



# Toxoplasmosis

Toxoplasmosis is a disease caused by the single-celled parasite, *Toxoplasma gondii*. This parasite needs cats to finish its lifecycle but can infect any mammal, including humans. Many cats do not show any signs of the disease, while others can become very sick. In humans, this parasite can cause birth defects.

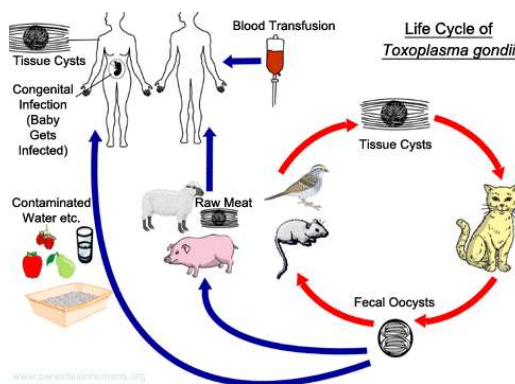
## *Toxoplasma gondii*

This parasite has three life stages, all of which are infectious. In all mammals, after ingestion, the parasite invades the small intestines and then spreads to other organs including the central nervous system, muscles, liver, lungs, and eyes. It can form cysts in muscle tissue and stay there until eaten by another animal. In cats, the parasite is able to complete its life cycle and release eggs into the cat's feces.



## Transmission

Since every stage of this parasite is infectious, there are multiple ways to get toxoplasmosis. Routes of infection are ingestion of eggs in contaminated feces (aka cat poop), ingestion of contaminated tissue, usually raw meat or eating prey, containing cysts, or transplacentally (via the womb). Cats commonly get the disease from eating infected prey while dogs are more likely to be born with the disease.



For humans, handling of raw meat or cat feces (cleaning the litter box) is the usual source.

## Signs

Most cats will not show any outward signs of the disease. However, they can still occasionally shed the parasite in their feces.

The most common signs for cats and dogs are vague and include anorexia, vomiting, diarrhea, weight loss, and tiredness (lethargy). They also can have difficulty breathing, lameness, eye issues, and seizures. Infected pregnant cats may give birth to stillborn kittens.

## Diagnosis

Since signs of toxoplasmosis look like many other diseases, diagnosis can be difficult. Blood tests, x-rays, and a fecal screening will help to rule out other diseases. A blood titer checks if the body has developed a reaction to the parasite and produced antibodies. This requires several samples over a 2-3 week period and is not reliable by itself.

Diagnosis of the disease is determined using clinical signs, test results, and response to anti-toxoplasmosis drugs. A PCR test (to look for DNA of the parasite) can also be performed but may be cost prohibitive.

About 30% of cats and dogs will have a positive toxoplasmosis titer. This does not mean they have the disease. A titer just tests the body's response to the parasite, not the parasite itself. A positive titer can mean the cat was exposed to toxoplasmosis and did not get sick resulting in the cat being protected against it. A healthy cat with a positive titer is of little risk to his owner.

A cat with a negative titer does not have antibodies against the disease and is at a greater risk of getting sick. Thus, a cat with a negative titer actually poses a greater danger to his owner, especially if he goes outside where he can eat infected prey.

## ***Treatment***

Clindamycin, an antibiotic, is the treatment of choice for cats and dogs. It needs to be given twice daily for 2-4 weeks. Some side effects can include anorexia, vomiting, and diarrhea.

Exams are repeated 2 days and 7 days after starting the medicine and again 2 weeks after the signs have resolved (before stopping the medicine). It's important to keep giving the medicine until the disease is completely gone and that can take 2 weeks after your pet looks healthy again.

## ***Human Prevention***

Immunocompromised people are more susceptible to getting toxoplasmosis. With proper precautions, though, they can usually continue to live with their cats. Follow these steps to help prevent toxoplasmosis.

- Litter boxes should be scooped daily (it takes 1-5 days after being shed to become infective)
- Disinfect litter boxes weekly with boiling water
- Keep cats indoors to prevent them from eating prey
- Cover outdoor sandboxes to prevent cats from using them as a litter box
- Wash hands and surfaces after handling raw meat or cleaning litter boxes
- Wear gloves when gardening
- Wash vegetables and hands thoroughly to prevent contamination from the soil
- Do not eat undercooked meat or unpasteurized dairy products
- Boil drinking water from unreliable sources
- Pregnant women need to be extra careful in following the guidelines and have someone else change the litter box

