



MotherToBaby

Medications & More During Pregnancy & Breastfeeding
Ask The Experts

Fact Sheet

by the **Organization of Teratology Information Specialists (OTIS)**

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Lymphocytic Choriomeningitis Virus (LCMV)

In every pregnancy, a woman starts out with a 3-5% chance of having a baby with a birth defect. This is called her background risk. This sheet talks about whether exposure to LCMV may increase the risk for birth defects above that background risk. This information should not take the place of medical care and advice from your health care provider.

What is Lymphocytic Choriomeningitis Virus (LCMV)?

LCMV is a virus that can cause flu-like symptoms including fever, muscle aches, fatigue, nausea and vomiting. Some people will develop meningitis (swelling of the spinal cord) or encephalitis (swelling in the brain) or both. Some people will not have any symptoms at all. The onset of flu-like symptoms starts 1-2 weeks after being exposed to the virus. These symptoms can last as long as a week. If the infection goes on to affect the spinal cord or brain, the infection can last up to 3 weeks.

LCMV is not thought to be a common virus in humans. The Centers for Disease Control and Prevention (CDC) estimates that 2% to 5% of adults have had an LCMV infection. Pet rodents such as mice, guinea pigs, and hamsters can carry the virus if wild rodents infect them. Wild rodents, pet rodents, and rodents in laboratories have all been found to carry LCMV, but the most common host is the house mouse. It is estimated that 5% of house mice throughout the United States carry LCMV.

How could I get LCMV?

Infected rodents shed the virus in their nasal secretions, saliva, milk, semen, urine, and feces. Contact through broken skin, eyes, nose or accidental ingestion of these rodent body fluids or their nesting material could lead to an LCMV infection. Sweeping rodent droppings may cause the virus to become airborne and increase the chances of breathing in the virus. Bites from infected rodents can also transmit the virus. Human exposure to the virus is more common during the fall when rodents move indoors. Passing the LCMV infection from person to person has not been seen except in the case of mother to baby during pregnancy or delivery.

Laboratory workers or veterinary workers who work with the virus or handle infected animals are also at risk. However, this risk can be minimized by wearing proper protective laboratory gear, and following appropriate safety precautions. See our MotherToBaby fact sheet on working as a Vet or Vet-tech: <http://mothertobaby.org/fact-sheets/vet-vettech/>.

How will I know if I have LCMV?

Not everyone will know as not all people develop symptoms. However, some people might feel some of the following: mild fever, fatigue, lack of appetite, muscle aches, headache, nausea or vomiting. After a few more days, you may have symptoms of meningitis such as fever, headache and a stiff neck, or symptoms of encephalitis such as drowsiness, confusion, sensory disturbances, and/or problems moving (paralysis). If you had close contact with a rodent, and/or have a fever or other symptoms of LCMV, contact your health care provider. A blood test can be done to look for signs of an LCMV infection. While there is no specific treatment for LCMV, appropriate treatment of the symptoms is recommended.

If I'm in my first trimester, will an LCMV infection cause a miscarriage?

A woman who gets an LCMV infection during her pregnancy can have an increased chance for miscarriage. Information regarding LCMV and miscarriage is very limited and the exact chance for a miscarriage is not clear.

How does LCMV affect the developing baby?

If a woman becomes infected with LCMV during her pregnancy, the virus could also affect the developing baby. Not all pregnancies will be affected. A small number of children have been reported who had LCMV infection at birth (also known as congenital LCMV). Infants with congenital LCMV may have problems with brain and eye development, as well as learning difficulties. The most common birth defects are hydrocephalus (fluid in the brain) and chorioretinitis (eye problems which can lead to vision loss). It is not known whether the severe cases of congenital LCMV reported are the typical presentation or if they are on the severe end of the spectrum.

It is not known how common LCMV infection is or how often congenital LCMV occurs. It is unknown how many women have had LCMV during pregnancy and had healthy babies because LCMV is not routinely tested for among healthy women and babies. Current data suggest that the cases of LCMV infection and congenital LCMV are under-reported. Many cases of LCMV go undetected because the symptoms are like the flu. Therefore, the exact risks for LCMV related birth defects are unknown.

Having had a LCMV infection in the past does not increase the chance for congenital LCMV in a current or future pregnancy.

Can LCMV infection in the baby be detected during pregnancy?

Certain findings on ultrasound, such as enlarged areas of the brain (ventriculomegaly), extra fluid in the brain or bleeding around the brain (hydrocephaly, intracranial hemorrhage), or buildup of fluid in the body tissues (hydrops), can suggest a possible LCMV infection.

How can I prevent getting an LCMV infection?

The chance of LCMV infection is low. However, pregnant women can take precautions to lower their chances of LCMV infection. Some tips are outlined below, and the CDC has more information on their 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.
- If you think there are wild rodents in your home, have a professional pest control company remove them.
- Avoid vacuuming or sweeping rodent urine, droppings, or nesting materials.

If I have confirmed that I am infected with LCMV, can I still breastfeed my baby?

There is no evidence to suggest that LCMV can be transmitted to your baby through breast milk, but studies are needed to help answer this question. Tell the health care providers for you and your baby 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. Be sure to talk to your health care provider about all breastfeeding questions.

What if the father of the baby has LCMV?

In general, exposures that fathers have are unlikely to increase risks to a pregnancy. For more information, please see the MotherToBaby fact sheet Paternal Exposures and Pregnancy at <http://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/pdf/>.

References Available By Request

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