

# Toxoplasmosis

Toxoplasmosis is a parasitic infection that when contracted by a pregnant woman can pose serious risk to the unborn baby. Up to one in 1,000 babies in this country are born affected with toxoplasmosis. Fortunately, a pregnant woman can follow some simple precautions that can reduce the risks from infection.

A pregnant woman who contracts toxoplasmosis for the first time during pregnancy has about 40% chance of passing the infection onto the fetus. However, the risk and the severity of the baby's infection depend partly on the timing of the mother's infection. Studies suggest the when mothers are infected in the first trimester, 15% fetuses become infected, as compared to 30% in the second trimester and 65% in the third. Babies whose mothers have toxoplasmosis in the first trimester usually have the more severe infections.

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## What risk does toxoplasmosis pose to the baby?

Up to 90% of infected babies appear normal at birth. However 80 to 90% will develop sight-threatening eye infections months to years after birth. Some also will develop hearing loss, hydrocephalus (water on the brain) mental retardation, learning disabilities or seizures. Toxoplasmosis during pregnancy also can result in miscarriages or stillbirth.

About one in ten infected babies has a severe toxoplasmosis infection that is evident at birth. These newborns often have severe eye infections, an enlarged liver and spleen, jaundice, pneumonia and other problems. Some die within a few days of birth. Those who survive sometimes suffer from mental retardation, severely impaired eyesight, cerebral palsy, seizures and other problems.

## What causes toxoplasmosis?

Toxoplasmosis is caused by a parasite called *Toxoplasma gondii*. It is most often picked up through exposure to cat feces or by eating raw or undercooked meat that is contaminated with the parasite. Other sources of infection may include raw goat's milk, raw eggs, and insects such as flies and roaches that may have been in contact with cat feces.

Cats often become infected when they eat an infected rodent or bird. The parasite reproduces in the cat's intestine and a form of the parasite ends up in the cat's litter box, sand or soil. This form of the parasite becomes infectious within days, and is resistant to most disinfectants. Under the right temperature and humidity conditions the parasite may live in soil for more than a year. Infected cats usually appear healthy.

## Who gets toxoplasmosis?

Toxoplasmosis is one of the most common infections in the world. Most cases go undiagnosed. Symptoms, if any, tend to resemble the flu. Active infection normally occurs only once in a lifetime. Although the parasite remains in the body indefinitely, it is generally harmless and inactive unless the immune system is not functioning properly. If a woman develops immunity to the infection at least six to nine months before pregnant, there is rarely any danger in passing it to her baby.

## What can you do to avoid toxoplasmosis?

Let someone else change the litter pan during pregnancy. Don't let cats walk on surfaces where food is prepared or eaten. After playing with the cat, wash hands immediately. Do not eat raw or undercooked meats.

# Chicken Pox: What Is It?

Chicken pox is a usually mild, but highly contagious infection caused by a virus. Mainly an itchy rash characterizes it. Most pregnant women need not to worry about chicken pox since 85 to 95% are immune either because they had the disease in childhood or have been vaccinated.

## What risk does chicken pox pose for the fetus?

Infection in the first 20 weeks of pregnancy occasionally results in one or more features of congenital varicella syndrome, a pattern of birth defects that include scars, defects of the muscle and bone, malformed and paralyzed limbs, a smaller than normal head, blindness, seizures, and mental retardation. Fewer than 5% of babies of infected mothers develop any of these birth defects. After the first 20 weeks of pregnancy, chicken pox rarely results in birth defects. Chicken pox also may increase the risk of miscarriage and premature labor.

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## What is the risk to the newborn from maternal chicken pox around the time of delivery?

When the mother develops the rash from five days before to two days after delivery, the newborn can develop an especially severe and sometimes fatal, chicken pox infection. Without treatment up to 50% newborns become infected, and up to 30% of them die from complications of the infection. A baby infected during this period will develop a rash between 5 and 10 days after birth.

When maternal infection occurs around the time of birth, infection in the newborn can often be prevented or the severity of the infection can be lessened if the baby is treated promptly with an injection of a special kind of gamma globulin called VZIG, which contains antibodies against the virus. VZIG is investigational and hard to obtain in the US. When the baby develops symptoms in spite of the treatment with VZIG, new antiviral drugs can also help reduce the severity of infection.

If the pregnant woman develops chicken pox between 6 and 21 days before delivery, her newborn faces the risk of infection. However, the risk is less serious and consequences from the disease are rare, as the mother's body has enough time to produce antibodies to the virus and pass these protective substances along the fetus.

## What should a pregnant woman do if she is exposed to chickenpox?

Pregnant women who know they have had the chicken pox in the past have no cause for concern. A woman who is not certain she has had the chicken pox, however, should check with her doctor immediately if she believes she has been exposed to the disease. A blood test can usually determine if a person is susceptible.

## Can chicken pox be prevented in susceptible women?

Experts recommend that a susceptible pregnant woman who has been closely exposed to chickenpox receive VZIG. When given within 96 hours after exposure, VZIG helps prevent infection or lessen its severity. This is very important for the health of the pregnant woman as complications of chicken pox, such as pneumonia, may be more severe in pregnancy. It is not yet known, however, whether VZIG helps to protect the fetus from infection. VZIG used to be available to doctors through regional distribution centers of the American Red Cross. In 2006, the supply of VZIG became contaminated and was discarded. A new supply is being generated in California, but acquisition requires approval as an investigational drug. Currently, no central Florida hospital has obtained approval. Therefore, it is very important that you avoid contact with sick children.

# Fifth Disease

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Fifth disease is a common childhood illness characterized by a mild fever and rash. This illness, caused by a virus, got its name many years ago when it appeared fifth in a list of what were then considered the common causes of rash and fever in childhood. In addition to rash and fevers, infected adults also may experience joint pain and swelling. Outbreaks commonly begin in late winter or in spring at elementary and junior high schools.

## What risk does fifth disease pose in pregnancy?

To date, fifth disease in pregnancy has not been proven to cause birth defects, although doctors are still exploring this possibility. Fifth disease can, however, disrupt the fetus' ability to produce red blood cells. Sometimes this leads to dangerous form of anemia, heart failure, abnormal pooling of fluid (referred as fetal hydrops), and fetal death. Fortunately, less than one third of pregnant women's infections result in their fetuses becoming infected. Most infected fetuses quickly resume red blood cell production and avoid anemia. These babies are born healthy, with no apparent problems resulting from infection.

According to the American Academy of Pediatrics, the risk of fetal death from fifth disease appears to be the highest when a pregnant woman is infected during the first 20 weeks of pregnancy. Studies suggest, however, that only 3-9 % of cases of maternal infection in the first 20 weeks of pregnancy result in fetal death.