

## Coccidia

Coccidia are small organisms that infect dogs, most often those in kennels, pet stores or wherever many dogs live together.

### How Dogs Get Coccidia

Adult coccidia in an infected dog will pass tiny egg-like organisms called "oocysts" through the dog's stool. These oocysts are accidentally eaten by your dog. The oocysts break open in the intestine and release new organisms which move to the intestinal wall. There these new organisms multiply rapidly and become either new oocysts to be passed out again with the stool or they return to another cell and multiply. Your infected dog is both increasing the number of internal coccidia organisms and contaminating the environment at the same time.

### Signs of Coccidia Infection

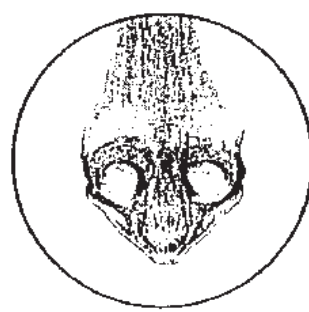
When they reproduce, coccidia destroy your dog's intestinal cells. Some can move to the liver and brain and destroy cells there.

Signs include bloody diarrhea, abdominal pain, listlessness, dehydration and weight loss. Some dogs show no outward signs of infection. As with all intestinal worm infections, puppies are most at risk.

### How to Prevent Coccidia

To minimize the risk of coccidia infections:

- Clean up stools.
- Consult with your veterinarian. Although no preventives exist, your veterinarian can prescribe medicines that kill coccidia.
- Sanitize your dog's kennel or pen. If this is not practical, change the kennel site.
- Prevent your dog from eating prey if possible. If you're a hunter, don't feed your dog prey scraps unless fully cooked.



## Tapeworms

Tapeworms are common intestinal parasites in pets. The most common tapeworm is transmitted to dogs through fleas.

### How Dogs Get Tapeworms

Your dog becomes infected with tapeworms by eating fleas, or rabbits, mice, rats and other animals that carry tapeworm larvae. Adult tapeworms live in your dog's intestine and release segments filled with eggs through the stool.

Tapeworm eggs are often consumed by fleas, making them carriers. An infection occurs when your dog eats the infected fleas. The tapeworm larvae develop into adults in your dog's intestine and shed more egg segments.

### Signs of Tapeworm Infection

Tapeworms irritate your pet's intestine and reduce food absorption. They can be passed on to humans (by accidentally eating an infected flea), but they don't pose a significant human threat.

### How to Prevent Tapeworms

To minimize tapeworm infections:

- If your dog is exposed to fleas or if it hunts outside, regularly look for tapeworm segments in your dog's stool. In a fresh stool, these segments may be alive and moving. In older stools, or around the dog's bedding, they look like grains of rice. If your dog has fleas, he is at risk of a tapeworm problem.
- Begin a flea-control program to prevent flea-carried tapeworm infections. Follow a total flea control program, including pet sprays, dips and shampoos. Treat indoors and out with flea products.
- Try to prevent your dog from hunting and eating prey.
- Unfortunately, no tapeworm preventives are available. See your veterinarian about regular treatment of your pet if you live in a flea-problem area or if your dog roams freely.

# Your Dog's Diagnosis:

Your pet has been diagnosed with the following internal parasites:

- Roundworms
- Hookworms
- Whipworms
- Coccidia
- Tapeworms

### Immediate Treatment/Instructions:

### Future Prevention Program/Instructions:

All Animal Clinic  
18001 Euclid Avenue  
Cleveland, OH 44112-1105  
(216) 531-PETS

Shaker Animal Clinic  
3612 Lee Rd. 44120-5114  
(216) 561-PETS

All Creatures Animal Clinic  
834 E. 152nd St. 44110-3002  
(216) 249-PETS



## Roundworms

Nearly all puppies have roundworms. In many areas of the country, up to 70% of adult dogs are also infected.

### How Dogs Get Roundworms

Infection usually begins when your dog accidentally swallows roundworm eggs in soil. These eggs hatch into tiny worms that move from your dog's intestine to its liver and lungs, then back to the intestine where they mature. The adult roundworm lays eggs that are passed in your dog's stool to the soil.

Female dogs can also pass roundworms to their unborn puppies or to nursing pups.

