

Toxoplasmosis in Cats



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Toxoplasmosis is a disease caused by the single-celled parasite Toxoplasma Gondii (T. gondii). Infection is widespread throughout the world but *T gondii* is a very well adapted parasite, meaning it rarely causes significant disease in an infected host. Out of all the zoonotic diseases which humans can get from cats, Toxoplasmosis is the most well- known and publicized one.

Toxoplasma Gondii (a coccidian parasite) infects nearly all warm-blooded animals, including pets and humans. The Center for Diseases Control and Prevention (CDC) has identified Toxoplasmosis as one of the five neglected parasitic infections of people due to its high prevalence. It is estimated that over 40 million people in the U.S are infected with toxoplasmosis.

T. gondii is unusual in that virtually any warm-blooded animal can be infected with the parasite, but it is cats that are required to complete the life-cycle of T gondii. The life-cycle of T gondii is complex and involves two types of hosts:

- **Definitive** hosts in which the parasite reproduces and forms eggs (called oocysts)
- Intermediate hosts in which it reproduces by making clones of itself, which cluster insider cysts

Wild and domestic cats are the ONLY *definitive* hosts for *T. gondii*. When a cat ingests infected prey or raw meat, the parasite is released from cysts into the cat's digestive tract, where it reproduces and produces oocysts. Infected cats then excrete these oocysts in their feces by the millions.

Although cats are important in the life-cycle and epidemiology of *T gondii* infections, human infections are often nothing to do with the cat itself and often result from ingestion of undercooked meat containing the parasite.

People and animals don't usually show symptoms during or after infection, but those who are pregnant or have weakened immune systems face greater health risk. Infection usually lasts a few weeks, and most humans and animals become immune afterward.

How Does Toxoplasmosis Spread in Cats?

Cats usually get toxoplasmosis from eating wild animals or undercooked meat infected with the parasite. *T. gondii* also lives inside infected cats' feces, where it can infect other cats or animals that swallow it. Infection with *T. gondii*

is much more common in outdoor cats that are active hunters. In general, depending in their lifestyle, between 20%-60% of cats will be infected with *T. gondii*, but very few of these will ever show clinical signs.

Signs and Symptoms of Toxoplasmosis in Cats

Most cats infected with *T. gondii* show no signs of disease. Occasionally, however, a clinical disease called Toxoplasmosis occurs. The disease is more likely to occur in cats with suppressed immune systems, including young kittens and cats with feline leukemia (FeLV) or feline immunodeficiency virus (FIV).

Although infection with *T. gondii* rarely causes disease in cats, signs of illness can sometimes be seen and these include:

- Fever
- Fatigue
- Diarrhea
- Loss of appetite
- Trouble chewing or swallowing food
- Weight loss
- Lethargy
- Pneumonia (causing breathing difficulties)
- Inflammatory eye problems (uveitis and retinitis)
- Abnormal pupil size and responsiveness to light
- Blindness
- Lack of coordination
- Heightened sensitivity to the touch
- Personality changes
- Circling
- Head pressing
- Ear twitching
- Seizures
- Loss of control over urination and defecation
- Liver disease (hepatitis) causing jaundice

Diagnosis

Toxoplasmosis is usually diagnosed based on a cat's history, clinical signs, and laboratory test results. Measurements of two types of antibodies (chemicals the immune system creates to kill outside germs and infections) to T. gondii in the cat's blood -IgC and IgM — can help to diagnose the disease.

The presence of IgC antibodies suggest that the cat has been previously infected and is most likely immune to the organism. These cats are no longer a source of infection for other animals or people. In contrast, the presence of IgM antibodies, suggest an active infection.

Treatment

Feline treatments for Toxoplasmosis usually involve an oral antibiotic called clindamycin, either alone or in combination with corticosteroids if there is significant inflammation of the eyes or central nervous system. A veterinarian may also prescribe steroid creams for your cat's eyes. These medications should help symptoms fade within a few days. Treatment should ideally be started immediately after diagnosis and continued for several days after signs have disappeared. If your cat doesn't get better, a different illness might be causing them.

Prognosis

The prognosis for cats diagnosed with toxoplasmosis depends upon the organs or systems affected, the time between infection and treatment, and initial responses to therapy. Generally, cats with central nervous system and eye symptoms respond to treatment more slowly, but have more favorable prognosis if their clinical signs improve within 2-3 days of starting therapy. The prognosis for cats with toxoplasmosis affecting the liver or lungs are usually poor.

Preventing Toxoplasmosis in Cats

Make sure your cat eats only properly cooked (appropriate heating inactivates any *T. gondii* cysts that may be present). Preferably cats should be fed commercially prepared/packaged wet or dry food, and not wild rodents or other prey. Keeping them indoors will also reduce their chance of coming into contact with the parasite. Cats should also be denied access to facilities housing food-producing livestock and food storage areas. Last but not least, clean their litter box daily to avoid your cat touching other cat's feces, which may be contaminated.



EndFIP® has a vision: every cat a healthy cat. This vision expands beyond the boundaries of FIP. The focus of our group is to educate, inform and inspire people to create lasting solution to prevent cats from becoming infected with feline coronavirus, thus preventing FIP altogether. We also like to provide information about other issues affecting cats worldwide.

All of us at EndFIP® are dedicated to keeping cats healthy and happy.

For information about Toxoplasmosis in humans, please visit: https://www.cdc.gov/parasites/toxoplasmosis/index.html



