



Centers for Disease Control and Prevention

West Nile Virus (WNV) Infection and Breastfeeding  
*Information for Clinicians*

On October 4, 2002, CDC's *MMWR* published a report entitled "Possible West Nile Virus Transmission to an Infant through Breast-Feeding - Michigan, 2002." CDC and the Michigan Department of Community Health continue to investigate West Nile virus (WNV) infection in a woman and possible transmission to her newborn child. Following is a summary.

- In early September 2002, a woman gave birth to a healthy infant. Post-delivery, the mother required transfusion with 2 units of packed red blood cells for anemia.
- The second blood transfusion, given one day after delivery, was derived from the same donation as a unit given to a liver transplant recipient who subsequently developed WNV meningoencephalitis. A retained blood specimen from the donation was PCR-positive for WNV.
- The mother began breast-feeding her child on the day of delivery. She was discharged from the hospital 2 days later.
- The mother developed severe, persistent headache and high fever (102.8°F) and was readmitted to the hospital 15 days after delivery.
- A cerebrospinal fluid (CSF) sample was positive for WNV-specific IgM, and the mother was diagnosed with WNV meningoencephalitis.
- A sample of the mother's breast milk obtained 16 days after delivery tested positive for WNV-specific IgM.
- The infant remained afebrile and healthy, although a serum sample from the infant at age 25 days tested positive for WNV-specific IgM. Virus culture is pending.
- Neither WNV nor WNV nucleic acids have been identified previously in human breast milk.
- Because the infant had minimal outdoor exposure, it is unlikely WNV infection was acquired from a mosquito. Therefore, breast milk must be considered a likely source of infection.
- Currently, both mother and child are healthy.

Recommendations for Patients: **Because the health benefits of breast-feeding are well established, and the risk for WNV transmission through breast-feeding is unknown, these findings do not suggest a change in breast-feeding recommendations.** Lactating women who are ill or who are having difficulty breastfeeding for any reason, as always, are advised to consult their physicians.

Following are questions and answers developed by CDC to assist clinicians who may receive inquiries from their patients regarding WNV and breastfeeding.

**Q. Can West Nile virus be transmitted through breast milk?**

**A.** Based on a recent case in Michigan, it appears that West Nile virus can be transmitted through breast milk. A new mother in Michigan contracted West Nile virus from a blood transfusion shortly after giving birth. Laboratory analysis showed evidence of West Nile virus in her breast milk. She breastfed her infant, and three weeks later, her baby's blood tested positive for West Nile virus. Because of the infant's minimal outdoor exposure, it is unlikely that infection was acquired from a mosquito. The infant was most likely infected through breast milk. The child is healthy, and does not have symptoms of West Nile virus.

**Q. Should I continue breast-feeding if I am symptomatic for West Nile virus?**

A. Because the health benefits of breast-feeding are well established, and the risk for West Nile virus transmission through breast-feeding is unknown, the new findings do not suggest a change in breast-feeding recommendations. The American Academy of Pediatrics and the American Academy of Family Physicians recommend that infants be breastfed for a full year of life.

Lactating women who are ill or who are having difficulty breast-feeding for any reason, as always, should consult their physicians.

**Q. Should I continue breast-feeding if I am not symptomatic for West Nile virus?**

A. Yes. Because the health benefits of breast-feeding are well established, and the risk for West Nile virus transmission through breast-feeding is unknown, the new findings do not suggest a change in breast-feeding recommendations.

**Q. If I am breast-feeding, should I be tested for West Nile virus?**

A. No. There is no need to be tested just because you are breast-feeding.

**Q. Is there any evidence that West Nile virus is transmitted from mother to child during pregnancy or during birth?**

A. There is no evidence that West Nile virus can be transmitted during pregnancy or birth.

**Q. Are infants at higher risk than other groups for illness with West Nile virus?**

A. No. West Nile virus illnesses in children younger than 1-year-old are infrequent. During 1999-2001, no cases in children younger than one year of age were reported to CDC. Of the over 2500 total West Nile Virus cases in 2002, only four were less than one year of age. We know that one of these infants was not breast-feeding, and investigation of the other infants is underway.

**Q. If I am breast-feeding, should I use insect repellent containing DEET?**

A. Yes. Insect repellents help people reduce their exposure to mosquito bites that may carry potentially serious viruses such as West Nile virus, and allow them to continue to play and work outdoors. There are no reported adverse events following use of repellents containing DEET in pregnant or breast-feeding women.

For additional information regarding WNV, please see <http://www.cdc.gov>

Questions can be directed to CDC Public Information at 1-888-246-2675 (English), 1-888-246-2857 (Spanish), and 1-866- 874-2646 (TTY).

For the full published case report, please see CDC Possible West Nile Virus Transmission to an Infant through Breast-Feeding – Michigan 2002. *MMWR* 2002; 51:877–878.

Also available online at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5139a1.htm>