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# Types of Intestinal Parasites: Its Transmission, Symptoms, and Diagnosis

**Frank Stein***

*Department of Health Science, University of Twente, Enschede, Netherlands*

***Corresponding Author:** Frank Stein, Department of Health Science, University of Twente, Enschede, Netherlands; E-mail: steinfrank@utwente.nl

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## Description

Intestinal parasites, also known as intestinal worms or helminths, are organisms that reside in the human gastrointestinal tract, causing a wide range of health issues. These parasites are prevalent worldwide, particularly in areas with poor sanitation and limited access to clean water. In this note, we will explore the most common types of intestinal parasites, their modes of transmission, symptoms, diagnosis, treatment, and preventive measures.

### Types of intestinal parasites

Intestinal parasites can be broadly classified into two categories: helminths (worms) and protozoa [1]. Helminths are multicellular worms, while protozoa are single-celled organisms.

**Helminths:** a. Roundworms (Nematodes): Examples include *Ascaris lumbricoides*, which is the most common roundworm affecting humans, and *Trichuris trichiura*, which causes whipworm infection. b. Tapeworms (Cestodes): *Taenia saginata* and *Taenia solium* are two common tapeworms found in humans. c. Flukes (Trematodes): *Fasciola hepatica* and *Schistosoma mansoni* are flukes that can cause significant health problems.

**Protozoa:** a. *Giardia lamblia*: A common protozoan parasite causing giardiasis. b. Entamoeba histolytica: Responsible for amoebiasis. c. *Cryptosporidium parvum*: Causes cryptosporidiosis, particularly in immunocompromised individuals [2,3].

### Transmission, symptoms, and diagnosis

Intestinal parasites are primarily transmitted through contaminated food, water, or soil. Poor sanitation practices, inadequate hygiene, and close contact with infected individuals or animals can contribute to the spread of these parasites [4]. The symptoms of intestinal parasite infections can vary depending on the specific parasite and the severity of the infection [5].

Common symptoms include abdominal pain, diarrhea, nausea, vomiting, weight loss, fatigue, anemia, and malnutrition [6]. Some parasites can cause complications such as intestinal obstruction, perforation, or liver damage.

Diagnosing intestinal parasites typically involves a combination of clinical evaluation, laboratory tests, and stool sample analysis [7]. Microscopic examination of stool samples can identify the presence of parasite eggs, larvae, or cysts. In some cases, additional tests like blood tests, imaging studies or endoscopy may be required for a definitive diagnosis.

### Treatment and prevention

The treatment of intestinal parasites generally involves the use of specific antiparasitic medications. The choice of medication depends on the type of parasite involved. Commonly used drugs include albendazole, mebendazole, praziquantel, and metronidazole. These medications work by either killing the parasites or inhibiting their growth and reproduction [8-10]. Treatment may need to be repeated to ensure complete eradication of the parasites.

Preventing intestinal parasite infections requires a multi-faceted approach. The following measures can help reduce the risk of infection:

**Hygiene practices:** Regular hand washing with soap and clean water, especially before handling food, after using the toilet, and after contact with soil or animals.

**Safe food and water:** Consuming properly cooked food, drinking clean and safe water from reliable sources, and avoiding raw or undercooked meat, seafood, and fruits and vegetables washed with contaminated water.

**Sanitation:** Ensuring access to improved sanitation facilities, proper disposal of human waste, and avoiding open defecation.

**Vector control:** Preventing contact with intermediate hosts, such as snails or insects, which are involved in the life cycles of certain parasites.

**Education and awareness:** Promoting health education and raising awareness about proper hygiene practices, the importance of sanitation, and the risks associated with intestinal parasites.

Intestinal parasites pose a significant health burden globally, affecting millions of people. Understanding the types of parasites, their modes of transmission, symptoms, diagnosis, treatment, and preventive measures is essential for effective control and management of these infections. By adopting appropriate preventive measures, we can reduce the incidence of intestinal parasite infections and improve overall public health.

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