

Internal Parasite Control

A parasite is an organism that lives at the expense of another living being. Internal parasites, like Intestinal worms and heartworms, live inside the body. Dogs and cats are subject to a variety of internal parasites, but some parasites are species specific (for example, heartworms are generally found only in dogs). In this chapter we will look at what you need to know about the more common internal parasites.

Tapeworms

Description

Tapeworms can infect both dogs and cats and are transmitted fleas. The flea is the parasite's intermediate host. Control of the intermediate host is extremely important in preventing reinfestation of tapeworms. The adult tapeworm lives in the pet's intestine. It attaches to the wall of the intestine and absorbs protein from the contents of the intestine. This is what we mean by a parasite living at the expense of another living being. Because the tapeworm is taking nutrition from the pet's intestine, the pet is not getting all the nourishment it should. Tapeworms are one of the few internal parasites that can be seen in the stool by the owner. They look like grains of white rice.

Treatment

Adult tapeworms can be treated easily and effectively. The medications come in both injectable form (for the doctor to give in the office) and tablet form (for the owner to give at home). This medication is called Droncit.

Prevention

Control of the intermediate host is a must. Fleas should be eradicated. Animals that regularly catch and eat rodents should be checked for tapeworms often.

Roundworms

Description

Adult roundworms attach to the wall of the intestine and drain protein from the host. For this reason, roundworms are most harmful to young animals, who need as much nourishment as possible while they are growing.

Humans may be infected by roundworms. If a human ingests roundworm eggs, the roundworm larvae can migrate throughout the body, causing a condition called visceral larval migrans. Children should never be allowed to play in areas contaminated by roundworm eggs.

Treatment

Roundworm eggs can be detected under the microscope by a fecal flotation test. Since roundworm eggs indicate the presence of adult roundworms, the doctor administers a deworming medicine. Animals that are severely infested should be rechecked and/or dewormed again in several weeks.

Prevention

Early detection is important. When infestation occurs, owners must pick up all stool in the yard regularly to prevent the animal from reinfesting itself. Oral medication is available for control of roundworms and is included in many heartworm preventions.

Hookworms

Description

Hookworms are a very serious parasite problem, especially in young animals. The hookworm attaches itself to the intestinal wall and ingests blood. When left untreated, hookworms can cause "hookworm anemia," which can often be fatal. Paleness of the gums and tongue and a black, tarry stool are the main signs of hookworm infestation.

The hookworm larvae can penetrate the skin to infect its host. This includes humans! Great care should be taken when cleaning an area infected by hookworms. Always wear gloves, and never walk or allow children to play barefoot in or around the infected area.

Treatment

Since hookworm eggs pass out in the stool, they can be detected by a fecal flotation test. If hookworms are present, the doctor gives the animal worm medication. Infected pets should be rechecked and/or dewormed again in several weeks.

Prevention

Prevention is much the same as that described for roundworms. Keeping the yard clean and free of stools and checking the animal for worms at an early age will help prevent infestation. Sprays that kill hookworm larvae are available for yards should an infestation occur, and oral medication, taken daily or monthly. Is available to control hookworms and is included in many heartworm preventions.

Whipworms

Description

Whipworms usually occur only in dogs. Whipworms live in the large intestine and the colon. They usually do not cause major illness (unless the infection is

severe). Clinical signs of whipworm infection include weight loss, poor hair coat and a loose stool that may contain blood or mucus. Whipworms cannot be transmitted to humans.

Treatment

Whipworm eggs are detected by a fecal flotation test, although they can be more difficult to detect than hookworm and roundworm eggs. Whipworm infection is treated with one of several deworming medications. Infested animals should be rechecked and/or dewormed again in several weeks.

Prevention

Once again, a clean yard, free of stools, and early detection are the best ways to prevent severe infestation. Daily and monthly oral medication is available and is often used in areas of frequent reinfection.

Coccidia

Description

Coccidia are small protozoan parasites rather than worms. They are seen primarily in young animals, particularly those pets involved in stressful situations such as moving to a new home. The coccidia cause irritation and inflammation of the intestine, which leads to diarrhea. Transmitted mainly by direct contact with other animals, coccidiosis is treated with oral medication.

Treatment

Treatment with oral medication is normally very effective.

Heartworms

Description

The parasites we have discussed so far all live in the animal's intestines. As you might guess, heartworms live in an animal's heart. Heartworm disease is the parasitism of the heart and blood vessels of the lung, by heartworms. Heartworm disease is a slow progressive disease. Symptoms of the disease usually include nonproductive cough, tiring easily, exercise intolerance, lethargy, weight loss, and eventually heart failure (similar to the signs of heart failure). Most heartworm positive cases are dogs but some cats and ferrets can be susceptible.

Mosquitoes transmit heartworms. A mosquito bites an infected dog, drawing out some of the dog's blood. The mosquito then bites an uninfected dog and injects saliva (anticoagulant), contaminated with microfilariae (immature heartworms), into the uninfected animal. For this reason, areas of the country with a lot of mosquitoes (warm climates and areas near water) experience worse problems

with heartworms than areas with fewer mosquitoes. Heartworms are detected with a blood test.

Life Cycle

1. Adult worms live in the right side of an infected animal's heart.
2. Microfilariae (small, immature worms) circulate in the blood.
3. A mosquito bites an infected animal, ingesting the microfilariae with the blood from the dog or cat.
4. The mosquito transmits matured larvae into a new host (an uninfected dog).
5. The larvae migrate through the tissue to the heart.
6. The larvae grow into adult worms in the heart.

Prevention

This is one case where an ounce of prevention is worth two pounds of cure! Therefore we will talk about prevention before we talk about treatment.

Heartworm prevention comes in monthly products:

Heartgard Plus: Oral beef flavored jerky type treat that prevents heartworms, hookworms, and roundworms.

Interceptor: Oral taste tab that prevents heartworms, hookworms, roundworms, and whipworms.

Sentinel: Oral taste tab that prevents heartworms and prevents fleas from breeding. Must be given with a meal.

Revolution: A topical heartworm prevention that also kills fleas, ticks, ear mites and skin mites, roundworms and hookworms.

We recommend that heartworm prevention be given year round and that a dog be tested every two years.

NOTE: Heartworm prevention is a prescription drug. We can only sell it to our clients. The patient must have had a heartworm test within the past two years in order to purchase heartworm prevention from us. If they are purchasing their products from on-line companies they will have to have had a heartworm test and a physical exam within the past 12 months for the doctor to sign the prescription waiver.

Treatment for Adult Heartworms

This treatment actually involves the killing of the adult heartworms (i.e., adulticide). It will involve a 2-3 day stay in the hospital. The drug used to kill adult heartworms is immiticide, an organoarsenical adulticide.

The number of adulticide treatments (i.e., injections) depends on the severity of the worm burden. Most dogs with heavy burdens will be given 1 injection and

then 30 days later two more injections 24 hours apart. Hospitalization will continue for one to two days post injections.

After the adulticide treatment it is very important that exercise and excitement be avoided. This is because the worms that have been killed are dissolving in the heart and blood vessels. Excessive exercise or excitement will make the heart beat faster and the blood flow faster. This could allow large pieces of dead worms to lodge in smaller vessels and act as a clot, possibly causing serious complications or even death.