

## BASIC INFORMATION

### Description

Numerous parasitic organisms can live inside the gastrointestinal (GI) tract (gut) of dogs and cats. Some of these parasites (roundworms, hookworms, whipworms) cause clinical signs, whereas others have little impact on the health of the animal. Some intestinal parasites of dogs and cats can potentially infect humans, which is of particular concern when young children are handling or playing with animals that are infested or in areas (such as sandboxes) where infected animals have defecated.

### Causes

Most GI parasites of dogs and cats are obtained from their environment. The methods by which animals are infected vary depending on the particular parasite involved. Some parasites have a direct life cycle, in which infective larvae (young worms) develop from eggs in the feces and are able to immediately infect a new host when eaten. Other parasites have complicated life cycles that require them to infect other (intermediate) hosts before infecting the dog or cat. Roundworms (*Toxocara canis*) can be transmitted from the mother before birth or through the mother's milk.

### Clinical Signs

Parasites that have little impact on the health of their host, such as most forms of tapeworm, may cause no clinical signs. Tapeworm eggs are passed in packages called *proglottids* that are sometimes seen in the feces or crawling on the skin around the anus. The most common type of tapeworm proglottid looks like a moving grain of white rice. Tapeworm segments can cause irritation to the skin around the anus and may lead to tail-dragging or scooting behaviors.

Many roundworms can cause to diarrhea, weight loss, failure to grow, and a poor hair coat. Hookworms and whipworms eat blood that they suck from the walls of the intestines. This can cause intestinal bleeding, with dark, tarry diarrhea and anemia (pale gums and tongue, weakness). Severely affected animals, particularly puppies and kittens, may develop pot bellies because of muscle weakness and malnutrition.

A protozoan (single-celled organism) called *Giardia* is a common cause of chronic diarrhea in some areas of the country. Giardiasis can affect animals of any age. Human beings can also become infected with *Giardia*, but the strain of the *Giardia* organism that affects people is different than that infecting dogs and cats.

### Diagnostic Tests

Because of the wide variety of parasites that can infect the gut, several different diagnostic tests may be recommended. For some

parasites, such as tapeworms, simply identifying tapeworm segments by sight is all that is necessary to make the diagnosis.

Most intestinal parasites are diagnosed by finding their eggs in a fecal sample. Direct smears and floatation or concentration procedures may be performed, with samples examined under a microscope. Some fecal floatation methods for certain parasites require 12-24 hours before results are available. Certain intestinal parasites are diagnosed by more complicated tests that are sent to an outside laboratory, and in these cases results usually are not available for a few days.

Fecal examinations are a common component of wellness examinations in animals. Because animals are exposed to parasites in their environment throughout their life, routine fecal examinations allow many parasites to be treated before they can cause any clinical signs or be spread to other animals and humans. However, a negative fecal sample does not rule out the presence of an intestinal parasite, because not all samples will contain parasites or their eggs.

## TREATMENT AND FOLLOW-UP

### Treatment Options

The specific drug recommended depends on the type of parasite diagnosed. Some antiparasitic drugs contain one ingredient that kills one type of parasite, whereas others are combination products that kill a wider group of parasites. Decreasing parasite numbers in the environment through good kennel hygiene, washing of bedding, bathing the animal during treatment, and killing intermediary hosts (such as fleas) is important for preventing infection and reinfection.

### Follow-up Care

Repeated fecal testing may be recommended to determine whether the parasite infestation has been eradicated. Repeat treatments may be needed at specific intervals to completely control the infestation.

### Prognosis

Prognosis for most animals with intestinal parasites is good, providing effective antiparasitic medications are given correctly. Because many parasites exist in large numbers in the animal's environment, it is very common for animals to become reinfected and require repeated treatment. Recommendations for regular treatment to eliminate and control parasite infections vary depending on the climate in which you live. Your veterinarian will design a comprehensive testing and prevention program for your pet.

**IF SPECIAL INSTRUCTIONS HAVE BEEN ADDED, THEY WILL APPEAR ON THE LAST PAGE OF THE PRINTOUT.**