

Echinococcus granulosus



What is it?

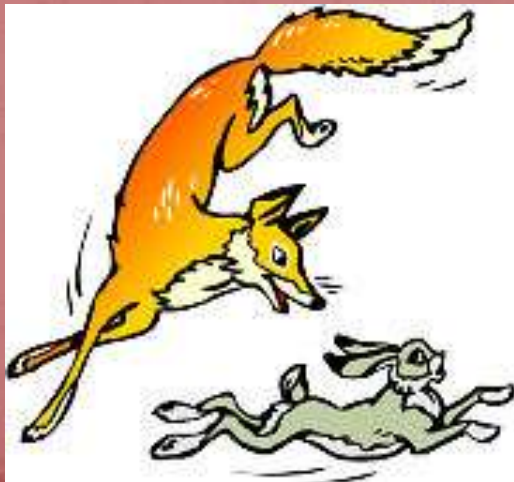
- Human Echinococcosis is caused by the larval stages of cestodes (tapeworms) of the genus *Echinococcus*
- has 3 proglottids, hooks and suckers
- **E. granulosus**
 - Causes cystic Echinococcosis
 - This form is most frequently encountered
 - 3 mm-6 mm long
 - Rostellum contains 28-50 hooks



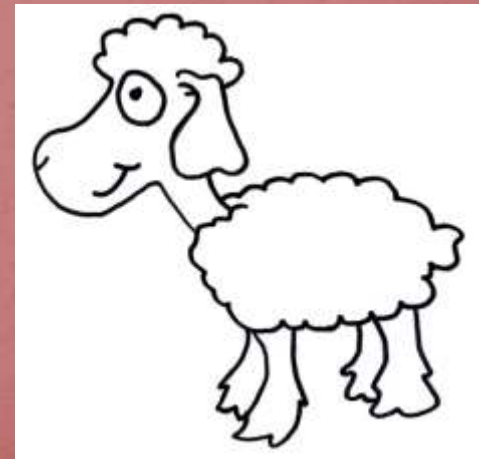


Definitive Host/Intermediate Host:

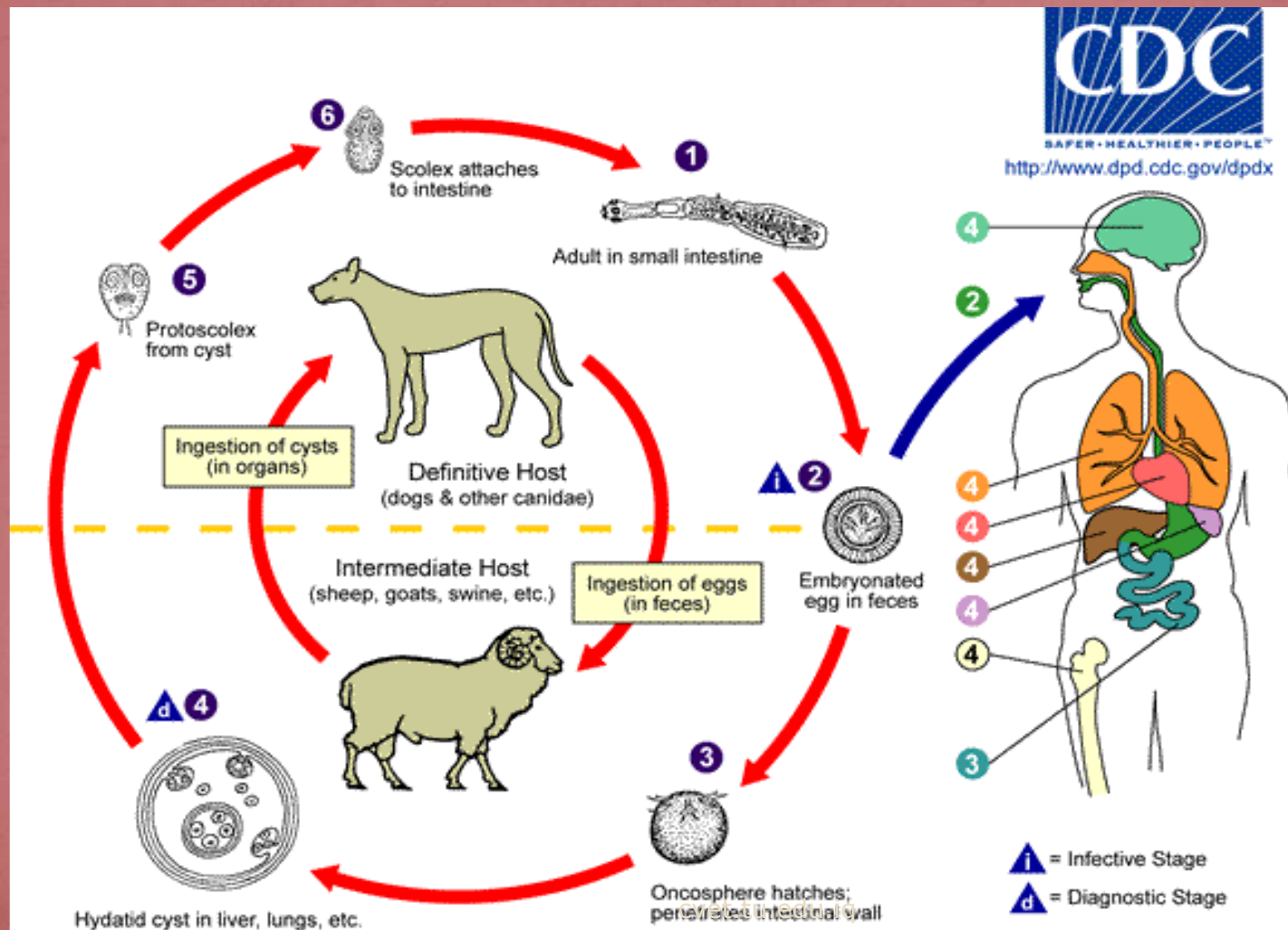
- Echinococcus granulosus:
 - Definitive Host: dogs and other carnivores
 - Intermediate Host: mammals, including humans or herbivorous species