### Signs of Roundworm Infection

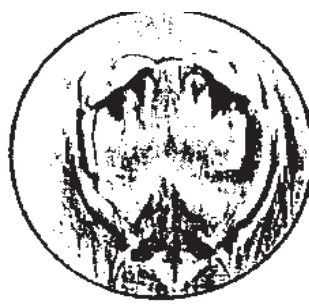
Left untreated, roundworms can cause a potbelly and diarrhea. Vomiting, a rough coat and poor growth are other signs. Heavy infections damage your dog's liver, lungs and brain. Death is possible.

Canine roundworms sometimes infect people. Humans contract the disease by touching their mouths with hands contaminated by roundworm eggs in the soil.

### How to Prevent Roundworms

To control roundworms in your dog and limit your family's exposure:

- Take puppies to your veterinarian at an early age. Follow your veterinarian's advice on treatment and follow-up visits.
- Have your veterinarian do an annual stool test on your dog after one year of age.
- Ask your veterinarian about daily medications that remove parasites and reduce the risk of reinfection.
- Never feed your pet on the ground. Feed and water only in clean dishes.
- Always clean up your dog's stools to reduce soil contamination.
- Wash hands after working in dirt that might be soiled by dogs. Instruct children to routinely wash their hands after playing outside.



## Hookworms

Hookworms are tiny, threadlike parasites that affect puppies and adult dogs. They are a particular problem in areas with warm, moist, sandy soil.

### How Dogs Get Hookworms

The cycle begins when hookworm eggs are passed in dog stools to the soil. Your dog can swallow the young hookworms or they can penetrate its skin, usually through the foot. Like roundworms, hookworms are also passed from female dogs to their puppies.

Hookworms present a slight risk to humans if larvae (young hookworms) in the soil contact skin. Painful skin sores can result.

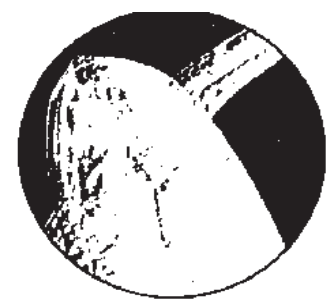
### Signs of Hookworm Infection

Hookworms feed on blood and tissue by piercing your dog's intestinal lining with tooth-like hooks. As a result, hookworms can cause severe blood loss. As few as 100 hookworms can kill a puppy. Dogs with heavy infections often have bloody diarrhea. Other signs include anemia, dehydration and apparent weakness. Some puppies show no outward signs of infection.

### How to Prevent Hookworms

To reduce the risk of hookworms:

- Take puppies to your veterinarian at an early age. Follow your veterinarian's advice on medicine and follow-up visits.
- Ask about products which help prevent hookworms.
- Provide your veterinarian with your dog's stool sample at least once a year.
- Don't feed your pet on the ground. Use only clean food and water dishes. To kill hookworms in your yard, use sodium borate (10 pounds per 100 square feet).
- Clean up dog stools before they can break down in the soil.
- Wash hands before eating. This is especially important for children.



## Whipworms

Dogs confined to small, outside areas are at highest risk of having whipworms.

### How Dogs Get Whipworms

Whipworm infection occurs when your dog swallows whipworm eggs. After hatching in the small intestine, whipworm larvae move to the large intestine where they mature. Here, adult worms lay eggs which are passed in your dog's stool to contaminate the soil.

### Signs of Whipworm Infection

Light infections of whipworms are difficult to diagnose, but they can lead to more serious problems. Large numbers of whipworms irritate the lining of your dog's intestine, causing weight loss and pain. Watery, bloody stools may result. Severe infections can cause life-threatening dehydration and anemia.

Whipworms are not dangerous to people. But once dogs become infected, whipworms are difficult to eliminate without medication programs.

### How to Prevent Whipworms

To protect your pet from whipworms after your veterinarian's treatment:

- If your dog returns to the same infected ground, treatments will be required every three months. A new site is preferred.
- If your pet lives in a pen with a washable surface, sanitize the area before returning your dog to its quarters.
- Don't feed your dog on the ground. Feed and water only in clean dishes.
- Ask your veterinarian for medicines that remove and control whipworms. A daily preventive program should be started—both through medication and daily cleanup of dog stools.