



# CMV Information for Parents

## CMV

How are babies affected by congenital CMV infection?

page 2

What type of follow-up is recommended for children with congenital CMV infection?

page 2

Will my child's hearing change?

page 3

Can the spread of CMV be prevented?

page 4

Cytomegalovirus (CMV) is a common virus throughout the world and will infect most people at some time in their life. In healthy children and adults, the virus usually causes no symptoms and poses no threat to their health. CMV is a concern, however, because it can lead to health problems when unborn babies or people with weakened immune systems are infected.

### How is CMV Spread?

CMV is spread from one person to another when there is contact with fluids from the body such as saliva, urine, feces, blood, tears, semen, vaginal secretions, and breast milk. CMV is not transmitted in the air. You cannot catch CMV by being in the room with someone unless there is contact with the infected person's bodily fluids.

CMV can be transmitted to newborns at the time of delivery due to contact with vaginal secretions or later through the mother's breast milk. An infection that occurs during delivery or anytime after birth is known as an **acquired CMV infection**. For healthy, full-term infants acquiring a CMV infection in this way usually does not cause any problems.

CMV can also be transmitted during pregnancy to the unborn child of a woman with a CMV infection. When this happens it is known as a **congenital CMV infection**. There are particular concerns when this type of infection occurs.

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## CONGENITAL CMV INFECTION



CMV is the most common infection passed from mother to unborn child in the United States. Five to ten out of every 1000 babies born in the U.S. will have a congenital CMV infection.

### How are babies affected by congenital CMV infection?

Approximately 9 out of 10 babies born with a congenital CMV infection will not have any symptoms at birth. This is called a “silent” infection. These “silent” infections often go unnoticed. However, about 1 out of 10 children with no symptoms at birth will later develop problems as a result of their CMV infection. The most common concern is hearing loss. This hearing loss may be mild or severe and it may begin shortly after birth or later in childhood. It is also possible that these children with “silent” infections will experience learning and developmental delays or vision abnormalities, although these problems are much less common.

Children who do have signs of CMV infection at birth may have any of the following symptoms: petechiae (little red spots under the skin), enlarged liver or spleen, jaundice (yellow color of eyes and skin), low blood platelet count, small head size, calcium deposits in the brain, seizures, or abnormal muscle tone. Some of these symptoms may resolve but others can lead to life long disabilities. Children who have symptoms at birth may also have vision problems, hearing loss or developmental delays. These conditions may be present at birth or develop later.

### How is a diagnosis of congenital CMV infection made?

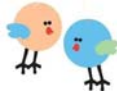
Congenital CMV infection is diagnosed by obtaining a sample of saliva, urine or blood from the baby during the first 3 weeks of life to check for the virus. After the first 3 weeks a diagnosis of congenital CMV infection cannot be confirmed because a sample taken at that time could also indicate an acquired infection (CMV that was transmitted to the baby during delivery or after delivery).

### What type of follow-up is recommended for children with congenital CMV infection?

All children with a confirmed diagnosis of congenital CMV infection should receive regularly scheduled hearing tests. These tests should be done every 6 months the first three years of life and once a year after that. If any changes in hearing are observed, more frequent testing may be necessary. An eye exam should be done during the first year of life. Children with congenital CMV infection should also be watched closely for normal growth and development, including head size and developmental milestones such as crawling, walking, and talking. Depending on the symptoms your baby has, other special tests may be needed such as specific blood work to determine how organs in the body have been affected by the virus, a brain scan, or specific developmental testing. Children with congenital CMV infection should have the same routine follow-up visits with their primary care doctors that are recommended for all children and all the usually scheduled immunizations, unless there is some other reason not to immunize.



## Will my child's hearing change?



Even if a child with congenital CMV infection has normal hearing at birth, they may still develop hearing loss later in childhood. About 50% of children who develop hearing loss will have a hearing loss that worsens over time (progressive loss). For some children their hearing may actually improve at some points in time but then may decrease again (fluctuating loss). About half of the children with hearing loss due to congenital CMV infection have loss in only one ear. Usually children with this type of loss can function normally with minimal assistance. It is important to keep in mind that of all the children born with a CMV infection only about 1 in 7 will develop hearing loss.

## Is there any treatment for congenital CMV infection?

At this time there is no standard recommended treatment for congenital CMV infection. There are ongoing studies regarding use of anti-viral therapies for the treatment of infected infants.

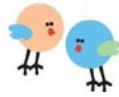
However, there are interventions available to assist children in dealing with problems that can result from CMV infection. These interventions may include speech therapy, hearing aids, cochlear implants (for severe hearing loss), and physical therapy.

## Is congenital CMV infection a reason for my child to be excluded from a daycare or school?

Your child should never be denied admission to any daycare, educational facility, or social activity due to their diagnosis of congenital CMV infection. Neither should they be required to be tested for CMV shedding (the amount of virus in the body fluids, usually urine is tested) prior to admission. CMV is a very common virus and is shed by many children with acquired infection, not just those with congenital infection.



## PREVENTION



### Can the spread of CMV be prevented?

Although most people will have a CMV infection at some time in their life there are certain times, such as during pregnancy, that it is best to try to avoid acquiring a CMV infection.

Health care workers and others, such as daycare workers, who come in contact with fluids from the body should practice “universal precautions”. This includes good hand washing and the use of gloves.

Although no action can totally eliminate all risk of catching CMV, some measures can be taken to help control the spread of infection in the home and other settings.

These include:

- Do not kiss young children under 5 or 6 years of age on the mouth or cheek. Instead, kiss them on the forehead or the top of the head and give them a big long hug.
- Do not share food, drinks, or items such as utensils or toothbrushes with young children.
- Do wash your hands with soap and water after diaper changes or after contact with a child’s saliva.
- Daycare center workers also may wear gloves when changing the diapers of young children.
- Since young children, especially toddlers, frequently put toys in their mouth, it is recommended the toys be washed with soap and water or wiped with a solution of one-part chlorine bleach to nine-parts water, followed by a tap water rinse.

(The above list of precautionary measures is reprinted from *What Everyone Should Know about CMV* published by the National Congenital CMV Disease Registry, Baylor College of Medicine, via their web page, [www.bcm.tmc.edu/pedi/infect/cmvcmvbroch.htm](http://www.bcm.tmc.edu/pedi/infect/cmvcmvbroch.htm)).

**If you have further questions regarding CMV we encourage you to talk with your study coordinator or your own primary care physician.**

**Visit our CHIMES Study web page at [www.uab.edu/ChimesStudy](http://www.uab.edu/ChimesStudy)**

**The CMV & Hearing Multicenter Screening (CHIMES) Study is sponsored by the National Institute on Deafness & Other Communication Disorders (NIDCD), National Institutes of Health (NIH)**

