



## ROUNDWORM INFECTION

### What are roundworms?

As their name implies, these are worms which have round bodies. On average, they are about 7-12 cm (3-5 inches) long. They live in the dog's intestines and consume partially digested food. Unlike hookworms, they do not attach to the intestinal wall; they move freely in their food, the contents of the small intestine. Roundworms, sometimes called ascarids, pass moderate numbers of microscopic eggs which are passed in the dog's faeces and can be detected by microscopic examination.

### How did my dog get roundworms?

Bitches that have had roundworms at any time in the past can transmit them to their puppies before birth. This is true even if the bitch is not passing roundworm eggs in the faeces because roundworm larvae (immature worms) encyst in the mother's muscle tissue and are not detected by our tests for adult worms. These encysted larvae are mobilised by changes in the bitch's hormonal status as a result of pregnancy and migrate across the placenta into the foetal tissues. They ultimately mature in the puppy's bowel. Another major source of roundworm infection for puppies is the mother's milk. Roundworm larvae may be present in the mother's mammary glands and milk throughout the period of nursing the puppies.

Both puppies and adult dogs may become infected by swallowing roundworm eggs which contain infective larvae. The larvae hatch out 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 dog's faeces, and the life cycle of the parasite is completed.

Obviously, roundworm eggs passed in one dog's faeces are infectious to other dogs. Interestingly, a large number of other animal species have been found to harbour roundworms and represent potential sources of infection for dogs. These include cockroaches, earthworms, chickens, and rodents.

### What kinds of problems do roundworms cause for my dog?

They are not highly pathogenic (harmful) to adult dogs, but large numbers can cause weight loss and a pot-bellied appearance to puppies and weakness in adults. Decreased appetite, vomiting or diarrhoea will be observed on occasion. Puppies will sometimes die with serious roundworm infections often due to obstruction of the bowel due to the mass of roundworms.

### **How is roundworm infection diagnosed?**

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

### **How are roundworms treated?**

Treatment is not complicated. Several very safe and effective drugs are available to kill roundworms in the intestine. Some of these drugs temporarily anaesthetise the worms so that they pass out of the dog with a normal bowel movement. The live or sometimes dead worms are found in the faeces. Because of their size, they are easily seen. At least two or three treatments are needed; they are typically performed at 2-4 week intervals. None of these treatments will kill the immature forms of the worm or the migrating larvae.

The eggs are highly resistant to most commonly used disinfectants and to even harsh environmental conditions. Therefore, removal of the dog's faeces is the most effective means of preventing reinfection. A 1% solution of household bleach can be used to remove the sticky outer coating of the eggs, making it easier to rinse them away. This does not, however, kill the eggs. Remember the obvious limitations about where bleach may be safely applied.

### **Are canine roundworms infectious to people?**

Yes. The roundworms of both dogs and cats can pose a health risk for humans. Children in particular are at risk should they become infected. A variety of organs may be affected as the larvae migrate through the body but the main danger is that the larvae migrate to the eye where they can cause blindness. In suitable environments, the eggs may remain infective to humans (and to dogs) for years.

### **What can be done to control roundworm infection in dogs and to prevent human infection?**

1. Pregnant bitches should be dewormed in late pregnancy (after the 6th week when the encysted larva will be migrating into the bowel, both of the bitch and

the unborn puppies. This will help to reduce potential contamination of the environment for newborn puppies.

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 veterinary surgeon.
3. Prompt deworming should be given when any parasites are detected; periodic deworming may be appropriate for dogs at high risk for reinfection. Adult dogs remain susceptible to reinfection with roundworms throughout their lives.
4. Dogs with predatory habits should be dewormed several times a year. Rodent control is desirable since rodents may serve as a source of roundworm infection for dogs.
5. Prompt disposal of all dog faeces is important, especially in gardens, playgrounds, and public parks.
6. Dogs should be discouraged from toileting in areas normally used by children.
7. Strict hygiene is especially important for children. Do not allow children to play in potentially contaminated environments.