

# Toxoplasma gondii



By  
Eileen Fitzpatrick  
with  
Dr. Kristin Hager

# Toxoplasma gondii

- Toxoplasma gondii is a parasite that causes disease in humans with weakened immune systems and unborn fetuses.
- It is a protozoan parasite that infects most nucleated cells in warm-blooded vertebrates.
- One-third to one-fourth of all humans are infected with Toxoplasma gondii.

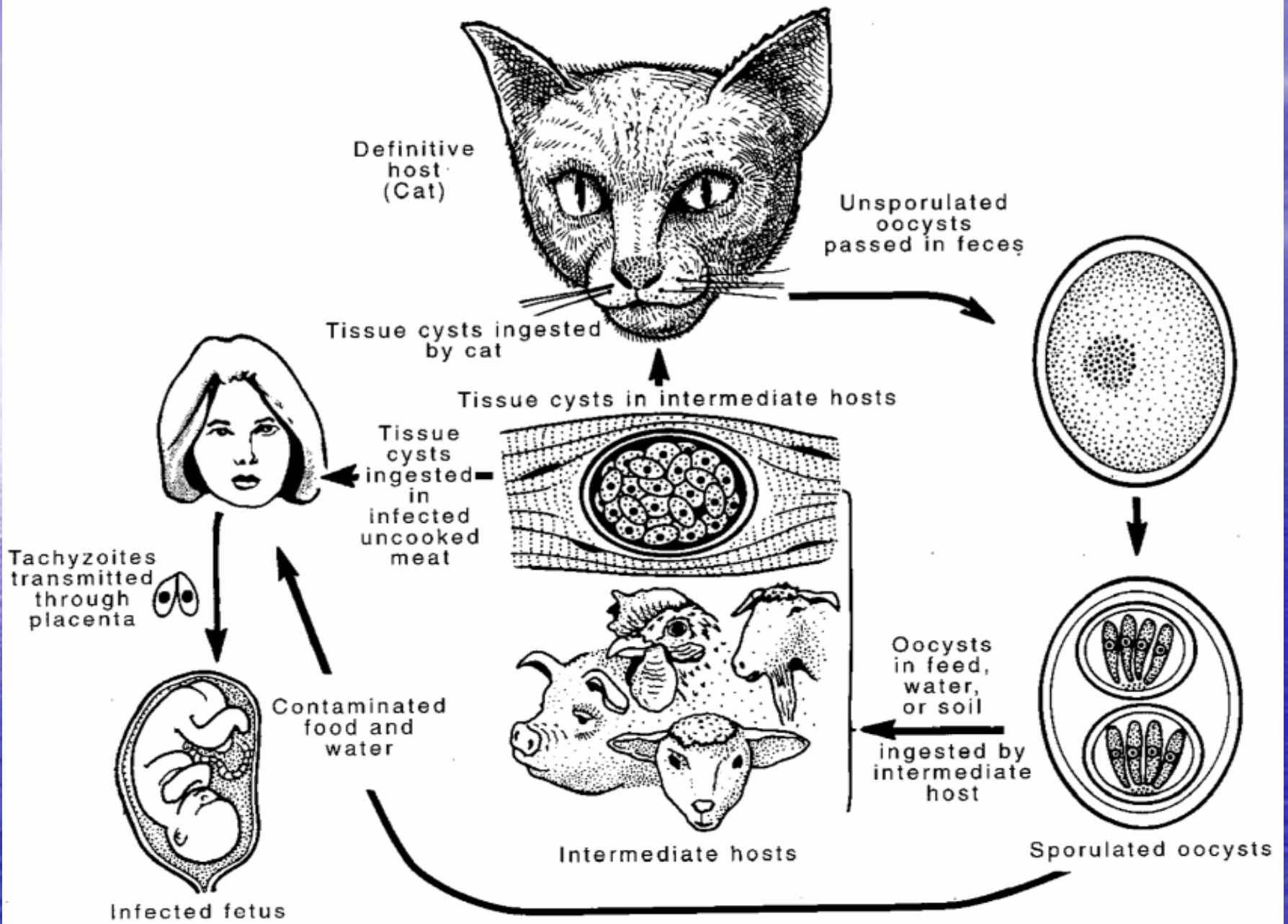
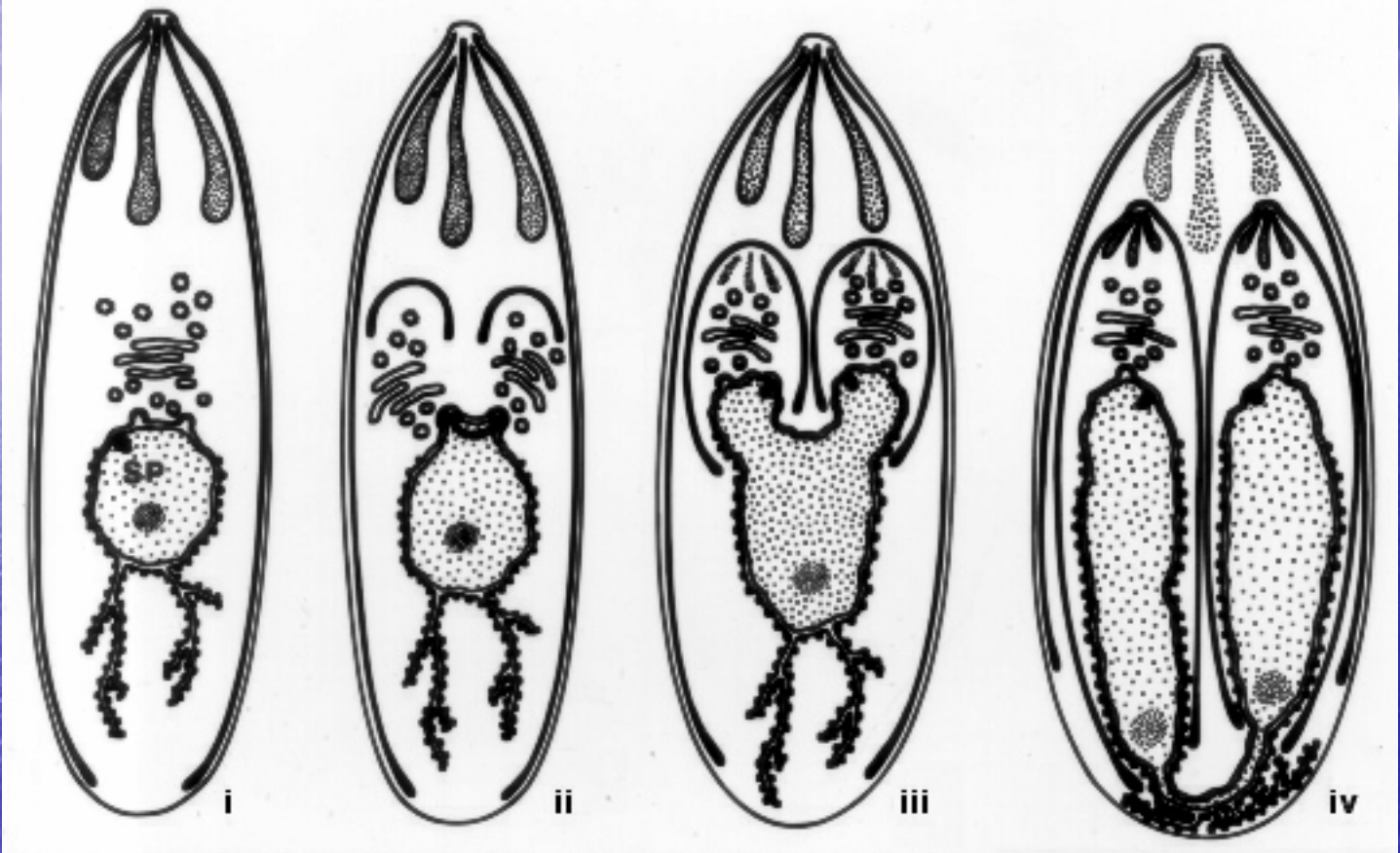


