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## Toxoplasmosis and Pregnancy

This sheet talks about the risks that exposure to toxoplasmosis can have during pregnancy. With each pregnancy, all women have a 3% to 5% chance of having a baby with a birth defect. This information should not take the place of medical care and advice from your health care provider.

### ***What is toxoplasmosis?***

Toxoplasmosis is an infection caused by the parasite *Toxoplasma gondii*. You can get it by eating undercooked, infected meat, or handling soil or cat feces that contain the parasite. Although most adults have no symptoms, swelling of the lymph nodes, fever, headache or muscle pain may be seen. In most cases, once you have gotten toxoplasmosis, you cannot get it again.

### ***How can I find out if I am at risk for toxoplasmosis?***

About 85% of pregnant women in the United States are at risk for toxoplasmosis infection. Women who have recently gotten a cat or have outdoor cats, eat undercooked meat, garden, or who have had a recent mononucleosis-type illness are at increased risk. There is a higher prevalence of toxoplasmosis in Europe where far more undercooked meat is eaten.

A blood test can determine if you have ever had toxoplasmosis. Ideally, testing for toxoplasmosis should be done prior to conception. If an infection is identified during pregnancy, several tests may be needed to see whether the infection is recent or old. You should discuss whether you should be tested with your health care provider.

### ***What precautions can I take to avoid infection?***

*Toxoplasma gondii* can be found in raw or undercooked meat, raw eggs and unpasteurized milk. Cats that eat raw meat or rodents can become infected, and the parasite lives in the cat's feces for two weeks. *Toxoplasma gondii* eggs can live in cat feces buried in soil up to 18 months. To avoid infection, pregnant women should

- Cook meat until it is no longer pink and the juices run clear
- Wear gloves while gardening
- Wash all fruits and vegetables
- Wash hands carefully after handling raw meat, fruit, vegetables, and soil
- Do not touch cat feces
- Do not feed cats raw meat

### ***I had a toxoplasmosis infection two years ago and I am currently pregnant. Is my baby at risk?***

Infection of the developing baby only occurs when the mother has an active infection during pregnancy. In general, there is no increased risk to the baby when toxoplasmosis occurs more than 6 months prior to conception. If you had toxoplasmosis in the past, you are usually immune, and the baby is not at risk. If you have a weakened immune system, such as in AIDS, you can develop another active infection.

### ***I am pregnant and have just found out that I have recently been infected with toxoplasmosis. Is my baby at risk?***

The toxoplasmosis parasite is known to cross the placenta. In about 20 percent of the cases in which a pregnant woman has toxoplasmosis, the baby is also infected. Infants who become infected during pregnancy are said to have "congenital toxoplasmosis" infection. In the United States, between 400 and 4000 babies are born with toxoplasmosis each year. Some infants with congenital toxoplasmosis will have medical conditions that include problems with the brain, eyes, heart, kidneys, blood, liver, or spleen. Long term effects may include seizures, mental retardation, cerebral palsy, deafness, and blindness. Many infected infants will have no problems at birth. Discuss with your health care provider whether you should see a specialist for further information.

### ***Is there a higher risk to my pregnancy because I have toxoplasmosis and am only 10 weeks pregnant?***

When the mother is infected during the first trimester, the risk that the baby will be infected is 10-15%. This is also the time in gestation when the baby is at a higher risk for severe problems from infection. When the mother is infected late in pregnancy, the chance that the baby will have severe problems is very small.

***How can I find out if my baby has been infected with toxoplasmosis?***

If you have recently been infected, there are several ways to check if your baby has been infected. The fluid around the baby or fetal blood can be examined to determine the presence of infection. However, if the baby is infected, these tests cannot tell you how severe the infection is. About one-third of babies with congenital toxoplasmosis will have a problem that can be seen on ultrasound. After birth, a blood test can be performed on the baby to determine if the baby is infected.

***Is there any treatment for toxoplasmosis during pregnancy?***

Maternal toxoplasmosis infection can be successfully treated with antibiotic medication. Early identification and treatment can reduce the chance that the baby will become infected. If the baby has already become infected, treatment with other medications will make the baby's disease less severe. However, treatment may not prevent effects in the baby. Treatment during the first year of life may also be helpful. Your health care provider can discuss specific treatment options with you.

