

Cytomegalovirus infection

Patient Information Series – What you should know, what you should ask.

What is a Cytomegalovirus infection?

Cytomegalovirus (CMV) is a common virus for people of all ages. When CMV affects a pregnant woman, the infection is usually mild, but it can also be transmitted through the placenta and affect the fetus. This is called congenital CMV, and it can cause birth defects and other health problems.

How is CMV spread?

This virus is spread from an infected person from direct contact with saliva, urine, semen, vaginal fluids, blood, tears, feces, or breast milk, transplanted organs, and blood transfusions. CMV can stay in a child's body fluids like saliva and urine for months after the infection.

Can congenital CMV be prevented?

You may be able to reduce your risk of getting cytomegalovirus by reducing your contact with the saliva and urine of infants and young children. The saliva and urine of children with CMV contain large amounts of the virus. You can prevent a child's saliva from getting into your mouth, for example, by not sharing food, utensils, cups, or glasses. In addition, you should wash your hands after changing diapers. These measures cannot eliminate your risk of getting cytomegalovirus, but they may reduce your chances. There's currently no vaccine for CMV.

Why is CMV infection important?

When the baby gets infected with the virus before birth, it is called congenital CMV infection. When a person is pregnant and becomes infected with CMV for the first time, there is a 40% chance of passing it to the baby. When an old infection reactivates, or a new strain of the virus is contracted during pregnancy, there may be a lower chance of transmitting the infection to the developing baby.

Not all babies who contract the virus in pregnancy will have birth defects or other problems from the infection. Of babies who contract the virus, between 1-10% will have symptoms at birth.

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If CMV infection occurs in the first trimester, the likelihood that the brain, hearing and vision will be affected is greater than if the infection occurs later in pregnancy.

How do I know if my baby is affected?

Ultrasound may show some of the problems caused by congenital CMV, such as low weight, small head size, large placenta, and changes in brain structure. However, many babies with congenital CMV will not show signs of infection on ultrasound. Aspects such as intellectual disability and learning disabilities may not be seen on ultrasound.

Amniocentesis is a procedure that removes a small amount of fluid surrounding the baby (the amniotic fluid). This fluid can be tested for CMV. Your health care provider can explain the risks and benefits of having this test. After the baby is born, the baby's saliva, urine, or blood can be tested for CMV.

Should I do some tests?

The infection in the mother is asymptomatic in most cases. One of the most common symptoms is general malaise or low energy, headache, fever, or muscle pain, including increased liver enzymes.

A person who has been infected with CMV will develop antibodies in their blood. The most effective way to diagnose infection in the mother is serology, however, testing for CMV is not routinely recommended for all women during pregnancy or for newborn babies. This is because laboratory tests cannot predict which babies will become infected with CMV or have long-term health problems.

Therefore, the most effective way to diagnose maternal infection is serology (blood test).

Through special blood work, testing for IgG and IgM antibodies and IgG and IgM avidity, we can diagnose the type of infection in a pregnant woman:

IgG- IgM-: Non-immunized patient.

IgG+ IgM-: Past infection. Immunized patient.

IgG+ IgM+ with low avidity: Very recent infection less than 12 weeks ago.

IgG+ IgM+ with high avidity: Recent infection but more than 12 weeks ago or CMV reactivation.

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A CMV viral load in maternal blood may also be performed. A positive load indicates infection, but sometimes a negative load does not rule out a recent past infection.

How is infection diagnosed in my baby?

Through an amniocentesis. This should be done from the 20th week of pregnancy or four weeks after the suspicion of maternal infection from the second half of pregnancy.

If CMV is detected in the amniotic fluid, it indicates that the baby is infected, but that does not mean that it is affected. Up to 80% of infected fetuses have no symptoms at birth.

Will it be an early delivery?

No, spontaneous onset of labor is allowed.

Will it be a vaginal birth?

The delivery will be vaginal unless there is any indication of cesarean section for any other reason.

Will I be able to breastfeed?

Yes. Breastfeeding is allowed.

Can congenital CMV be treated?

For babies with signs of congenital CMV infection at birth, antiviral medications may improve hearing and some developmental outcomes.

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What are my baby's symptoms at birth?

About 1 in 200 babies is born with congenital cytomegalovirus. About 1 in 5 of these babies will have birth defects or other long-term health problems.

Babies with congenital cytomegalovirus may show signs from birth.

Some of the signs that a baby might have congenital cytomegalovirus infection at birth are; rash, jaundice (yellowing of the skin or the eyes), sore throat, swollen glands, microcephaly (small head), low birth weight, hepatosplenomegaly (enlarged liver and spleen), seizures or retinitis (damaged eye retina). In severe cases, they may develop long-term health problems, such as hearing loss, developmental and motor delay, vision loss, microcephaly (small head) or seizures.

Newborns of mothers diagnosed with a primary CMV infection during pregnancy should be tested for congenital CMV infection. As hearing loss is the most common sign of congenital CMV, babies who do not have a normal hearing screening test at birth can also be tested for congenital CMV.

Infants who show signs of congenital cytomegalovirus at birth may be treated with medications called antivirals. Antivirals may reduce the severity of health problems and hearing loss. However, they must be used with caution because of side effects.

Babies with congenital CMV infection should have regular access by the Pediatric Unit.

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