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ФАКУЛЬТЕТ ДОВУЗОВСКОГО ОБРАЗОВАНИЯ

TOXOPLAZMOSIS



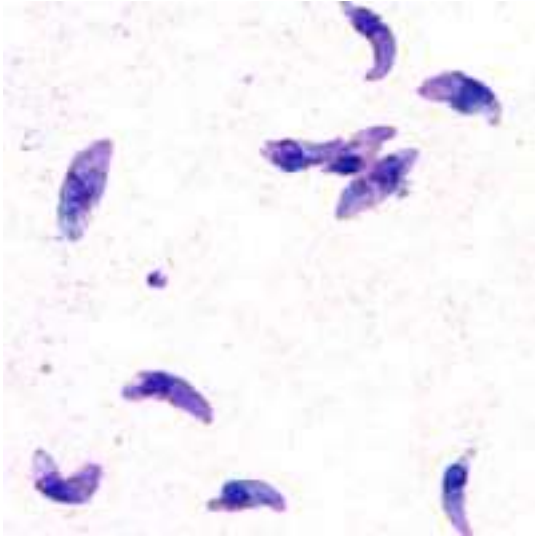
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Toxoplasmosis

T. gondii is a parasite of warm blooded animals which is present throughout the world. It is the causative agent of the diseases known as Toxoplasmosis.



Toxoplasmosis is a disease caused by the parasite *Toxoplasma gondii*. More than 60 million people in the U.S. have the parasite. Most of them don't get sick. But the parasite causes serious problems for some people. These include people with weak immune systems and babies whose mothers become infected for the first time during pregnancy. Problems can include damage to the brain, eyes and other organs.

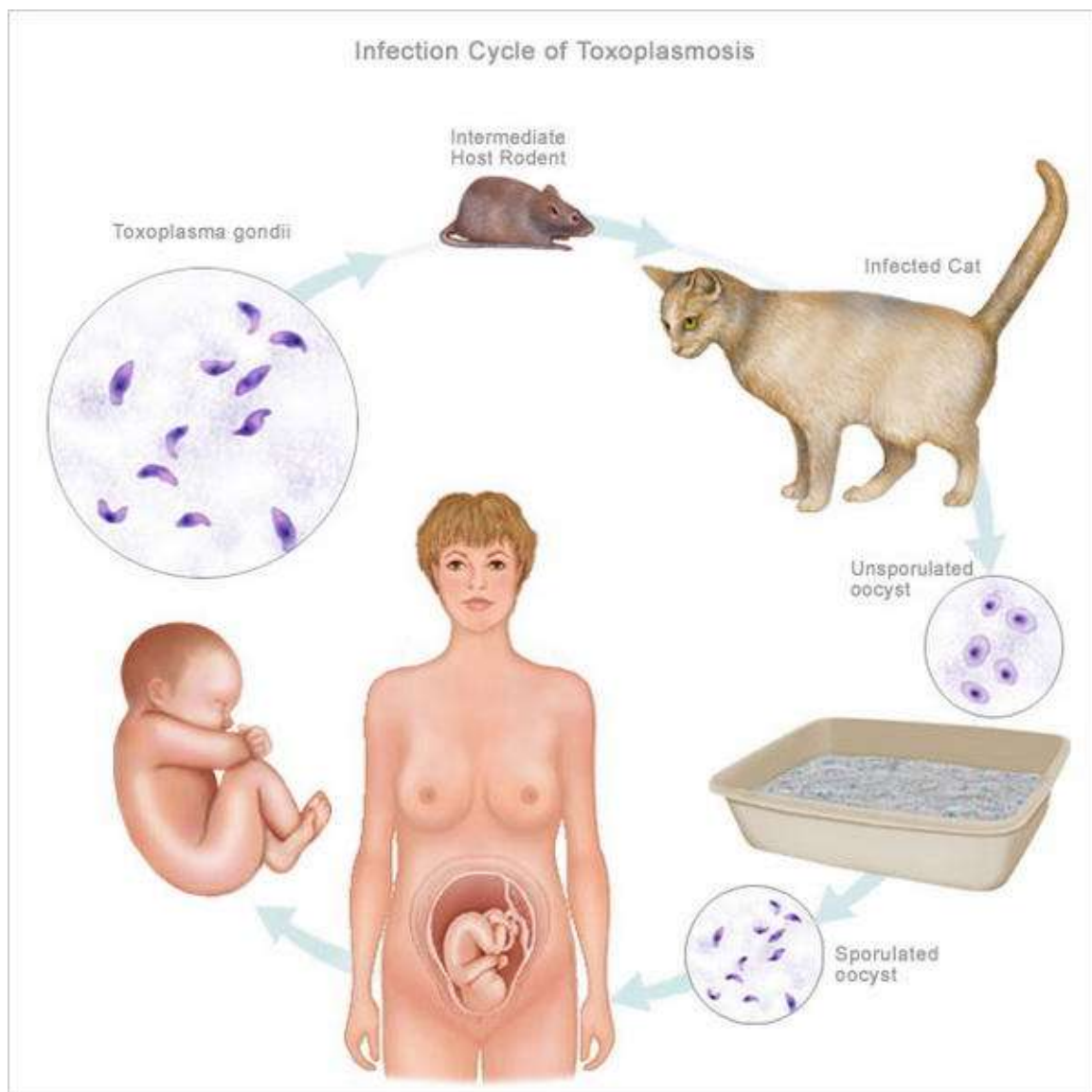
You can get toxoplasmosis from

- Waste from an infected cat
- Eating contaminated meat that is raw or not well cooked
- Using utensils or cutting boards after they've had contact with raw meat
- Drinking infected water
- Receiving an infected organ transplant or blood transfusion

