

TOXOPLASMOSIS

(Adapted from Veterinary Information Network www.vin.com)

What is Toxoplasmosis?

Toxoplasmosis is the disease syndrome caused by a protozoan organism called *Toxoplasma gondii*. It affects most animals - most notably sheep, cats, and humans - but even insects, fish, and earthworms may be carriers. Because of the risk to an unborn child, many medical doctors go so far as to recommend that pregnant women do not keep cats as pets.

What is the risk to an unborn child?

A human with an acute *Toxoplasma* infection experiences varying degrees of illness: fever, swollen lymph nodes, muscle stiffness, joint pain, swollen liver and/or spleen (manifested as a sore upper abdomen). These symptoms may be so mild as to go unnoticed. Illness lasts 1 to 12 weeks and is often dismissed as a bad cold or mononucleosis.

However, if the person infected is a pregnant woman, the *Toxoplasma* organism may cross the placenta. The amount of damage done depends on the stage of pregnancy at the time of infection. Infection in early pregnancy may result in miscarriage or stillbirth; it may also result in a child with varying degrees of blindness (due to inflamed retina) and/or various severe neurological conditions including hydrocephalus, microcephaly, and retardation. Sometimes problems are not evident at birth and show up late in life.

Fortunately, only 30 to 40% of infections in pregnant women result in damage to the fetus, the most common problem being eye disease.

The problems described above occur only when someone is infected with *Toxoplasma* for the first time; that is, a person who has already had the infection is not likely to get sick again nor is she likely to transmit the organism to an unborn child. (It is estimated that one third of the U.S. population has already had Toxoplasmosis.) In general, people who experience more than one acute episode are severely immunosuppressed (as from HIV or cancer therapy.)

How do people get this disease?

There are two basic forms of *Toxoplasma* organism: the oocyst, which is shed in cat feces, and the *Toxoplasma* tissue stages, which live in the flesh of such food animals as hogs and lambs. A person who inadvertently eats either of these forms of *Toxoplasma* is liable to become infected. Raw goat's milk is also an important source of infection.

If my cat has *Toxoplasma*, won't he be obviously sick?

Not necessarily. The form of feline infection that is contagious to humans is the intestinal form in which a cat sheds oocysts in its feces. The cat may or may not show diarrhea.

Cats may experience an acute illness similar to that which humans experience; however, in adult cats, symptoms are usually mild and go unnoticed. This form of infection is not contagious to humans, though a pregnant cat could transmit the disease to her kittens.

How is my cat a risk to me?

The cat has probably been over-emphasized as a carrier of *Toxoplasma*; most human infections result from eating tissue stages of *Toxoplasma* in undercooked meat.

Usually a cat will only shed oocysts after the first infection of *Toxoplasma*; a cat that has already had a *Toxoplasma* infection usually will not re-shed the oocysts unless its immune system has been compromised (as through the feline leukemia virus infection or drugs.) Cats shedding oocysts generally do so for 5 to 14 days.

Oocysts require 24 to 48 hours to sporulate --- that is, grow into a form that is dangerous to people. For this reason, the cat's litter box should be changed daily or twice daily. Dangerous oocysts can be contacted when gardening. Note that freezing weather will not reliably kill dangerous oocysts in soil nor will freezing meat kill the dangerous tissue forms.

Dogs that eat cat feces can also shed oocysts for 2 days afterwards.

Your cat may be tested to see if she has already had Toxoplasmosis; a cat that has already been infected is unlikely to shed dangerous oocysts in the future.

The cat itself is not a source of oocysts: only its feces are.

How can I avoid infection?

- Probably the most important thing is to be careful when cooking raw meat, especially lamb and pork. **DO NOT EAT MEAT OR TASTE MEAT BEFORE IT IS FINISHED COOKING.** Microwaving does not heat evenly enough to reliably kill the organism.
- Wash your hands after handling your cat and the litter box.
- Do not allow your cat to eat raw meat. Feed only commercial cat food and do not allow your cat outside to hunt.
- Change the litter box daily or twice daily. It is best of course, if someone else changes the box while you are pregnant.
- Do not dump the litter box into the backyard. Always wear rubber gloves when gardening.
- Do not allow cats access to barns where food animals are kept. This is how food animals get infected.
- Do not drink raw milk, especially goat's milk

Although it is possible to get Toxoplasmosis from cats, no correlation has been found between cat ownership and *Toxoplasma* infection. There is, however, a strong association between *Toxoplasma* infection and working with raw meat as in a slaughterhouse or as a butcher. Be careful handling raw meat.

