



No more worming around *Intestinal parasites*

By Ananda Russ - Royal Emerald Director

A parasite is an organism that depends on another organism, known as a host, for food and shelter. As an example, tapeworms live in the digestive system of a large variety of animals. The tapeworm has no digestive system of their own, but absorbs nutrients through their skin from partially digested food as it passes through the host.

A parasite usually gains all the benefits of this relationship. In contrast, the host may suffer from various diseases, infections, and discomforts as a result of the parasitic attack. In some cases, however, the host may show no signs at all of infection by the parasite.

Some symptoms of parasite infestation include the following: diarrhoea, hunger pains, appetite that is too healthy or no appetite, weight loss or weight gain, sleep disturbances, rectal itching especially at night, tooth grinding, nose picking, bloating and gas, nausea, fever, rash, irritable bowel syndrome, constipation, joint and muscle pain, bad breath, fluid retention, allergies and food sensitivities, sugar cravings, mental confusion, fatigue or tiredness, foul smelling stools, heartburn, headaches, bed wetting, nervousness and anaemia.

The life cycle of a typical parasite commonly includes several developmental stages. During these stages, the parasite may go through two or more changes in body structure as it lives and moves through the environment and one or more hosts.

Typically, a parasitic infection does not directly kill a host. The stress placed on the organism's resources can affect its growth, ability to reproduce, and survival. This stress can sometimes lead to the host's premature death. Parasites, and the diseases they cause and transmit, have been responsible for tremendous human suffering and loss of life throughout history.

Infectious Diseases:

An infectious disease, or infection, is a condition that results when a parasitic organism attacks a host and begins to multiply. As the parasite multiplies, it interferes with the normal life functions of the host more and more. The host begins to feel ill as a symptom of the parasite's invasion and activities. In many cases, the host's immune system may be

able to respond to the parasite and destroy it. In many other cases, however, the parasitic infection may over-whelm the immune system, resulting in serious disease and even death.

Almost all infections contracted by humans pass from other humans or animals. Some infections originate from outside the body, among them a cold from kissing someone with a cold; rabies from a dog bite; hepatitis B from a contaminated needle entering the bloodstream; hepatitis A from germs transferred from fingers to mouth after touching a dirty toilet seat; measles, mumps, and the flu from tiny moisture particles



that exit the mouth and nose when a person sneezes, coughs, or talks; syphilis from an infected sex partner; tetanus from a soil-contaminated wound; salmonella from ingesting undercooked eggs, meat, and poultry; and many diseases ranging from the relatively innocent to the fatal—such as gastroenteritis, cholera, and dysentery—from drinking or bathing in contaminated water.

Types of parasites:

The major types of organisms that cause parasitic infections include species of protozoa, helminths or worms, and arthropods.

Protozoa - Protozoa are single-celled organisms. More than 45,000 species of protozoa are known, many of which are parasitic. As parasites of humans, this group of organisms has historically been the cause of more suffering and death than any other category of disease causing organisms.

Intestinal protozoa occur throughout the world. They are especially common in areas where food and water sources are subject to contamination from animal and human waste. Typically, protozoa that infect their host through water or food do so while in an inactive state, called a cyst. A cyst consists of a protozoan encased in a protective outer membrane. The membrane protects the organism as it travels through the digestive tract of a previous host. Once inside a new host, the parasite develops into a mature form that feeds and reproduces. A protozoan that causes severe diarrhoea is *Giardia lamblia*. This is a parasite that can infect hikers who drink untreated water.



Helminths - Helminths are wormlike organisms including nematodes (roundworms), cestodes (tapeworms), and trematodes (flukes).

The largest parasitic roundworm, common among humans living in tropical developing countries, is *Ascaris lumbricoides*. This roundworm can grow to a length of 35 centimeters (15 inches) within the small intestine of its host.

A parasitic roundworm that affects dogs is *Dirofilaria immitis*, or heartworm. This worm infects the heart tissues and eventually weakens the cardiac (heart) muscles to the point of failure. If left untreated, heart-worm can kill a dog.

Tapeworms - are a class of worms characterized by their flat, segmented bodies. The segments hold both male and female reproductive organs, allowing self-fertilization. Segments that contain fertilized eggs break off or dissolve, passing the eggs out of the host. Adult tapeworms typically reside in the intestinal tract of vertebrates, attaching themselves to the stomach lining with hooks or suckers on their head.

Common tapeworms use intermediate hosts, such as cattle, swine, and fish respectively, before entering the human body.

Tapeworm eggs are passed into cattle or swine through infected soil. They develop into an intermediary stage that embeds in the muscle and connective tissue of the animal. Infected animals that are processed for meat but improperly cooked still harbour the parasite, which are passed on when consumed by humans. The tapeworms develop into adults that attach to the intestinal lining of the host.

Trematodes - or flukes, are typically flat, oval-shaped worms that have a layer of muscles just below the skin. These muscles allow the worm to expand and contract its shape and, thus, move its body. Flukes usually have an oral sucker, sometimes ringed with hooks. They use the sucker to attach themselves to the host's tissues.

How can infection with intestinal parasites be prevented?

Good hygiene is the best defense against intestinal parasites. This includes frequent and thorough hand washing, especially after changing diapers, after going to the bathroom, and before handling food.

Doctors advise that travelers to undeveloped countries drink and brush their teeth with bottled water and avoid eating raw fruits and vegetables, food from street vendors, and unpasteurized dairy products. In addition, cooking all food until it is steaming hot kills parasites.

Always wearing shoes and avoiding swimming in bodies of fresh water such as ponds, rivers, and lakes can minimize the risk of contact with contaminated soil and water.

Do a parasite cleanse at least once a year, preferably twice a year, using AIM's Para 90 and Herbal Fiberblend.

AIM's Para 90

- Antiparasitic
- Intestinal Cleanser
- Helps maintain digestive health
- Combines 16 cleansing herbs

