Cytomegalovirus (CMV) infection during pregnancy
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What are the possible consequences of CMV infection in pregnancy?

CMV infection is usually harmless for pregnant women, and 80% of those infected have no obvious symptoms. However, in 40% to 50% of cases of primary infection (= first exposure to the virus) in pregnancy, the virus is passed on to the unborn child. Around 13% of these prenatally infected children have clinical symptoms of varying severity at birth, for example: low birth weight, bleeding into the skin, jaundice, enlarged liver and spleen.

Moreover, serious and usually permanent damage such as microcephaly (small head size), calcifications in the brain, mental retardation and physical disabilities, hearing loss and visual impairment may occur. At least half of the children who already show symptoms at birth have some permanent damage. About 10%-15% of prenatally infected children who are born healthy develop permanent health problems after months or years, mainly affecting hearing and mental development.

The risk of fetal damage and severe injury to the child at birth or later in life is greatest if a primary CMV infection occurs in early pregnancy, but less so if primary infection occurs in late pregnancy.
Who is at risk of primary CMV infection?
Around 55% of women of child-bearing age (between 15 and 45 years of age) in Germany have no antibodies against CMV and are therefore not protected against primary infection. Women who have already had a CMV infection before pregnancy (usually without noticing it) have acquired CMV antibodies. Even so, they can be infected again. In such cases, the risk of infection of the unborn child is low, and even more so the risk of damage to the child.

How can one get infected?
CMV is not passed on by airborne (droplet) infection (sneezing, coughing), but by smear infection, i.e. through direct contact with CMV-contaminated saliva, urine, tears or genital secretions. Transmission requires prolonged close contact: young adults are usually infected by sexual contact, while the majority of pregnant women are infected by healthy, CMV-excreting toddlers (often their own children). These children have usually not been infected with CMV before birth, but shortly after (= early postnatal) through breast milk or contact with other babies and toddlers (e.g. in mother & toddler groups). Early postnatal CMV infection generally has no consequences for the health of full-term children and is a natural way to gain antibody protection against CMV. These children show no sign of illness but could excrete CMV in their urine and saliva for months or years.

How can CMV infection be diagnosed?
Because CMV infection in pregnant women usually causes no symptoms, or only flu-like signs such as fever, headaches and dizziness, a reliable diagnosis can only be made by testing a blood sample for CMV antibodies.
When should CMV antibody testing be performed?
Ideally prior to a planned pregnancy or as soon as possible after determination of pregnancy.

**Antibody testing**

**before pregnancy:** ► IgG antibodies (IgG)
**during early pregnancy:** ► IgG (and possibly also IgM) antibodies

In Germany, testing for CMV antibodies has to be paid for by the pregnant woman and is only reimbursed by statutory health insurance if an acute infection is assumed. In case of occupational hazard (working in childcare), the employer pays the costs.

**What to do if CMV antibodies are absent:**
► Careful adherence to the hygiene measures described below, especially when in contact with children under 3 years of age
► Antibody testing approx. every 8-10 weeks

**If an acute primary CMV infection is detected:**
Only CMV immunoglobulin is available for treatment.

How can CMV infection be prevented?
There is no vaccination available against CMV. The virus can remain infectious for up to 48 hours on objects contaminated with saliva or urine, but can be inactivated using soap. Pregnant women can therefore reduce the risk of infection through simple hygiene measures. Very important is thorough hand washing with soap after any contact with the bodily fluids of toddlers (nappy changing, feeding, wiping runny noses, tears, saliva, touching toys contaminated with saliva, etc.). Kissing toddlers directly on the mouth, eating their leftover food, and sharing dishes/cups, cutlery, toothbrushes, facecloths or towels should be avoided.