West Nile Virus Infection and Pregnancy

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 West Nile Virus Infection may increase the risk for birth defects over that background risk. This information should not take the place of medical care and advice from your health care professional.

*What is West Nile Virus (WNV)?*

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. Since 1999 WNV has been found in the United States.

You cannot get WNV from birds or horses. If an infected mosquito bites a human, the human can become infected. The incubation period (the time from bite to the start of symptoms) is usually 2 to 14 days.

*What are the symptoms of WNV?*

Most people infected with WNV will have no symptoms or very mild symptoms. About 20% of infected people will develop more serious symptoms of WNV. These symptoms may include fever, headache, being very tired, body aches, swollen glands and sometimes a skin rash on the trunk of the body.

Less than 1% of infected people will develop severe infection that leads to swelling of the brain or swelling of the area around the brain and spinal cord. These symptoms include headache, high fever, neck stiffness, confusion, tremors, convulsions, muscle weakness, paralysis and coma.

Generally, symptoms of WNV last only a few days but can last up to two weeks. Symptoms of severe WNV may last several weeks and some people may experience long-term illness.

*How is WNV treated?*

There is no specific treatment for WNV. Pain relievers such as acetaminophen may help relieve some minor symptoms. Individuals with severe WNV infection may need care in the hospital. You should contact your health care provider if you think you have developed WNV.

*I am pregnant. How do I prevent mosquito bites?*

Mosquitos are most active during early morning and dusk. The Centers for Disease Control and Prevention (CDC) recommends staying indoors during the times of day when mosquitoes are most active. Pregnant women should protect themselves when outdoors by using a mosquito repellent that contains DEET or picaridin. With proper use, these products will not increase the chance of birth defects or other pregnancy problems. For further information about using DEET while pregnant, please see the OTIS fact sheet.

To further decrease your exposure to mosquitoes, frequently change the water in birdbaths and outdoor water containers where mosquitoes might breed.

*I am pregnant and have been diagnosed with WNV. Can this harm my baby?*

Very little information is available regarding exposure to WNV during pregnancy. There is one case report of a pregnant woman who passed the virus to her unborn baby. Although the baby was born with serious medical problems, one case report does not establish a connection. In contrast, there are reports of over 70 women who had WNV during pregnancy. No adverse effects attributable to WNV were seen in the babies of these women. While reassuring, more research
is needed before we can say whether a baby may have problems if a mother develops WNV during pregnancy.

**I’m breastfeeding. Can I use DEET or picaridin?**

Yes. Breastfeeding mothers must also protect themselves from mosquito bites by using DEET or picaridin. No reports or problems associated with using these products while breastfeeding have been noted. Please see the fact sheet [DEET and Pregnancy](http://www.mothertobaby.org/files/deet.pdf) for further general information. Be sure to talk to your health care provider about all your options for breastfeeding.

**I’ve been diagnosed with WNV. Should I continue to breastfeed?**

The passing of WNV through breast milk is still being researched through the CDC. Infected infants and young children usually have mild symptoms and rarely develop complications from WNV. In one case, a woman was infected with WNV after the birth of her child. The virus was present in both the baby and the breast milk. However, the child had no symptoms and remained healthy.

Because there are important benefits to breastfeeding and the chance for passing WNV through breast milk is unknown, the CDC recommends that women should not stop breast feeding because of WNV infection. Talk with your pediatrician about continuing to breastfeed if you have a confirmed active case of WNV.

**My partner had WNV. Will his exposure harm my pregnancy?**

There are no studies looking at the possible risks to a pregnancy if the father has WNV around the time of conception or during the pregnancy. In general, medications that the father takes do not increase risk to a pregnancy. For more information, please see the [MotherToBaby fact sheet on Paternal Exposures and Pregnancy](http://www.mothertobaby.org/files/paternal.pdf)

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**Selected References:**

- Wesson DM. 2006. Is West Nile virus a teratogen? (abs) Birth Defects Research (Part A) 76:357

If you have questions about the information on this fact sheet or other exposures during pregnancy, call OTIS/MotherToBaby at 1-866-626-6847.