

Lymphocytic Choriomeningitis Virus (LCMV)

This sheet is about exposure to lymphocytic choriomeningitis virus (LCMV) during pregnancy or while breastfeeding. This information should not take the place of medical care and advice from your healthcare provider.

What is lymphocytic choriomeningitis virus (LCMV)? How is it spread?

LCMV is a virus that is carried by rodents and can be passed to humans. Infected rodents shed the virus in their nasal secretions, saliva, milk, semen, urine, and feces. Contact with rodent body fluids through broken skin, eyes, nose, accidental ingestion, or presumably, by the bite of an infected rodent, can lead to an LCMV infection. Wild rodents, pet rodents, and rodents in laboratories can carry LCMV, but the most common host is the house mouse. Other rodents that may be infected if they have contact with wild mice include hamsters and guinea pigs. It is estimated that 1 out of 20 house mice (5%) in the United States carry LCMV. The Centers for Disease Control and Prevention (CDC) estimate that 1 out of 20 to 1 out of 50 adults (2% - 5%) have had an LCMV infection.

What are the symptoms of LCMV?

Some people with LCMV have no symptoms. For others, LCMV causes flu-like symptoms such as fever, muscle aches, fatigue, nausea, and vomiting. These symptoms start 1-2 weeks after being exposed to the virus and can last as long as one week. Some people develop meningitis (swelling of the spinal cord), encephalitis (swelling in the brain), or both. These symptoms can last up to 3 weeks or longer. Symptoms of LCMV infection can be treated, and cases that affect the spine or brain require hospitalization.

How can I lower the chance of getting LCMV?

The chance of LCMV infection is low. However, people who are pregnant can lower their chance of infection by following the tips below and on the CDC website at <https://www.cdc.gov/vhf/lcm/prevention/index.html>.

- Avoid direct physical contact with wild or pet rodents.
- If possible, have someone else care for pet rodents and clean their cages.
- If you do come in contact with a rodent or its urine, droppings, or nesting materials, wash hands very well with soap and water afterwards.
- Avoid vacuuming or sweeping rodent urine, droppings, or nesting materials, which can cause the virus to become airborne and increase the chance of breathing in the virus.
- If you have wild rodents in your home, have a professional pest control company remove them.
- Laboratory workers or veterinary workers who work with the virus or handle infected animals can lower their chance of infection by wearing proper protective laboratory gear, including gloves, face masks, disposable gowns, and following appropriate safety precautions. See our MotherToBaby fact sheet on working as a vet or vet tech: <https://mothertobaby.org/fact-sheets/vet-vettech/>.
- Person-to-person transmission has not been reported, with the exception of the virus passing from a person who is pregnant to the developing baby (called vertical transmission).

Does getting LCMV increase the chance of miscarriage?

Miscarriage can occur in any pregnancy. Having an LCMV infection during pregnancy can increase the chance for miscarriage, although the exact chance for a miscarriage is not clear. The chance of pregnancy loss is higher with LCMV infections in the first trimester than with infections later in pregnancy.

Does getting LCMV during pregnancy increase the chance of birth defects?

Every pregnancy starts out with a 3-5% chance of having a birth defect. This is called the background risk. If a person gets LCMV during pregnancy, the virus can pass to the developing baby. This is called congenital LCMV.

The most common known birth defects from congenital LCMV are fluid in the brain (hydrocephalus), small head size

(microencephaly), a part of the brain (cerebellum) that is not completely developed or is smaller than it should be (cerebellar hypoplasia), eye problems that can lead to vision loss (chorioretinitis), and effects on brain development ranging from mild learning disabilities to more severe developmental disability. There have not been enough reported cases of congenital LCMV to know whether these more severe cases are typical. The chance of these brain, eye, and developmental effects appears to be higher when a person who is pregnant gets an LCMV infection in the second or third trimester of pregnancy.

It is not known how likely it is that an LCMV infection in pregnancy will pass to the baby, or what the chance of birth defects is if that happens. This is because many cases of LCMV go undetected (since the symptoms are like the flu), and healthy people are not routinely tested for LCMV. It is not known how many people have had LCMV during pregnancy and still had healthy babies.

Having a LCMV infection in the past that has gone away does not increase the chance for congenital LCMV in a current or future pregnancy.

How can I find out if I have LCMV?

If you have had close contact with rodents, rodent droppings, or nesting material, and/or have a fever or other symptoms of LCMV, contact your healthcare provider. A blood test can screen for an LCMV infection.

How can I find out during my pregnancy if my baby will be affected by LCMV?

Ultrasound can detect some of the possible effects of congenital LCMV, such as enlarged areas of the brain, extra fluid in the brain, bleeding around the brain, or buildup of fluid in the baby's body tissues (hydrops).

Can I breastfeed if I have LCMV?

There is no evidence to suggest that LCMV can be passed to a baby through breast milk. Tell your healthcare provider and your baby's provider about your infection, rid the home of wild rodents if they are present, and wash your hands well with soap and water before holding your baby. If you suspect your baby has symptoms of LCMV, contact the child's healthcare provider. Be sure to talk to your healthcare provider about all of your breastfeeding questions.

What if a male has LCMV?

LCMV has not been studied for effects on male fertility. In general, exposures that fathers and sperm donors have are unlikely to increase risks to a pregnancy. For more information, please see the MotherToBaby fact sheet Paternal Exposures at <https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/>.

Please click here for references.

Questions? Call 866.626.6847 | Text 855.999.3525 | Email or Chat at [MotherToBaby.org](https://mothertobaby.org).

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