

Toxocariasis

Disease Vectors

Toxocariasis is an infection that can spread from animals to humans, which is caused by parasitic roundworms commonly found in the intestine of dogs (*Toxocara canis*) and cats (*Toxocara cati*). Dogs and cats infected with *Toxocara* can shed *Toxocara* eggs in their feces. Adults and children can become infected by accidentally swallowing dirt that has been contaminated with dog or cat feces that contain infectious *Toxocara* eggs. People can also get infected from eating undercooked meat containing *Toxocara* larvae (immature worms), although this is rare.

The most common *Toxocara* parasite of concern to humans is *T. canis*, which puppies usually contract from their mother before birth or from her milk. The larvae mature rapidly in the puppy's intestine; when the puppy is 3 or 4 weeks old, the worms begin to produce large numbers of eggs that contaminate the environment through the puppy's feces. After the eggs pass into the environment, it takes about 2 to 4 weeks for infective larvae to develop in the eggs. If a person ingests one of these infective eggs, they can get toxocariasis. Toxocariasis is not spread person-to-person like a cold or the flu.

Symptoms, Diagnosis & Treatment

Adult roundworms live in the affected cat or dog's intestines. Many cats and dogs do not have signs of infection; however, cats and dogs with heavy roundworm infections, especially puppies, can have diarrhea, vomiting, weight loss, dull hair, and a potbellied appearance. Kittens or puppies may cough if the roundworm larvae move into the lungs. Pet owners may notice the adult roundworms in their cat or dog's feces or vomit. The roundworms will appear white or light brown in color and may be several inches long. If you are concerned that your pet may have roundworms, contact your veterinarian. They may take a stool sample, and a roundworm diagnosis is confirmed if eggs are visible in the feces under a microscope.

Many people infected with *Toxocara* do not have symptoms and do not ever get sick. Some people may get sick from the infection and develop the following:

- Ocular toxocariasis: Ocular toxocariasis occurs when *Toxocara* larvae migrate to the eye. Symptoms and signs of ocular toxocariasis include vision loss, eye inflammation or damage to the retina. Typically, only one eye is affected.
- Visceral toxocariasis: Visceral toxocariasis occurs when *Toxocara* larvae migrate to various body organs, such as the liver or central nervous system. Symptoms of visceral toxocariasis may include fever, fatigue, coughing, wheezing, or abdominal pain.

In most cases, *Toxocara* infections are not serious, and many people, especially adults infected by a small number of larvae (immature worms), may not notice any symptoms. Severe cases are rare, but are more likely to occur in young children, who often play in dirt or eat dirt contaminated by dog or cat feces. If you think you or your child may have toxocariasis, you should see your health care provider.

Toxocariasis can be difficult to diagnose because the symptoms of toxocariasis are similar to those of other infections. A blood test is available that looks for evidence of infection with *Toxocara* larvae. In addition to the blood test, diagnosis of toxocariasis includes identifying the presence of typical clinical signs of visceral toxocariasis or ocular toxocariasis and a compatible exposure history. Visceral toxocariasis is treated with antiparasitic drugs. Treatment of ocular toxocariasis is more difficult and usually consists of measures to prevent progressive damage to the eye.

Prevention

- Have puppies and kittens dewormed by a veterinarian at an early age. Puppies and kittens may need to be dewormed more than once. Follow your veterinarian's advice on how frequently puppies and kittens need to be tested and treated.
- Start or keep your pets on a medication program that prevents, treats, and controls worms. Your veterinarian can recommend treatments to eliminate and help prevent these worm infections. Since these products are available in many forms, you and your veterinarian can choose which one works best for your dog or cat.
- Wash your hands with soap and water after playing with your pets or other animals, after outdoor activities, and before handling food or eating.
- Teach children the importance of washing hands to prevent infection.
- Cover sandboxes and restrict animal access to play areas.
- Teach children that it is dangerous to eat dirt or soil.
- Do not allow children to play in areas that are soiled with pet or other animal feces.
- Clean your pet's living area at least once a week. Feces should be either buried or bagged and disposed of in the trash. Wash your hands after handling pet waste.

References

- <https://www.cdc.gov/parasites/toxocariasis/index.html>
- https://www.cdc.gov/parasites/toxocariasis/resources/toxocariasis_fact_sheet.pdf
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