**Disease Vectors**

Toxoplasmosis is caused by the protozoan parasite *Toxoplasma gondii*. Although this parasite is very common in the environment, it rarely causes symptoms in healthy people. Most human exposure is through gardening, consuming undercooked meat of infected intermediate hosts (particularly pork or lamb) or unwashed fruit and vegetables. Transmission can occur when a cat mistakes an outdoor sandbox for a litter box and children subsequently ingest oocytes from contaminated cat feces. A special case is the transmission from a pregnant woman to her unborn child, which may lead to serious medical problems.

Cats are the ultimate host for *T. gondii* (the parasite can complete its life cycle only in felines), but humans and several other animals can be infected with intermediate stages of the parasite. An infected cat will shed oocysts in its feces, starting 3-10 days after it has been exposed, continuing to shed for up to two weeks. The oocysts become infective 1-5 days after shedding. In the environment, oocysts are ingested by rodents, birds or other animals, which may become prey for cats, completing the parasite life cycle.

**Symptoms, Diagnosis and Treatment**

Most exposed people are asymptomatic. In some cases, flu-like symptoms develop (body aches, swollen lymph nodes, headache, fever, fatigue) that resolve without treatment. However, people with weakened immune system are at risk for serious complications, and their symptoms include headache, confusion, poor coordination, seizures, lung problems, and blurred vision. Pregnant women can be asymptomatic yet transmit the parasite to the unborn child resulting in stillbirth or miscarriage. Babies that survive often encounter severe symptoms that do not develop until later in life. Closely supervised medical treatment is essential for high risk patients.

Adult cats with toxoplasmosis often show no signs of illness and require no treatment. In young pets (kittens and puppies) with less developed immune systems, symptoms vary depending on which tissues are infected and include fever, diarrhea, cough, shortness of breath, itching, and seizures. Cats with feline immunodeficiency virus may develop acute generalized toxoplasmosis.

Diagnosis is based on symptoms, identification of antibodies to the infection, and microscopic tissue examination.

When a cat has an acute case of toxoplasmosis, veterinarians may prescribe anti-parasitic drugs and/or antibiotics to relieve symptoms and secondary infections; however, this treatment is not a cure, i.e., all parasites are not eliminated. Cat owners should consult with their veterinarians about treatment.

**Prevention**

**Preventing exposure of zoonotic transmission:**
- Keep cats indoors; do not allow them to hunt or roam.
- Keep outdoor sandboxes covered.
- Do not allow cats to use a garden or children's play area as their litter box.
- Feed cats only canned or dried commercial food or well-cooked table food, not raw or undercooked meats. Do not feed cats unpasteurized milk.
- Control rodent populations and other potential intermediate hosts.

**Pregnant or immunocompromised individuals:**
- Avoid changing cat litter if possible.
- Do not adopt or handle stray cats, especially kittens.
- Wear gloves while gardening; wash your hands thoroughly afterwards.

**References and Links**

Toxoplasmosis in Cats [http://www.vet.cornell.edu/fhc/health_information/brochure_toxo.cfm](http://www.vet.cornell.edu/fhc/health_information/brochure_toxo.cfm)
Mayo Clinic: [http://www.mayoclinic.org/diseases-conditions/toxoplasmosis/basics/definition/CON-20025859](http://www.mayoclinic.org/diseases-conditions/toxoplasmosis/basics/definition/CON-20025859)
WebMD.com: [http://www.webmd.com/baby/toxoplasmosis#1](http://www.webmd.com/baby/toxoplasmosis#1)