

Toxocariasis

Toxocariasis is a preventable parasitic infection caused by the larval form of the dog or cat roundworms *Toxocara canis* and *Toxocara cati*. *Toxocara* eggs are found in dog or cat feces. After someone accidentally ingests *Toxocara* eggs, the larvae hatch and travel through the bloodstream into organs and other tissues. This often causes fever and coughing, and sometimes leads to severe illness, including inflammation of the liver or blindness.

Two forms of toxocariasis are of most concern. Ocular toxocariasis results from movement of the parasite into the eye, and visceral toxocariasis results from movement of the parasite through the organs or tissues. Ocular toxocariasis causes visual impairment that can be permanent, including blindness. Visceral toxocariasis can lead to severe damage to the liver and other organs.

Toxocariasis is considered a Neglected Parasitic Infection, one of a group of diseases that results in significant illness among those who are infected and is often poorly understood by health care providers.

How people get toxocariasis:

People can acquire toxocariasis if they accidentally ingest dirt containing *Toxocara* eggs (for example, after gardening or playing in dirt contaminated with infected dog or cat feces). Once inside the body, roundworm larvae hatch from the eggs and find their way to various parts of the body through the bloodstream. Although rare, people can also become infected by eating undercooked or raw meat (for example, raw duck livers) from an infected animal.

Prevention of toxocariasis:

Toxocariasis is an entirely preventable disease. Prevention measures greatly reduce the risk of toxocariasis. These measures include:

- Controlling *Toxocara* infection in dogs and cats through deworming (consult a veterinarian)
- Reducing the risk of contact with the larvae by promptly disposing of dog and cat feces to a place away from where people work or play
- Hand washing before handling food
- Hand washing after playing with pets, picking up dog feces, or handling cat litter

Risk factors for acquiring toxocariasis:

People are at higher risk for getting toxocariasis if they:

- Own a dog
- Are under the age of 20 (younger people have more frequent contact with soil)
- Live in hot, humid regions where the roundworm eggs remain alive in the soil for long periods of time

In general, children from socioeconomically disadvantaged populations and minority groups have the greatest risk of developing toxocariasis. However, anyone who is exposed to pet feces can get the disease.



Why be concerned about toxocariasis in the United States?

According to 1988-1994 NHANES III data, approximately 13.9% of the U.S. population has antibodies to *Toxocara*. This suggests that tens of millions of Americans may have been exposed to the *Toxocara* parasite, but it is not known how many ever got sick from the infection. A recent study documented significant vision loss and blindness in children with ocular toxocariasis.

What is CDC doing to address toxocariasis?

- CDC, in partnership with the American Academy of Ophthalmology, determined how often ophthalmologists see patients with ocular toxocariasis by administering a web-based survey to collect data on patients with the disease.
- CDC is working to improve health care provider awareness of toxocariasis, as lack of understanding of the disease may lead to unrecognized cases. These efforts include outreach to pediatricians.
- CDC is working in partnership with state and local health departments to:
 - » Assist in developing community policies for pet hygiene
 - » Increase efforts to control parasites in dogs and cats
 - » Advise health professionals to help them better care for patients with toxocariasis

What more needs to be done:

CDC is working to address toxocariasis infection in the United States. However, the following, in collaboration with outside partners, still needs to be achieved:

1. Determine the number of people, especially children, with clinical disease caused by toxocariasis. This will allow us to better monitor the impact of efforts to control the disease.
2. Create new diagnostic tests and treatment protocols to quickly and accurately diagnose and treat cases of toxocariasis.
3. Continue to support state health department efforts to prevent the spread of toxocariasis in the United States.

For more information on Neglected Parasitic Infections, please visit www.cdc.gov/parasites/npi.html

