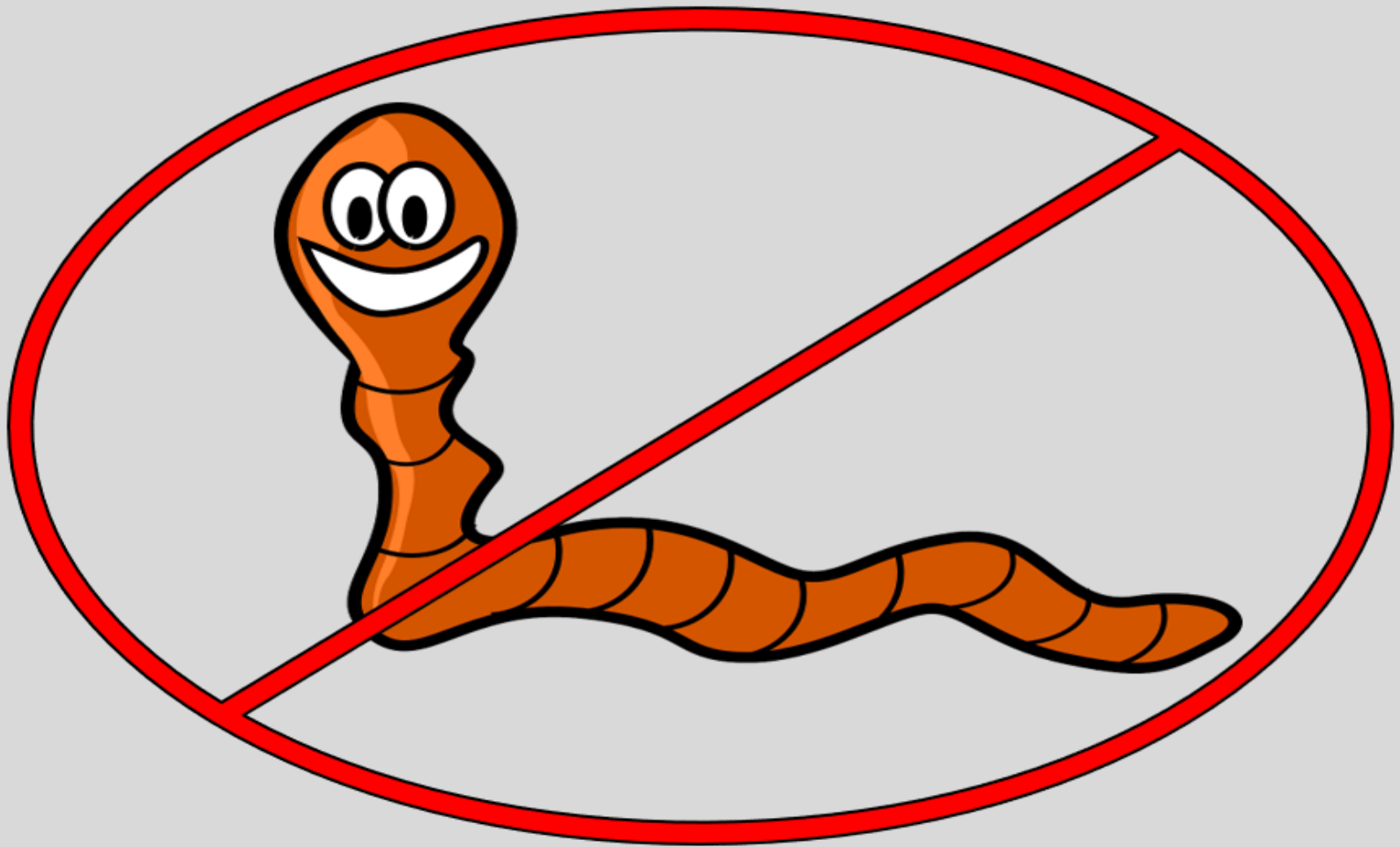
(b)

Taenia Solium



Taenia saginata







Thank you for listening!

QUESTIONS?
ALWAYS
WELCOME!