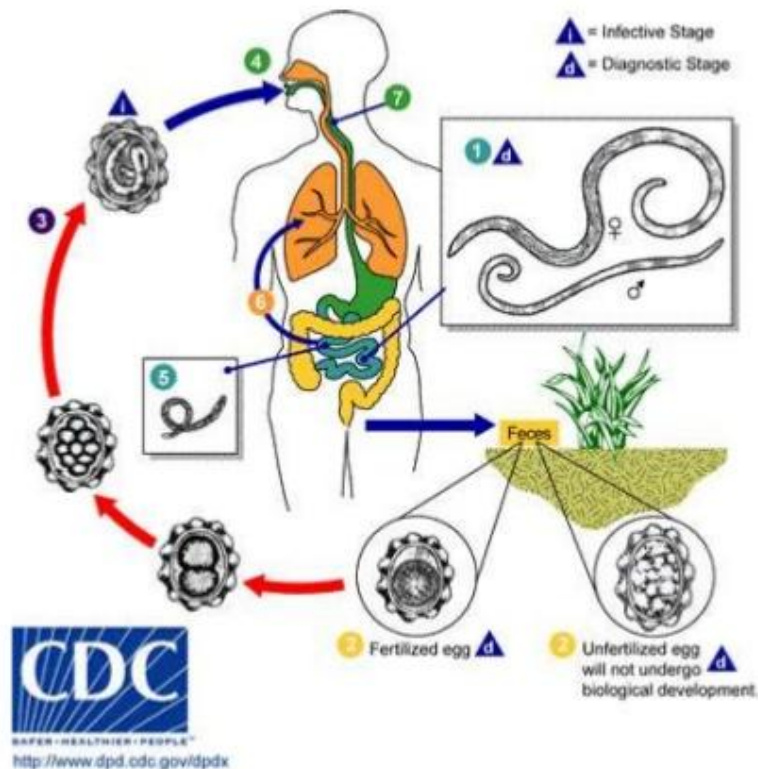


LIFE CYCLE OF ASCARIS

LIFE CYCLE



LIFE CYCLE cont.....

- Adult worms live in the lumen of the small intestine. A female may produce approximately 200,000 eggs per day, which are passed with the faeces .
- Unfertilized eggs may be ingested but are not infective. Fertile eggs embryonate and become infective after 18 days to several weeks.
- After infective eggs are swallowed , the larvae hatch , invade the intestinal mucosa.
- Carried via the portal, then systemic circulation to the lungs. larvae mature further in the lungs (10 to 14 days), penetrate the alveolar walls, ascend the bronchial tree to the throat, and are swallowed.
- Upon reaching the small intestine, they develop into adult worms. Between 2 and 3 months are required from ingestion of the infective eggs to oviposition by the adult female. Adult worms can live 1 to 2 years.

Rhabditiform larvae



Egg hatch-----3rd stage larva --- hepatic portal vessels to liver (3-4 days) -----
Hepatic vein ----- Post caval vein ----- Heart
--- Lungs (7days-3rd moulting) ---Larynx ---
oesophagus --- Stomach (4th moulting)

Modes of transmission

- ❖ Occurs mainly by ingestion of contaminated food or water with eggs.
- ❖ Occasionally by inhalation of contaminated dust with eggs.
- ❖ Children playing in contaminated soil may acquire the parasite from their hands.

Symptoms

Symptoms associated with larval migration

- Migration of larvae in lungs may cause hemorrhagic/eosinophilic pneumonia, cough (Loeffler's Syndrome)
- Breathing difficulties and fever
- Complications caused by parasite proteins that are highly allergenic - asthmatic attacks, pulmonary infiltration and urticaria (hives)

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Symptoms associated with adult parasite in the intestine

- Usually asymptomatic (85%)
- Vague abdominal discomfort, nausea in mild cases
- Malnutrition in host especially in children in severe cases
- Heavy worm loads can retard physical and mental development
- Sometimes fatality may occur when mass of worms cause intestinal obstruction



Symptoms associated with worm migration

- § Worms retain motility, do not attach
- § Migration of adult worms may cause signs and symptoms of perforation, peritonitis, appendicitis or extrahepatic biliary obstruction
- § Severe inflammatory reactions mark the migratory route
- § Dermatological and allergic reactions can occur



Complications

- § Intestinal obstruction, volvulus, intussusception
- § Obstruction of intrahepatic and extrahepatic bile ducts
- § Peritonitis caused by intestinal perforation
- § Chronic pancreatitis
- § Acute or chronic appendicitis
- § Pneumonitis, bronchitis and asthma