

## Occupational Health - Zoonotic Disease Fact Sheet

### TOXOPLASMOSIS

#### **KEY FACTS:**

- Toxoplasmosis is a disease that results from infection with the *Toxoplasma gondii* parasite, one of the world's most common parasites.
- Toxoplasmosis is considered to be a leading cause of death attributed to foodborne illness in the United States.
- Toxoplasmosis is considered one of the Neglected Parasitic Infections, a group of five parasitic diseases that have been targeted by CDC for public health action.

**SPECIES:** This protozoan parasite infects wild and domestic animals including birds, sheep, goats, cattle, pigs, and poultry. Cats are the most common source of the *Toxoplasma* protozoa that are transmitted to other animals or people because cats are the only animal in which the parasite can complete its life cycle.

**CAUSATIVE AGENT:** *Toxoplasma gondii* Subphylum Apicomplexa, Family Eimeriidae.

**TRANSMISSION:** Individuals can become sick with toxoplasmosis by eating raw or undercooked contaminated meat, accidental ingestion of undercooked meat from handling contaminated meat and not washing your hands, drinking water contaminated with the toxoplasmosis parasite, drinking unpasteurized goat's milk, zoonotic transmission from an infected cat, and mother to child transmission.

**DISEASE IN ANIMALS:** This parasite completes its life cycle in cats, and they are the only mammals in which this parasite is passed through the feces and into the environment as part of the life cycle. Clinical symptoms seen in cats include: lethargy, depression, weight loss, tremors, seizures, respiratory distress, vomiting, and diarrhea.

**DISEASE IN HUMANS:** The infection is very common in humans, but clinical disease is of low incidence and occurs only sporadically, typically in immune compromised individuals. Individuals who become sick usually present with influenza like symptoms, including body aches, swollen lymph nodes, headache, fever, and malaise. Persons with compromised immune systems may experience severe symptoms, including fever, confusion, headaches, and seizures. Congenital infection, which can occur in individuals with ocular disease, can result in systemic disease often with severe neuropathological changes.

**DIAGNOSIS:** According to the Centers for Disease Control, diagnosis of toxoplasmosis is typically made by serologic testing. Diagnosis can be made by direct observation of the parasite in stained tissue sections, cerebrospinal fluid, or other biopsy material. Molecular techniques that can detect the parasite's DNA in the amniotic fluid have been used in cases of possible mother-to-child transmission. *Please review current literature before prescribing diagnostic testing as recommendations may have changed.*

**TREATMENT:** Most healthy individuals do not require treatment and recover naturally from the disease. A combination of drugs are used to treat infections, including pyrimethamine plus either trisulfapyrimidines or sulfadiazine. Folinic acid avoids the hematologic effects of pyrimethamine-induced folate deficiency. *Please consult your physician for treatment options as recommendations may have changed.*

**PREVENTION/CONTROL:** Certain precautions can be taken to prevent infection with toxoplasmosis, including avoiding contact with cat feces, daily cleaning of litter pans, avoiding working in soil or gardens that could be contaminated by cats, thoroughly cooking meat, washing cooking utensils thoroughly, and not drinking unpasteurized milk. Individuals working with potentially infected animals should follow good hygiene practices, including washing hands and avoiding touching face and mouth. To prevent and control unintended infections, use uninfected animals for research, and isolate any animals used in clinical trials. Additionally, only conduct projects in laboratories with proper engineering controls and train staff members in the proper use of required personal protective equipment when they are in spaces containing live agent.

More information on Toxoplasmosis can be found on the Centers for Disease Control and Prevention website at: <https://www.cdc.gov/parasites/toxoplasmosis/>