CMV and your baby
What moms-to-be need to know

By Taryn McEvoy, MD, and Kristin Smith, MPH
Recent headlines have left many women and mothers-to-be concerned about the health risks that a common virus—one they may never have heard of—could present to their babies. While CMV, or cytomegalovirus, can produce serious complications in developing fetuses and newborns, the transmission rates are low, and there are several steps that women can take to reduce the risks.

**What Is CMV?**

Cytomegalovirus (cyto-megAH-low-virus) is one of the most common viral infections in the U.S. More than half of all adults have been infected with CMV by age 40, and one in three children have CMV by age 5, according to the Centers for Disease Control and Prevention (CDC).

CMV is part of the family of herpes viruses, which also includes chickenpox, mononucleosis, and herpes 1 and 2. If you are CMV seropositive—meaning that you have contracted CMV—the virus will stay dormant in your body for the rest of your life, usually without symptoms, unless your immune system is run down or compromised.

“Primary CMV” refers to the first time you contract the virus and develop CMV antibodies. “Reactivation” means a recurrence (return) of symptoms from an old CMV infection. “Reinfection” means you have contracted a new CMV strain.

Most healthy women with CMV don’t know they have it, because this virus often produces no symptoms. Other patients report flu-like symptoms that can include fever, fatigue, muscle aches, swollen lymph glands in the neck, and a sore throat. Some may experience symptoms similar to mononucleosis or hepatitis. Pregnant women who experience these types of symptoms should follow up with their health care provider.

**Transmission and risk**

Like other viruses in the herpes family, CMV is spread through contact with someone who has CMV and who transmits (shares) it through bodily fluids. These fluids include but are not limited to saliva, blood, urine, genital secretions during sex, and breast milk.

While healthy people who contract CMV generally have little to worry about, transmission rates and potential complications are higher for some individuals, including:

- People with compromised immune systems, including those with significant health concerns ranging from HIV to an invasive surgery
- Babies who have a low weight at birth, who are born early (premature), or who are born with other health concerns that make them more vulnerable to infection
- Babies in the womb (in utero), whose immune systems aren’t fully developed
- Child care workers and others who work closely with children, as well as parents with one or more children

**Babies and CMV**

The good news is that most healthy infants who contract CMV—in the womb or following birth—are at low risk for symptoms and complications. However, it’s important to understand how CMV can be shared with babies, and to recognize acute and chronic symptoms in newborns and children.

While transmission rates are estimated to be fairly low, there are several ways a pregnant woman or new mom who is seropositive for CMV can unknowingly share the virus with her baby.

**Perinatal CMV** means the baby contracted the virus at birth or shortly thereafter from a mother who is seropositive. The exposure may occur via maternal secretions when the baby passes through the birth canal or during breastfeeding. CMV can affect the health of these children, but the most significant risks involve those who contract the virus before birth.

**Congenital CMV** occurs when the mom-to-be shares the virus with her baby through the placenta, following a primary infection or a re-activation of the virus. One in 150 babies is born with congenital CMV, but only one in five of those will display symptoms at birth or face long-term health problems.

Some babies with congenital CMV appear very sick at birth and may experience a low birth weight, a small head (microcephaly), yellow eyes and skin (jaundice), a skin rash, and problems with internal organs, including the lungs, liver, and spleen. Well-baby checks are critical to detection.

A small percentage of babies with congenital CMV appear healthy at birth but develop symptoms over time that may include musculoskeletal concerns such as coordination or weakness, hearing and vision loss, cognitive disabilities, seizures, and more. Parents should stay alert, ask questions, and voice concerns about CMV symptoms at post-partum appointments and well-baby checks.

**Diagnosis and screening**

Routine prenatal screening for CMV is not currently recommended in the U.S., due in part to the lack of treatment options or preventive vaccines. Research at the University of Minnesota is exploring best practices in screening newborns for CMV, so this may change in the future.

For women who are symptomatic, our office uses serologic (blood) tests to detect CMV. Primary CMV may be suspected in women who show signs of hepatitis or mononucleosis but test negative for the viruses associated with those diseases. Ultrasound can also show indications of CMV in fetuses. The most common ultrasound finding of CMV is calcification in the brain’s ventricles, a network of four cavities that are filled with cerebrospinal fluid. Unfortunately, there is no treatment for CMV that has been proven to prevent fetal disease.
In newborns, a number of tests can detect congenital CMV up to the age of three weeks. Tests later than this do not appear to distinguish between perinatal exposure during delivery and congenital CMV.

**Treatment**
While there is no cure for CMV, preventive vaccine research is well underway. Outside of encouraging a healthy lifestyle and good sleep habits, no treatment is generally recommended for healthy women who are CMV seropositive, pregnant or not. Those with compromised immune systems are usually prescribed an antiviral medication to help fight the virus.

Babies with CMV are often treated with antiviral medications, and there is some evidence that these medicines can improve long-term developmental outcomes. We collaborate with pediatricians and other providers who care for babies to ensure coordinated communications and care for mother and child.

**Breastfeeding**
Pregnant women who are seropositive for CMV are often concerned about sharing the virus with their newborn by breast milk. Depending on the health of the baby, I generally discuss the benefits and risks of breastfeeding with my patients and do my best to answer questions based on our knowledge of this virus.

Currently there are no breastfeeding recommendations for women who test positive for CMV. Research shows that healthy term infants rarely acquire CMV via breast milk and that the benefits of breastfeeding outweigh the small risk of transmitting CMV.

While freezing and pasteurization appear to reduce or eliminate the virus from breast milk, these methods generally are not recommended because they affect the quality of the milk.

**Prevention: What you can do**
Pregnant women, parents, and others who work frequently with children, including teachers and child care workers, can follow simple steps to prevent CMV transmission. Prevention will help keep babies and children healthy before and after birth, so remember to:

- Wash your hands with soap and water regularly after contact with young children. This includes contact with drool, tears, diapers, toys, and eating and drinking utensils.
- Avoid eating off the same plates and utensils, or drinking out of the same cup as young children.
- Clean toys and surfaces frequently used by children or exposed to urine and saliva.
- Consider kissing children on the forehead instead of the lips.
- Practice safe sex.
- Use CMV-negative blood products if you require a blood transfusion.

**Conclusion**
CMV is the most common congenital viral infection. It is transmitted by close contact with multiple bodily fluids, including urine, saliva, and nasal secretions. The American College of Obstetrics and Gynecology recommends against routine screening for CMV, mainly because there is no vaccine available, there is no treatment to prevent the effects of CMV infection on newborns, and there is no way to predict whether the baby will develop significant negative outcomes from the virus. Since we have no treatment, prevention is extremely important. Just as pregnant women should avoid travel to areas afflicted with the mosquito-borne Zika virus, they should practice good hygiene to prevent transmission of CMV. This includes not sharing water bottles or food with young children.

Taryn McEvoy, MD, is a practicing obstetrician and gynecologist at Oakdale ObGyn.

Kristin Smith, MPH, is an outreach and education specialist at Oakdale ObGyn.