

# Identifying Congenital Cytomegalovirus (CMV) Early in Life: Information for Healthcare Provider

**CMV is the most common infectious cause of birth defects in the United States. Early diagnosis and treatment may improve health outcomes. Healthcare providers can play an important role by recognizing and diagnosing congenital CMV early, and helping infected infants get the treatment and care they need.**

CMV is a member of the herpesvirus family that infects people of all ages, and is usually asymptomatic. However, a mother can pass CMV to their infant during pregnancy, resulting in congenital CMV infection. Congenital CMV infection may cause long-term health problems for an infant. A pregnant woman who is infected with CMV can pass the virus to her child at any time during pregnancy. This can happen following a primary infection, reinfection with a different CMV strain, or reactivation of a previous infection.

## Disease Burden

- Each year in the US, about 1 in 200 infants (20,000) are born with congenital CMV infection.
- Most infants (80%) with congenital CMV infections are asymptomatic and will not have long-term health problems.
- Each year, about 4,000 (20%) infected infants will have long-term health problems.

## Clinical Manifestations

About 10% of infants with congenital CMV infection will have signs at birth that may include:

- Petechiae/purpura
- Jaundice
- Microcephaly
- Intrauterine growth restriction
- Hepatosplenomegaly
- Seizures
- Retinitis

Among infants with signs of congenital CMV infection at birth, about half will have long-term health problems that may include.

- Hearing loss
- Developmental and motor delay
- Vision loss
- Microcephaly
- Seizures

About 15% of infants with congenital CMV will not have symptoms at birth but later develop hearing loss. These children do not appear to have other long-term health problems.



## Diagnosis

Consider testing for congenital CMV in infants who show signs of CMV infection at birth. Because the signs of CMV infection at birth are common to other medical conditions, the diagnosis must be confirmed by laboratory testing within 2 to 3 weeks of birth. Infant saliva and urine are the preferred specimens for diagnosing congenital CMV. Testing samples taken from a child more than two to three weeks after birth cannot distinguish between congenital infection and an infection acquired after birth.

Congenital CMV infection is diagnosed by testing the infant's urine, saliva, or blood using:

- polymerase chain reaction (PCR) to detect CMV DNA, or
- Viral culture to detect live virus

Congenital CMV infection is not diagnosed with antibody testing (IgG, IgM).

## Treatment

Diagnosing and treating congenital CMV early may improve health outcomes for infected children.

For infants with signs of CMV at birth, starting treatment with antiviral medications, such as ganciclovir or valganciclovir, within the first month of life may improve hearing and developmental outcomes.

Infants with no signs of CMV infection at birth may still have or develop hearing loss. Treatment of these infants with antivirals is currently being evaluated to assess safety and possible benefit. These infants need regular hearing evaluations.

## Monitoring Children with Congenital CMV

Congenital CMV infection affects each child differently. Healthcare providers play an important role in helping parents understand the services and support their child may need, which may include:

- Regular hearing evaluations. Infants with no signs of CMV infection at birth may still have hearing loss at birth or later in life. For children with hearing loss, early interventions, such as hearing aids and speech therapy, can help improve communication and language skills which lead to positive social interactions and educational development.
- Routine vision screening.
- Services such as speech, occupational, and physical therapy.



## Additional CMV Resources

AAP Redbook: Cytomegalovirus Infection:

<https://redbook.solutions.aap.org/chapter.aspx?sectionid=88187134&bookid=1484>

CDC Website: Cytomegalovirus (CMV) and Congenital CMV Infection Information for Healthcare Professionals

<https://www.cdc.gov/cmV/clinical/index.html>