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Cytomegalovirus and Pregnancy

The information below will determine if your prenatal exposure to cytomegalovirus represents an increased fetal risk. With every pregnancy, any woman has a 3 to 5 percent chance to have a baby with a birth defect.

What is cytomegalovirus (CMV)?

CMV is a member of the herpes family of viruses and is primarily a sexually transmitted disease, but it can also be transmitted from mother-to-child (congenitally), through blood transfusions, by close personal contact and via organ transplantation. CMV spreads from one person to another through contact with saliva, semen, cervical and vaginal secretions, blood, urine, tears, feces, or breast milk. In the US, the rate of CMV infection in women varies from 50-80%. A healthy immune system keeps this virus in check. There are two different types of infection: primary CMV infections and recurrent CMV infections.

Who is at increased risk for CMV?

Women who work in day-care centers or women who are exposed to toddlers and young children have an increased risk of CMV infection. Women who work in the health-care profession may also be at an increased risk, although the transmission to a health professional from an infected patient has never been documented.

How can I find out if I am infected with CMV?

A blood test can determine if you have a non-active (*latent*) CMV infection. Ideally, testing should be done prior to conception. If an infection is identified during pregnancy, several tests may need to be performed to determine whether the infection is new (*primary*) or old (*recurrent*). You should discuss whether you should be tested with your health care provider. Because testing for CMV infection can be difficult to interpret, your test may need to be performed at a special laboratory.

What precautions can I take to avoid CMV infection?

Women of childbearing age should practice good hygiene, especially if they are routinely exposed to young children. Good hand washing after changing diapers and after any contact with any of the bodily fluids mentioned above is encouraged. Mouth-to-mouth kissing with children attending day-care is discouraged. Pregnant women should refrain from sharing food, eating utensils, and drinking utensils. All women with non-monogamous relationships are strongly encouraged to use latex condoms during intercourse.

I am pregnant and have just found out that I have recently been infected (primary infection) with the CMV virus. Is my fetus at risk?

Primary maternal infection occurs in 0.7-4.0% of pregnancies. The reported transmission rates to the fetus are between 24 and 75%, with an average transmission rate of about 40%. Fetuses that become infected during pregnancy are said to have "congenital CMV infection". Of the approximately 40% of fetuses that become infected, 10% of neonates show symptoms of congenital CMV infections after primary maternal infection at birth. The brain, eyes, liver, spleen, blood, and skin are at risk for problems. Long-term effects may include sensorineural hearing loss, mental retardation, developmental delay, and visual impairment. Of the remaining 90% with asymptomatic (*no evidence of disease at birth*) congenital infection, 5-15% are at risk to develop some of the long-term effects. Discuss with your health care provider whether you should see a specialist for further information.

I had a CMV infection a year ago and I was recently diagnosed with a recurrent infection. I am pregnant. Is my fetus at risk?

Recurrent maternal CMV infection occurs (1-14%) in women more commonly than primary CMV infection, but only 0.2-2% of recurrent infections produce congenital infection. The incidence of symptomatic neonatal disease after recurrent maternal CMV infection is quite low, less than 1%, but long-term effects may still occur in 5-10% of congenital CMV infections with sensorineural hearing loss being the most common effect. Discuss with your health care provider whether you should see a specialist for further information.

Does it matter when in my pregnancy I am diagnosed with a primary or recurrent CMV infection?

Gestational age has no influence on the risk of transmission to the fetus. However, the severity of the disease tends to be worse when the infection takes place before 20 weeks of gestation. This is true for primary maternal infections more so than recurrent maternal infections. Recurrent maternal CMV infections typically cause no effects that are clinically apparent in the neonatal period regardless of timing of the infection; however there are a few reports of recurrent maternal CMV infections in which the neonate showed clinical signs of infection.

How can I find out if my fetus has been infected with CMV?

Once you have been shown to be infected, there are several ways to check if your fetus has been infected. Amniocentesis can be performed to check the fluid around the fetus or fetal blood can be examined to determine the presence of infection. Testing the fluid around the fetus has been determined to be more accurate than fetal blood testing. However, if the fetus is infected, these tests cannot tell you the severity of the infection in the fetus. In some cases, infected fetuses may have visible signs of problems on ultrasound such as a decreased amount of amniotic fluid (*oligohydramnios*), smallness in size for the fetus's age (*intrauterine growth retardation*), and enlarged tissues in the brain (*cerebral ventriculomegaly*) to name a few. After birth, a saliva, urine, or blood test

can be performed on the baby. You should discuss these tests with your health care provider.

Is there treatment for CMV during pregnancy?

Maternal CMV infections may be treated with one of two drugs: ganciclovir or foscarnet. Unfortunately, there is no accepted prenatal or postnatal therapy for congenital CMV infections. The use of ganciclovir during pregnancy to prevent or reduce the effects of congenital CMV infection has been considered. Current recommendations limit the use of ganciclovir in pregnancy to severe (life-threatening or sight-threatening) maternal CMV infections. Your health care provider can discuss specific treatment options with you.



December 2001
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