West Nile Virus Infection

This sheet is about exposure to or having a West Nile Virus infection in pregnancy or while breastfeeding. This information is based on published research studies. It should not take the place of medical care and advice from your healthcare provider.

What is West Nile virus?

West Nile virus (WNV) is a virus that can infect humans, birds, mosquitoes, horses, and some other mammals. It is commonly found in Africa, West Asia, and the Middle East. WNV has been reported in the United States since 1999.

How do you get WNV?

West Nile virus is most commonly spread to people by the bite of an infected mosquito. In rare cases, WNV has been spread through blood transfusion, organ transplant, to the fetus during pregnancy, delivery, or to a nursing child through breastfeeding. The chance of passing WNV infection to the fetus through delivery or to the child breastfeeding is unknown.

WNV is not spread through coughing, sneezing, or touching. Also, handling or eating infected animals does not spread WNV. However, if handling dead or live animals, use proper safety precautions such as wearing gloves to dispose of animal carcasses (dead bodies). Be sure to cook meat to its safe temperature before eating.

What are the symptoms of WNV?

The time from bite to the start of symptoms (incubation period) is usually 2 to 14 days. Most people (8 out of 10) infected with WNV will have no symptoms. About 20% (1 in 5) of people who are infected will develop fever with other symptoms such as headache, body aches, joint pain, vomiting, diarrhea, or rash.

Less than 1% (about 1 in 150 people) who are infected with WNV will develop severe infection that leads to inflammation of the brain (encephalitis) or inflammation of the area around the brain and in spinal cord (meningitis). Symptoms of severe illness include headache, high fever, neck stiffness, confusion, tremors, convulsions, muscle weakness, paralysis, and coma. Symptoms of severe WNV may last several weeks and some people may experience long-term illness.

How can I lower my chance of getting WNV?

The best way to prevent WNV is to protect yourself from mosquito bites. Insect repellent and other precautions are recommended by the Centers for Disease Control and Prevention (CDC) at https://www.cdc.gov/west-nile-virus/prevention/. MotherToBaby has fact sheets on Insect Repellents at https://mothertobaby.org/fact-sheets/insect-repellents/ and DEET at https://mothertobaby.org/fact-sheets/deet-nn-ethyl-m-toluamide-pregnancy/.

How can I find out if I am infected with WNV?

WNV can be detected by a blood test. If you think you have been exposed to WNV, talk with your healthcare provider.

I have a WNV infection. Can it make it harder for me to get pregnant?

It is not known if WNV infection can make it harder to get pregnant.

Does having WNV increase the chance of miscarriage?

Miscarriage is common and can occur in any pregnancy for many different reasons. One study looking at 77 women infected with WNV during pregnancy reported no increase chance of miscarriage.

Does having WNV in pregnancy increase the chance of birth defects?

Birth defects can happen in any pregnancy for different reasons. Out of all babies born each year, about 3 out of 100 (3%) will have a birth defect. We look at research studies to try to understand if an exposure, like West Nile Virus, might increase the chance of birth defects in a pregnancy. Having WNV is not expected to greatly increase the chance of birth defects. No consistent pattern of birth defects has been identified after exposure to WNV in pregnancy.

There is one case report of a pregnant woman who passed the virus to her fetus during pregnancy. The baby was born with serious medical problems, including bilateral chorioretinitis (rare but serious eye inflammation) and brain abnormalities. While the fetus was infected with WNV, it has not been proven that WNV caused these birth defects.

Fever is a possible symptom of WNV. A high fever in the first trimester can increase the chance of certain birth defects. Acetaminophen has been recommended to treat fever in pregnancy. If you get sick with WNV and develop a fever, talk with your healthcare provider to confirm if taking acetaminophen is right for you. For more information about fever and pregnancy, see the MotherToBaby fact sheet about fever at https://mothertobaby.org/fact-sheets/hyperthermia-pregnancy/.

Does having WNV in pregnancy increase the chance of other pregnancy-related problems?

It is not known if having WNV can increase the chance of other pregnancy-related problems such as preterm delivery (birth before week 37) or low birth weight (weighing less than 5 pounds, 8 ounces [2500 grams] at birth). One study looked at 28 pregnancies with known WNV infection. No differences in birth weight, length, or head circumference were found in this study.

Does having WNV in pregnancy affect future behavior or learning for the child?

One study that followed 11 children for 3 years did not find a link between WNV infection during pregnancy and developmental delay. Another study looked at 17 children born to women who had WNV while they were pregnant. The results showed typical development in the children at 2 years of age.

There is one case report of a WNV infection at 27 weeks of pregnancy where the baby had brain abnormalities at birth. However, a case report cannot prove that WNV caused the reported abnormalities.

Breastfeeding and WNV:

There is limited research on WNV and breastfeeding. There was a case report of a person who was infected with WNV through a blood transfusion after delivering a child. The virus was found in the breast milk. The breastfed child tested positive for WNV but had no symptoms and stayed healthy.

There are no recommendations to stop breastfeeding because of WNV. There are important benefits to breastfeeding and the chance for passing WNV through breast milk is unknown. If you suspect that the baby has symptoms of WNV, contact the child's healthcare provider. Be sure to talk to your healthcare provider about all your breastfeeding questions.

If a man has WNV, could it affect his fertility or increase the chance of birth defects?

Studies have not been done to see if WNV could affect men's fertility (ability to get a partner pregnant) or increase the chance of birth defects. In general, exposures that fathers or 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.

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