

Parasites

Human Parasites

- Macroscopic
 - Intestinal “worms”
 - Body lice
- Microscopic
 - Scabies
 - Fungi
 - Malaria



Roundworms

- Mainly live in our intestines
- Transmitted fecal-oral and are “soil transmitted”
- Affects 25% of the global population
 - Resistant to cold
- When the eggs are ingested, the larvae can migrate anywhere via blood stream and end up in the eye, brain, liver, etc.
 - Mature into adult white worms (size: large earthworms)

Roundworms Cont.

- Asymptomatic
 - Broad range of symptoms → depending on life cycle and how many are roundworms are present in the gut
- Can have minimal symptoms or multiple symptoms
- **Symptoms:** cough, sputum (a mixture of saliva and mucus coughed up from the respiratory tract), intestinal cramping, bloating, protruding abdomen, diarrhea, nausea, vomiting, heartburn, sore throat, runny nose, restless sleep, TEETH GRINDING, night crying, anxiety, etc.
- **Treatment:** oral pill → Albendazole



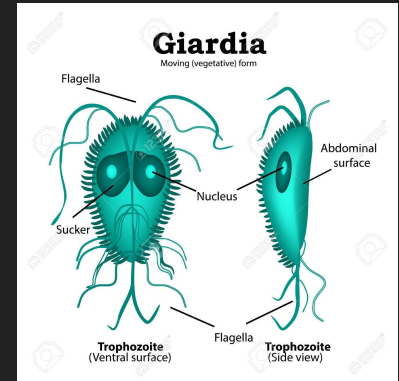
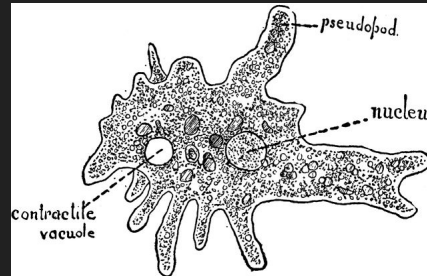
Pinworms

- Very common cause of Pruritus Ani (“Itchy Butt”) in children worldwide
- Adult size: 10 mm long x 3-4 mm wide
 - White color and live in the lower bowel
- Lay their eggs on anal skin → intense itching
- Transmitted orally by fingers, fingernails, clothing, toys, utensils, soil/dirt
- Occasionally, vaginal deposits itch and cause a vaginal discharge in young girls
- **Other symptoms:** irritable sleep, cramping, loss of appetite, bed wetting
- **Treatment:** oral pill → Albendazole



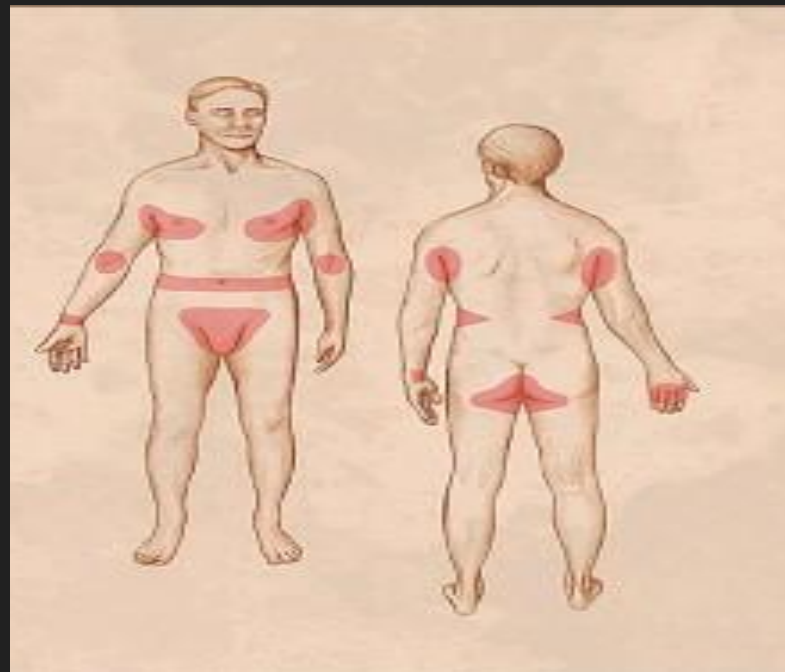
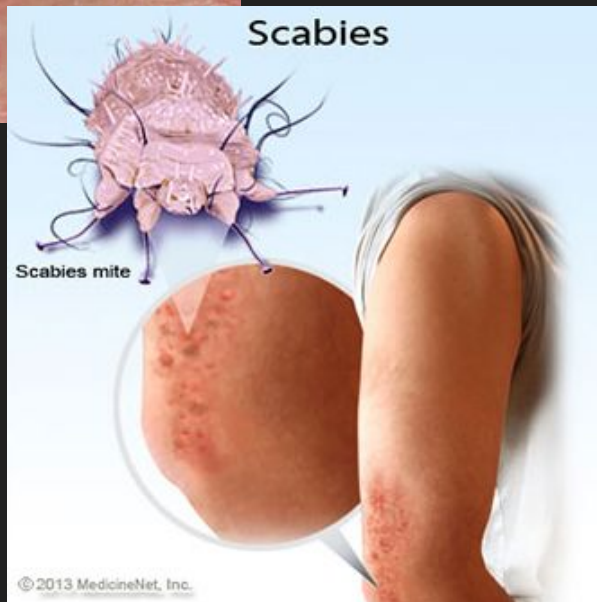
“Amoeba” and “Giardia” Others

- Both are single-celled protozoans, microscopic intestinal parasites
- Infection is transmitted by the fecal-oral route, primarily in contaminated water and food.
- **Symptoms:** Can range from asymptomatic (showing no symptoms) to WATERY DIARRHEA (yellow in color) that later becomes greasy and foul-smelling with occasional abdominal bloating, flatulence, N/V, cramping, and weight loss.
- **Treatment:** Metronidazole tablets and prevention information
- What prevention method could you suggest to a patient?



Scabies

- Microscopic insect (mite) that burrows under the skin and nest there to lay eggs and hatch larvae
 - They then migrate to other skin areas and burrow in
 - Cyclic
- **Symptoms:** Range from asymptomatic to very itchy (especially at night)
- Transmitted by prolonged direct skin to skin contact or contaminated clothing (ex: bed sheets)
 - Prevention: wash sheets and clothing with boiling water
 - Runs in families
- **Treatment:** Albendazole and cream



Fungi

- Very common
- Examples:
 - "Athlete's Foot," Ringworm, "Jock Itch"
- Can occur anywhere
- **Symptoms:**
 - Different species assume different visible patterns on our skin
 - Itching, flaking, redness, and swelling of skin
 - Generally superficial, but can be deep
- **Treatment:** easily treatable in most cases, topical antifungal ointment



Prevention

- Always tell children to wash their hands after the bathroom, and frequently throughout the day, in order to prevent parasites.
- Make sure to tell the parents to boil their water if it is not from a bottled source before consuming
 - This kill the parasitic bacteria