cvet.tu.edu.iq



Lifecycle:



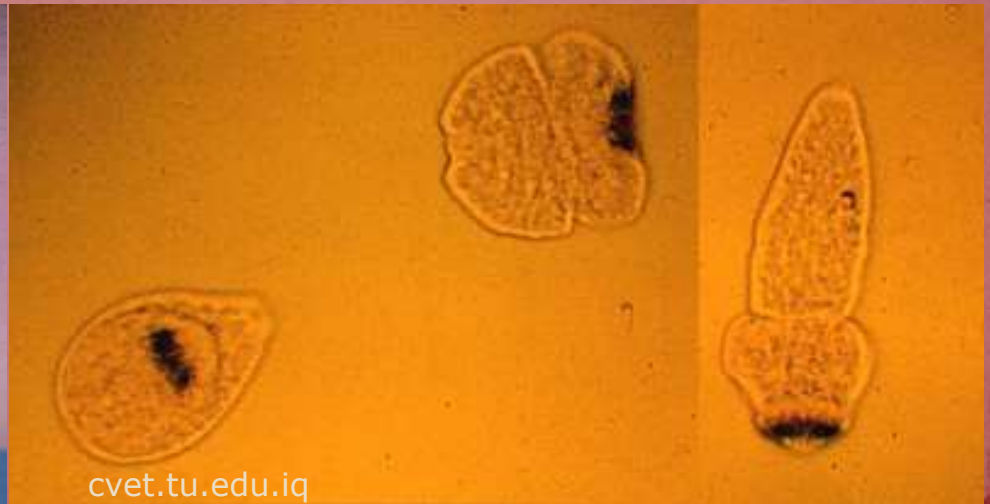
Symptoms:

- **E. granulosus**
 - Can remain silent for years
 - It is the enlarging cysts that cause symptoms in organs
 - **Hepatic involvement** (abdominal pain, mass in the hepatic area, biliary duct obstruction)
 - **Pulmonary involvement** (chest pain, Cough, hemoptysis)
 - **Brain, bone, and heart**
 - Rupture of cyst (fever, hives, pus, shock, and the cyst spreads throughout body cavity)



Diagnosis

- Imagery
 - Hydatids are found during X-radiography, ultrasonography, CAT scans
- Immunodiagnostic techniques
 - Generally less sensitive than imagery
- Microscopy
 - Fluid aspirated from hydatid cyst will show many protoscolices



Treatment

- **Most effective and common type of treatment is surgery to remove the parasite mass**



<http://youtube.com/watch?v=E9Hx9oKkEVg>

- **Medication after surgery may be necessary to keep the cyst from recurring**
 - Drug of choice is albendazole for *E. granulosus*
 - Drug of choice is albendazole and mebendazole for *E. multilocularis*

Control Methods:

- Interrupt lifecycle by denying access of dogs to offal
- Destroy stray dogs
- General education program
- Sheep herders should not live closely with their dogs