FIG. 1. Life cycle of *T. gondii*.





# Toxoplasmosis

- Symptoms:

1. Flu-like symptoms ( swollen lymph glands or muscle aches) that last for a month or more.

2. Severe toxoplasmosis causes damage to the brain, eyes, or other organs.

# Is *T.gondii* research applicable in a high school setting?

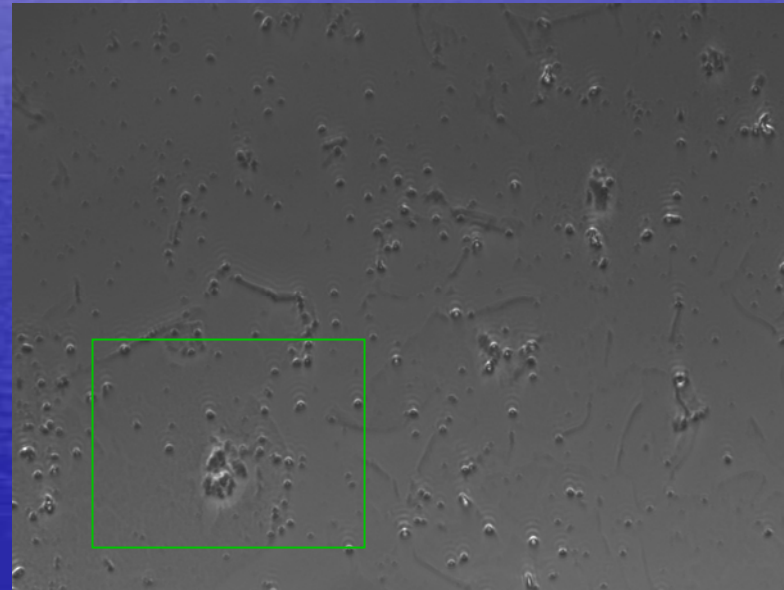
- Awareness of parasite cysts in purchased meat.
- This inquiry-based experiment involves using various types of raw meat (beef heart/liver, lamb or pork sausage) and extracting the cysts of the parasite, *T. gondii* from it.
- The meat is homogenized in a blender with 3X PBS/Tween or Percoll for 2 minutes.

# Lab Procedure

- The homogenate is filtered through two layers of gauze and centrifuged for 10 min. at 4°C and 2700rpm.
- The supernatant is poured off and resuspended in 20ml of PBS.
- The homogenate is centrifuged as before.
- The supernatant is poured off.
- The cysts are transferred to a glass slide and viewed under a microscope.



# Supermarket sausage



# *T. gondii* cyst

