

# PARASITE ENCYCLOPEDIA

## *A-Z Guide to Common Human Parasites*

This quick-reference guide covers the most common parasites affecting humans, organized alphabetically. Use it to understand what you might be dealing with and how to approach testing and treatment.

This is a reference tool, not a diagnostic guide. Always confirm suspected infections with proper testing.

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## A

### *Ascaris lumbricoides* (Roundworm)

- **TRANSMISSION:** Large intestinal roundworm; eggs in contaminated soil/feces. Common in tropical/subtropical regions.
- **SYMPTOMS:** Cough (larval migration), abdominal pain, visible worms in stool, malnutrition in children.
- **TESTING:** Stool O&P (3 samples), may see adult worms. Blood tests show eosinophilia.
- **TREATMENT:** Albendazole or mebendazole. Treat entire household if endemic.

### *Ancylostoma duodenale* / *Necator americanus* (Hookworm)

- **TRANSMISSION:** Soil-transmitted helminths; larvae penetrate bare skin. Endemic in warm, moist climates.
- **SYMPTOMS:** Itchy feet (entry site), anemia, fatigue, abdominal pain, protein deficiency.
- **TESTING:** Stool O&P, blood tests for anemia and eosinophilia.
- **TREATMENT:** Albendazole or mebendazole. Iron supplementation. Wear shoes in endemic areas.

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## B

### *Blastocystis hominis*

- **TRANSMISSION:** Protozoan of debated pathogenicity. Found worldwide in humans and animals.
- **SYMPTOMS:** Controversial. May cause IBS-like symptoms (bloating, diarrhea) or be asymptomatic.
- **TESTING:** Stool O&P or PCR. Presence alone doesn't confirm causation.
- **TREATMENT:** Controversial. Some treat if symptomatic (metronidazole), others consider it commensal.

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## C

### *Cryptosporidium*

- TRANSMISSION: Protozoan causing waterborne outbreaks. Highly chlorine-resistant. Common in pools and backcountry water.
  - SYMPTOMS: Watery diarrhea, dehydration, nausea, low-grade fever. Can be severe in immunocompromised.
  - TESTING: Stool PCR (O&P often misses it). Acid-fast staining.
  - TREATMENT: Nitazoxanide (prescription). Supportive care, hydration critical.
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## D

### *Dientamoeba fragilis*

- TRANSMISSION: Protozoan transmitted via fecal-oral route. Often overlooked in standard testing.
- SYMPTOMS: Diarrhea, abdominal pain, fatigue, nausea, IBS-like symptoms.
- TESTING: Stool PCR or specialized O&P (easily missed on standard tests).
- TREATMENT: Metronidazole or ivermectin. Treat if symptomatic.

### *Diphyllobothrium latum* (Fish Tapeworm)

- TRANSMISSION: Largest human tapeworm. Acquired from raw/undercooked freshwater fish.
  - SYMPTOMS: Often asymptomatic; may cause vitamin B12 deficiency, anemia, abdominal discomfort, weight loss.
  - TESTING: Stool O&P (segments/eggs visible), blood tests for B12 deficiency.
  - TREATMENT: Praziquantel. Cook fish thoroughly or freeze at -4°F for 7+ days.
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## E

### *Entamoeba histolytica*

- TRANSMISSION: Protozoan via fecal-oral route. Causes amebiasis. Can be invasive (liver abscess).
- SYMPTOMS: Bloody diarrhea, abdominal pain, fever. Asymptomatic carriage common.
- TESTING: Stool O&P + PCR. Serology for invasive disease. Liver imaging if abscess suspected.
- TREATMENT: Metronidazole followed by paromomycin (to clear cysts). URGENT if invasive.
- CRITICAL: *Entamoeba histolytica* requires immediate medical attention. Do not attempt to self-treat.

### *Enterobius vermicularis* (Pinworm)

- TRANSMISSION: Most common helminth in developed countries. Highly contagious among children.
- SYMPTOMS: Intense anal itching (especially at night), restless sleep, irritability, visible white threads.
- TESTING: Tape test (morning, before bathing). Stool tests often negative.

