



BASIC INFORMATION

DEFINITION

A protozoan infection found in humans and many species of mammals and birds. There are several types that occur in humans: congenital toxoplasmosis (passed from infected mother to her unborn child); ocular toxoplasmosis (also called retinochoroiditis, which usually results from congenital toxoplasmosis, but symptoms may not occur until ages 20-40); acute toxoplasmosis in a basically healthy individual; acute toxoplasmosis in an immunocompromised individual (person with AIDS, cancer or on immunosuppressant drugs).

FREQUENT SIGNS AND SYMPTOMS

- No symptoms usually (80 to 90% of patients).
- Fever.
- Fatigue.
- Swollen lymph glands.
- Muscle aches.
- Sore throat.
- Rash (sometimes).
- Retinitis (inflammation of the retina).

CAUSES

The protozoan, *Toxoplasma gondii*, usually transmitted by:

- Eating undercooked meats from infected animals.
- Cats who harbor the germ can excrete it in their stools; humans who carelessly handle cat litter (or fail to wash their hands after handling it) may become infected. Small children who eat infected soil (contaminated with dog or cat feces) can become infected.
- Blood transfusion.
- A pregnant woman who gets the infection can transmit it to her unborn child (often with severe effects).

RISK INCREASES WITH

- Immunosuppression due to illness or drugs.
- Contact with cats. The most likely sources of toxoplasmosis in cats is from eating mice, birds, and other small animals that are infected with the *Toxoplasma* parasite. For indoor cats, the most likely source is uncooked meat scraps.
- Improper food preparation.

PREVENTIVE MEASURES

- Avoid eating raw or undercooked meats or uncooked eggs or drinking unpasteurized milk. Use proper techniques for preparation and storage of meat products. Wash hands carefully after handling raw meats.
- A pregnant woman should have a laboratory blood test early in pregnancy to determine if she has antibodies to toxoplasmosis (about 55% of the U.S. population have them, which means they were infected at some time). She should also be tested again at 16-18 weeks of pregnancy to determine if she has acquired an infection, and if so, may consider a therapeutic abortion.
- Immunocompromised persons and pregnant women should avoid contact with cat feces.
- Protect children's play area, including sand boxes, from cat and dog feces.
- Change cat litter boxes daily; feed indoor cats only canned, dry or cooked meat.

EXPECTED OUTCOME

The majority of infected persons have no symptoms, and those with mild symptoms recover spontaneously with no aftereffects.

POSSIBLE COMPLICATIONS

- For pregnant female—when infection occurs early in pregnancy: miscarriage, stillbirth, various chronic disorders (seizures) and birth defects (blindness, deafness) in the newborn (some may not be apparent for years). An infection later in pregnancy usually has no ill effects.
- For immunocompromised patient—lung and heart damage, brain inflammation, recurrence.
- For non-immunocompromised patient (basically healthy)—rarely, may develop lung or brain inflammation. Younger children (under 5 years) may develop eye inflammation.



TREATMENT

GENERAL MEASURES

- Diagnosis involves a medical history, physical exam and laboratory studies of blood to detect the infection.
- Treatment is usually unnecessary for a healthy, non-pregnant individual who has no symptoms. For a child under age 5, medications will be prescribed to prevent eye complications.
- Pregnant female—your doctor will discuss the treatment available, the risks involved and the expected outcomes.
- Immunocompromised patient—treatment is with medication.
- Newborns with infection—are treated with medications (with or without symptoms as the germs can multiply after birth).
- If drugs are prescribed for you, your doctor will do frequent blood tests to monitor side effects.
- For more information, check the library or the internet.

MEDICATION

- Pyrimethamine, sulfadiazine or trisulfapyrimidines for 3 to 4 weeks and folinic acid to reduce the side effects of pyrimethamine are often prescribed.
- Corticosteroids, if necessary, for inflammation.
- Other medications are currently being evaluated.

ACTIVITY

Level of activity will be determined by severity of symptoms.

DIET

No special diet.



NOTIFY OUR OFFICE IF

- You or your child has symptoms of toxoplasmosis.
- Symptoms worsen or don't improve after diagnosis and treatment.
- New, unexplained symptoms develop. Drugs used in treatment may produce side effects.