Ascaris lumbricoides (Roundworm)
Morphology

- White or Pink worm 10-35 cm in length, and about the thickness of a lead pencil
Life Cycle

- Adults in small intestine of man → deposit eggs → passed in feces → eggs in soil become infective in 21 days → ingested by man → larva in intestine → circulation → right heart → lungs → break out of capillaries → coughed up → swallowed → mature in small intestine (mainly duodenum) to ovipositing stage at about 8 weeks after infection. Live 18 months
The life cycle of a helminthic parasite involves several stages:

1. The infectious stage (i) enters the host through the oral or respiratory tract.
2. The fertilized egg (d) is excreted in feces and can survive in the environment.
3. The egg is ingested by an intermediate host, such as a snail or a crustacean, where it hatches and develops into a larva.
4. The larva is ingested by a definitive host, such as a mammal, where it matures into an adult parasite.
5. The adult parasite reproduces, producing fertilized and unfertilized eggs.
6. The unfertilized egg (d) does not undergo biological development.
7. The fertilized egg (d) is excreted in feces and can infect a new host.

The CDC logo and website (http://www.dpd.cdc.gov/dpdx) are present on the page for reference.
Epidemiology

• Worldwide
• Uncommon in temperate and cold climates
Symptomatology

• During larval transit through lungs
  – may have eosinophilic pneumonitis (Loeffler’s)
• Adults may commonly cause vague abdominal discomfort
• Heavy worm burden
  – Some protein malnutrition may be seen especially in children due to competition for protein
• Less common but more important:
  – Mechanical intestinal obstruction, especially if many worms
  – Obstructive appendicitis
  – Migration
    • Liver
    • Peritoneum
    • Retrograde through mouth or nose
    • Through anus – usually caused by fever, pregnancy, noxious drugs
Diagnosis

• Stool examination
• Occasionally by x-ray
Treatment

- Piperazine
- Bephenium hydroxynaphthoate (especially if hookworm present as well)
- hexylresorcinol
Prevention

• Proper disposal of fecal material
• Avoid uncooked vegetables in endemic areas