- **TREATMENT:** Mebendazole, albendazole, or pyrantel pamoate. Treat entire household. 14-day hygiene protocol.
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## G

### Giardia lamblia (Giardia duodenalis)

- **TRANSMISSION:** Most common intestinal parasite in US. Waterborne (beavers, contaminated water).
  - **SYMPTOMS:** Explosive, foul-smelling diarrhea, bloating, gas, nausea, malabsorption, weight loss.
  - **TESTING:** Stool PCR (most sensitive), stool antigen test, or O&P (3 samples).
  - **TREATMENT:** Metronidazole, tinidazole, or nitazoxanide. Treat household members if recurrent.
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## S

### Strongyloides stercoralis

- **TRANSMISSION:** Soil-transmitted helminth; larvae penetrate skin. Can autoinfect (cycle in host indefinitely).
- **SYMPTOMS:** Itchy rash (larva currens), abdominal pain, diarrhea, cough, weight loss. Often asymptomatic for years.
- **TESTING:** Stool O&P (multiple samples), serology, agar plate culture (most sensitive).
- **TREATMENT:** Ivermectin (preferred) or albendazole. **CRITICAL** in immunosuppressed (can be fatal).

### Schistosoma (Blood Flukes)

- **TRANSMISSION:** Larvae penetrate skin in freshwater (Africa, Middle East, South America, Asia).
  - **SYMPTOMS:** Itchy rash (swimmer's itch), fever, abdominal pain, bloody diarrhea, liver damage, bladder cancer (chronic).
  - **TESTING:** Serology, stool/urine O&P (eggs), tissue biopsy.
  - **TREATMENT:** Praziquantel. Prevention: avoid freshwater swimming in endemic areas.
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## T

### Taenia solium (Pork Tapeworm) / Taenia saginata (Beef Tapeworm)

- **TRANSMISSION:** Undercooked pork (*Taenia solium*) or beef (*Taenia saginata*).
- **SYMPTOMS:** Often asymptomatic; may see proglottids (segments) in stool. *Taenia solium* can cause neurocysticercosis (brain cysts) if eggs ingested.
- **TESTING:** Stool O&P (segments/eggs), serology for cysticercosis.
- **TREATMENT:** Praziquantel or albendazole. Neurocysticercosis requires specialist care.

### Toxoplasma gondii

- TRANSMISSION: Cat feces (litter box), undercooked meat, contaminated soil. Can cross placenta.
- SYMPTOMS: Usually asymptomatic in healthy adults. Flu-like if symptomatic. Dangerous in pregnancy (birth defects, miscarriage). Severe in immunocompromised (brain lesions).
- TESTING: Serology (IgG/IgM). PCR for congenital infection.
- TREATMENT: Pyrimethamine + sulfadiazine + folinic acid (immunocompromised/pregnant). Spiramycin in pregnancy.

#### *Trichinella spiralis*

- TRANSMISSION: Acquired from undercooked pork or wild game (bear, boar, cougar).
- SYMPTOMS: Early: diarrhea, nausea. Later: muscle pain, fever, swelling around eyes, weakness.
- TESTING: Serology, muscle biopsy. Eosinophilia and elevated muscle enzymes.
- TREATMENT: Albendazole + corticosteroids. Cook pork to 71°C (160°F). Freeze wild game 3+ weeks.

#### *Trichomonas vaginalis*

- TRANSMISSION: Sexually transmitted protozoan. NOT an intestinal parasite. Affects urogenital tract.
- SYMPTOMS: Vaginal discharge, itching, odor in women; often asymptomatic in men. Can increase HIV transmission risk.
- TESTING: Wet mount microscopy, nucleic acid amplification test (NAAT).
- TREATMENT: Metronidazole or tinidazole. Treat sexual partners.

This encyclopedia is for educational purposes only. Parasite taxonomy and treatment recommendations evolve. Always consult a qualified healthcare provider for diagnosis and current treatment protocols.