**Clonorchis sinensis egg**
Oriental liver fluke
Eggs are small, microscopic
Has a prominent operculum and a small knob at the other end
Infected by eating undercooked infected fish
Pathogenic- causes damage to the liver

Liver fluke, Eggs are large and elongated, Thin shell with prominent lateral spine’
Infection results from penetration of skin with immature stages of worm
Pathogenic- symptoms may be asymptomatic; or bloody diarrhea, abdominal pain, and lethargy; some cases the eggs may reach the brain and the infection may be fatal.
Schistosoma mansoni egg

Fasicola hepatica

Schistosoma mansoni (Adults)

Fasicola hepatica (ova)

Fasicola hepatica (adult)
**Cestodes-Tapeworms**

**Taenia saginata**
Beef tapeworm, Has four large suckers but lacks hooks
Gravid proglottid has a uterus with more than 15 lateral branches
Pathogenic- contract from eating undercooked meat

![Taenia saginata (scolex)](image1)

**Taenia solium**
Pork tapeworm
Has four large suckers and two rows of hooks
Gravid proglottid has less than 13 lateral branches
More pathogenic than the beef tapeworm

![Taenia solium (scolex)](image2)

Eggs are identical in beef & pork tapeworm
Have thick, dark, radially striated shell
**Taenia (egg)**

**Echinococcus granulosus** (adult)

**Echinococcus granulosus** (adult) | **Echinococcus granulosus** (hyatid sands)