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# Toxoplasmosis and Your Cat

The causative agent for toxoplasmosis is *Toxoplasma gondii* an intracellular, coccidian parasite that is widespread in animals and humans. Only cats and other members of the *Felidae* family serve as the definitive hosts. Clinical disease in cats, however, is a relatively unusual occurrence.

In the early 1970s two articles appeared in popular consumer magazines linking toxoplasmosis and cats. Since the publication of these two articles, cat owners frequently inquire about the human health implications of their pets.

## LIFE CYCLE OF THE PARASITE

*Toxoplasma gondii* has a complex life cycle. Three infective forms or stages (tachyzoites, bradyzoites, and oocysts) of *T. gondii* may infect mammals without completion of the life cycle. The oocyst is probably the most important stage relative to transmission from cats to man in the United States. This form (oocyst) is passed in the feces of susceptible cats following ingestion of any of the three infective forms. Carnivorism, especially consumption of wild rodents or meat containing bradyzoites, is the usual route for cats to become infected.

Four to five days following ingestion of *Toxoplasma* cysts containing tachyzoites or bradyzoites, oocysts appear in the feces and continue to be excreted—often in enormous numbers—for 10 to 20 days. It has been determined that a cat eating a mouse has the potential for producing roughly 1 billion oocysts. The oocysts passed in the feces sporulate (develop) on the ground in two to four days and are infective to man and other mammals. The sporulated oocysts are very resistant and may survive for several months under favorable conditions.

## TOXOPLASMOSES AND CATS

It is estimated that at any one time approximately one percent of all cats will be shedding *Toxoplasma* oocysts in their feces. Reshedding of oocysts infrequently follows reinfection by *Toxoplasma* cysts or during periods of undue stress caused by malnutrition, parasitism, or disease.

Toxoplasmosis in cats is characterized by widespread infection, but clinical signs are rare. When signs of *T. gondii* infections are seen in felines they appear primarily in kittens. These signs may vary greatly and mimic various other disease situations. The diagnosis is best left to your veterinarian.

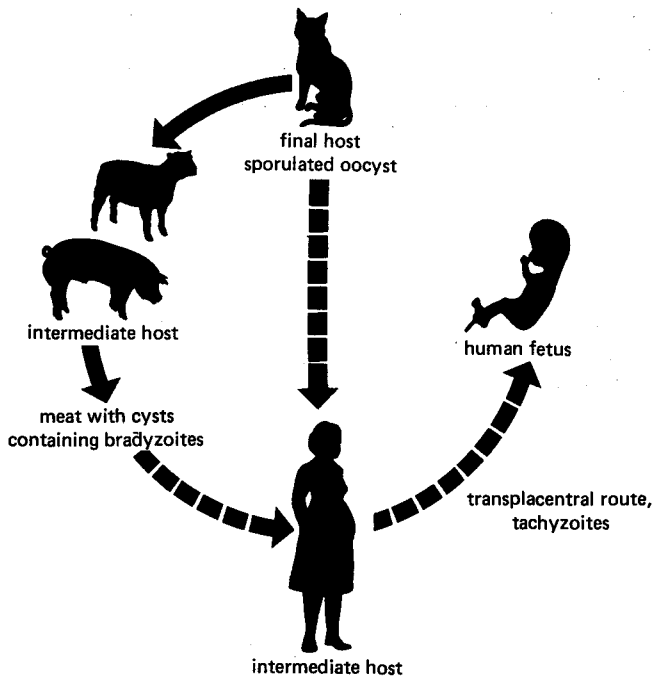
## HUMAN TOXOPLASMOSES

Infection in man is rather common, but clinical disease is rare. The effects of toxoplasmosis vary widely, ranging from

an asymptomatic infection to severe nervous disorders and occasionally death. Surveys have established that up to one third of the population in some areas of the United States have antibodies to *T. gondii*; this usually only indicates exposure to the parasite. The absence of significant numbers of suspected or confirmed cases indicates that toxoplasmosis is not a recognized cause of significant human illness or death.

The human form of the disease may be considered in two categories: congenital (present at birth) and acquired (after birth). Both congenital and acquired infections are most often asymptomatic. In man, toxoplasmosis is easily mistaken for other ailments. Frequently it causes a slight fever, a washed-out feeling, and swollen lymph glands—much like a severe case of "flu" or perhaps infectious mononucleosis. A few victims may suffer more severe damage such

Toxoplasmosis Life Cycle



as blindness or destruction of the brain and other parts of the central nervous system.

The currently recognized common sources of human toxoplasmosis are: 1) congenital infection, 2) raw or uncooked



meat, and 3) feces of infected cats. The most serious danger is congenitally acquired toxoplasmosis passed to an unborn baby by a mother who becomes infected with the disease during the last five or six months of pregnancy. Cases of severe birth defects including blindness and brain damage, stillbirths, and possibly miscarriages have been attributed to this form of the disease. So far, no cases have been reported in which an infection acquired during the first three months of pregnancy was passed on to a fetus. Studies have shown that if a woman is exposed before becoming pregnant, she is *not* likely to transmit toxoplasmosis to her unborn child.

As a rule, the clinical disease occurs sporadically and has a low incidence. Its importance in public health lies primarily in the seriousness of the congenital infection and its sequelae. In the United States it is estimated that approximately 3,000 infants are born each year with congenital toxoplasmosis. In other words, the infection is present in approximately 1 in 600 to 1 in 1,300 births, depending on where the survey is conducted. The infection is considered to be more prevalent in the hot, humid areas of the South than in the cold, dry locales of the North.

### PREVENTION AND CONTROL

As is the case with most diseases people can acquire from animals, the danger of toxoplasmosis infection probably can be controlled adequately by using a little common sense and practicing good personal hygiene.

### RECOMMENDATIONS

- Cook meat, especially lamb and pork, to 150°F throughout before eating.
- Wash hands with soap and water after handling meat.
- Never feed raw meat to cats: Feed only dry or canned cat food or cooked meat.
- Keep cats indoors; don't allow them to prey on mice or other rodents.
- Change litter boxes frequently. Flush cat feces down the toilet or burn. *Do not* use cat feces as a plant fertilizer.

- Pregnant women should avoid contact with cat feces and litter.
- Wear gloves while working in the garden.
- Cover children's sandboxes when not in use.
- If you have further concerns contact your physician.
- There is no effective treatment for *T. gondii* infection in cats.

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