



ROUNDWORM INFECTION IN DOGS

Dogs have many parasites, both internal and external. Internal parasites are those which live in the various organs inside the dog's body. Some of the internal parasites migrate through a number of different organs. Intestinal parasites are internal parasites that live in the small or large intestine (colon). External parasites, such as fleas, ticks, and mites, live on the outside of the body.

Roundworms represent a common intestinal parasite of the dog. They are also sometimes called ascarids. Typically, they are large, heavy-bodied worms and average 3-5 inches in length. They live in the dog's intestines, consuming partially digested food. In contrast to the behavior of the hookworm, the roundworm does not attach to the intestinal wall; rather, this worm literally swims in its food.

Prevalence

A majority of newborn puppies have roundworms. Lesser numbers of adult dogs are infected.

The most common roundworm of dogs is *Toxocara canis*.

Causes/Transmission

Puppies acquire the majority of roundworm larvae from the placenta before they are born; transmission through the mother's milk does occur but is less important for puppies than for kittens.

Additionally, dogs may become infected by swallowing roundworm eggs that contain infective larvae. The larvae hatch in the dog's stomach and small intestine and migrate through the muscle, liver, and lungs. After several weeks, the larvae make their way back to the intestine to mature. When these worms begin to reproduce, new eggs will pass in the stool, and the life cycle of the parasite is completed.

Obviously, roundworm eggs passed in one animal's stool may be infectious to other dogs. Interestingly, a large number of other animal species have been found to harbor roundworm eggs and represent potential sources of infection for our pets - these include cockroaches, earthworms, chickens, and rodents.

Clinical Signs

They are not highly pathogenic (harmful) to adult dogs until they occur in large numbers. Then they can cause liver damage, pneumonia, weight loss and a pot-bellied appearance in puppies. Decreased appetite, vomiting or diarrhea will be observed on occasion. Puppies may die with serious roundworm infection.

Diagnosis

Roundworm infection is diagnosed by microscopic examination of the dog's stool. They pass a moderate number of eggs, so examination of more than one stool sample may be necessary to find them. Occasionally, the mature worms can be found in the dog's stool or vomit.

Treatment

Treatment is quite simple. Several very safe and effective drugs are available to kill roundworms in the intestine. Several are available which temporarily anesthetize the worms so they pass out of the dog with a normal bowel movement. The live or dead worms are found in the bowel movement. Because of their large size, the worms are easily seen. Two or three treatments may be needed; they are typically performed at 2-4 weeks intervals. None of these treatments will kill the immature forms of the worm or the migrating larvae.

Some types of canine heartworm preventives contain medication that will help in controlling roundworm, hookworm, and whipworm infections in dogs.

Prognosis

The prognosis is better for mature dogs than for puppies. Extremely debilitated pups may succumb when large numbers of worms and/or severe clinical signs are present.

Transmission to Humans

The roundworms of dogs (and cats) pose a health risk for humans. As many as 10,000 cases of roundworm infection in humans have been reported in one year. Children, in particular, are at risk for significant health problems should they become infected. A variety of organs may be affected as the larvae migrate through the body. In suitable environments, the eggs may remain infective to humans (and to cats and dogs) for *years*.

Prevention

1. Pregnant cats and dogs should be dewormed in late pregnancy to reduce potential contamination of the environment for newborn animals.
2. All new puppies should be treated by 2-3 weeks of age. To effectively break the roundworm life cycle, puppies should be dewormed on the schedule recommended by your veterinarian.
3. Prompt deworming should be given when any parasites are detected; periodic deworming may be appropriate for pets at high risk for reinfection. Adult animals remain susceptible to reinfection with roundworms throughout their lives.
4. Dogs with predatory habits should have a fecal examination several times a year. Rodent control is desirable since rodents may serve as a source of roundworm infection for pets.
5. Prompt disposal of all pet feces is essential - especially in yards, playgrounds, and public parks.
6. Strict hygiene is especially important for children. Children should not be allowed to play in potentially contaminated environments.
7. The eggs are highly resistant to most commonly used disinfectants and, and even to harsh environmental conditions. Runs and kennels may be treated with a solution of 50% household bleach and 50% water. Although bleach does not kill the eggs, it will remove the sticky outer coating of the eggs, making it easier to rinse them away. Remember the obvious limitations about where bleach may be safely applied.