Most people with toxoplasmosis don't need treatment. There are drugs to treat it for pregnant women and people with weak immune system

Life cycle of *Toxoplasma gondii*

T. gondii has a very wide range of mammalian hosts but the most important definitive host from the human point of view is the domestic cat. Within epithelial cells of the small intestine, the organisms undergo a cycle of sexual reproduction that terminates in the production of oocysts, which are passed in the faeces and are remarkably resistant to environmental damage

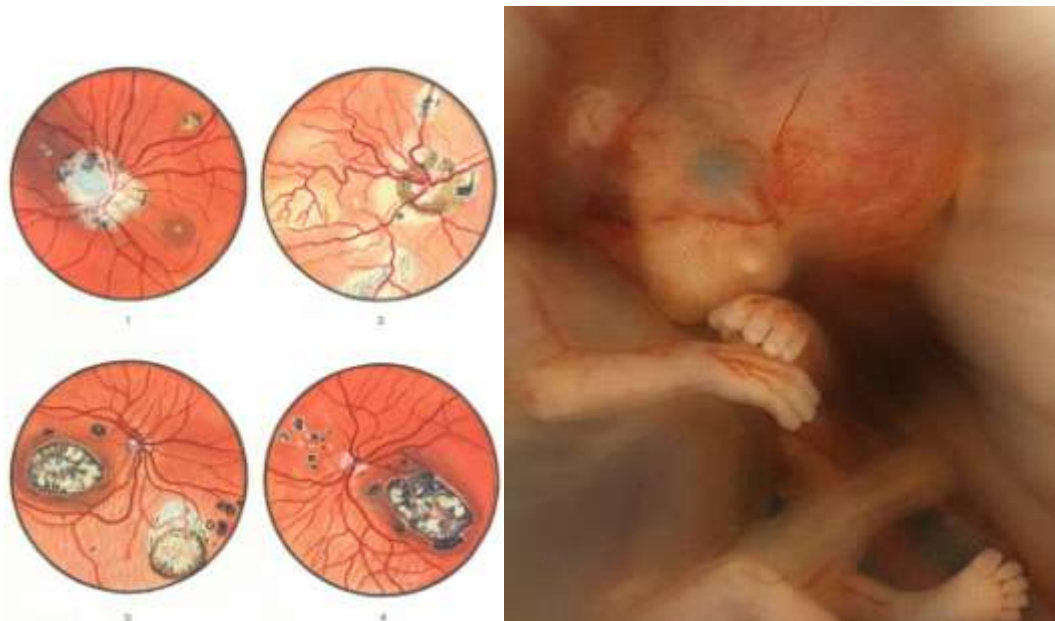


Fundal changes in congenital toxoplasmosis

Congenital toxoplasmosis may also produce choroidoretinitis in later years. A necrotising macular lesion with ectopic choroidal pigmentation. Defective vision and squint may result, or even blindness.

Hydrocephalus in congenital toxoplasmosis

Severe hydrocephalus, may result from congenital toxoplasmosis. The infection typically produces calcification of the subependymal tissues, and sometimes dilatation of the ventricles due to rapid proliferation of the parasites. There is usually serious cerebral damage also in such cases.



Congenital toxoplasmosis is a special form in which an unborn child is infected via the placenta. A positive antibody titer indicates previous exposure and immunity and largely ensures the unborn baby's safety. A simple blood draw at the first prenatal doctor visit can determine whether or not the woman has had previous exposure and therefore whether or not she is at risk. If a woman receives her first exposure to toxoplasmosis while pregnant, the baby is at particular risk. A woman with no previous exposure should avoid handling raw meat, exposure to cat feces, and gardening (cat feces are common in garden soil). Most cats are not actively shedding oocysts and so are not a danger

Prevention

The risk may be reduced further by having the litterbox emptied daily (oocysts require longer than a single day to become infective), and by having someone else empty the litterbox. However, while risks can be minimized, they cannot be eliminated. For pregnant women with negative antibody titer, indicating no previous exposure to *T. gondii*, as frequent as monthly serology testing is advisable as treatment during pregnancy for those women exposed to *T. gondii* for the first time decreases dramatically the risk of passing the parasite to the fetus.



Despite these risks, pregnant women are not routinely screened for toxoplasmosis in most countries (Portugal, France, Austria, Uruguay, and Italy being the exceptions) for reasons of cost-effectiveness and the high number of false positives generated. As invasive prenatal testing incurs some risk to the fetus (18.5 pregnancy losses per toxoplasmosis case prevented), postnatal or neonatal screening is preferred. The exceptions are cases where fetal abnormalities are noted, and thus screening can be targeted.

Some regional screening programmes operate in Germany, Switzerland and Belgium.

Treatment

Treatment is very important for recently infected pregnant women, to prevent infection of the fetus. Since a baby's immune system does not develop fully for the first year of life, and the resilient cysts that form throughout the body are very difficult to eradicate with anti-protozoans, an infection can be very serious in the young.

Atlas of Tropical Medicine and Parasitology

Wallace Peters

Geoffrey Pasvol