***If my baby is born without any symptoms of congenital toxoplasmosis, does this mean the toxoplasmosis infection in pregnancy had no effect?***

Infants with congenital toxoplasmosis usually don't appear any different at birth. Yet, long-term studies show that up to 90 percent develop problems including vision loss, hearing loss, or developmental delays. These symptoms can occur months or even several years after birth. For this reason, infants with congenital toxoplasmosis should be treated for the infection during the first year of life and then should be periodically checked for problems.

***If I have had toxoplasmosis in the past should I avoid breastfeeding my baby?***

No. Breastfeeding provides the baby with many nutritional and health benefits. Since most women with a history of toxoplasmosis will build immunity to the parasite, it is unlikely that toxoplasmosis will be passed through breast milk. In fact, women are often encouraged to breastfeed as this may provide the baby with protective antibodies.

***Will my baby get toxoplasmosis if I am infected while I am breastfeeding?***

More than likely, the baby will not get toxoplasmosis if you are infected while breastfeeding. There is some thought that transmission may occur if the mother is infected during the end of pregnancy or during breastfeeding, but this has not been proven in any studies.

***Should I be concerned if the father of my baby has toxoplasmosis while I am pregnant or breastfeeding?***

No. Toxoplasmosis is not passed from person to person except in cases of mother-to-child transmission during pregnancy, or as a result of blood transfusion or organ transplantation. A father cannot pass toxoplasmosis to you or the baby.

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**Selected References:**

- Centers for Disease Control and Prevention. Toxoplasmosis: Pregnant Women. [Cited 2010 October 11]. Available at URL: <http://www.cdc.gov/toxoplasmosis/pregnant.html>.
- Cook AJC, et al. 2000. Sources of toxoplasmosis in pregnant women. *BMJ* 321:142-147.
- Couvreur J, et al. 1993. In utero treatment of toxoplasmic fetopathy with the combination pyrimethamine-sulfadiazine. *Fetal Diagn Ther* 8:45-50.
- Daffos F, et al. 1988. Prenatal management of 746 pregnancies at risk for congenital toxoplasmosis. *N Engl J Med* 318(5):271-275.
- Dubey JP and Jones JL. 2008. *Toxoplasma gondii* infection in humans and animals in the United States. *Int J Parasitol* 38:1257-1278.
- Hide G, et al. 2009. Evidence for high levels of vertical transmission in *Toxoplasma gondii*. *Parasitol* 136:1877-1885.
- Hohlfeld P, et al. 1994. Prenatal diagnosis of congenital toxoplasmosis with a polymerase-chain-reaction test on amniotic fluid. *N Engl J Med* 331(11):695-699.
- Jones, CA. 2001. Maternal transmission of infectious pathogens in breast milk. *J Paediatr Child Health* 37:576-582.
- Jones JL et al. 2001. Toxoplasmosis *gondii* infection in the United States: Seroprevalence and Risk Factors. *Am J Epidemiol* 4:357-365.
- Koppe JG, et al. 1986. Results of 20-year follow-up of congenital toxoplasmosis. *Lancet* 1:254-255.
- Lopez A, et al. 2000. Preventing congenital toxoplasmosis. *MMWR Recomm Rep* 49(RR-2):59-68.
- Lynfield R and Eaton RB. 1995. Teratogen update: Congenital toxoplasmosis. *Teratology* 52(3):176-180.
- Matsui D. 1994. Prevention, diagnosis and treatment of fetal toxoplasmosis. *Clin Perinatol* 21(3):675-689.
- Montoya JC and Remington JS. 2008. Management of *Toxoplasma gondii* infection during pregnancy. *Clin Infect Dis* 47(4):554-566.
- Stray-Pedersen B. 1993. Toxoplasmosis in pregnancy. *Baillieres Clin Ob Gynecol* 7(1):107-137.
- Wilson CB. 1980. Development of adverse sequelae in children born with subclinical toxoplasmosis infection. *Pediatrics* 66(5):767-774.
- The Toxoplasmosis Study Group. 1990. Congenital toxoplasmosis. *Am J Dis Child* 144:619.

***If you have questions about the information on this fact sheet or other exposures during pregnancy, call OTIS at 1-866-626-6847.***