

## ***WEST NILE VIRUS - SUMMER 2004***

West Nile Virus (WNV) season is fast approaching. Data from previous years has shown that IgM can remain positive for more than a year in some patients infected with WNV. Since WNV has been present in each of the last two summers, a positive IgM test alone will not be diagnostic of disease. This year, public health officials at the Nebraska Health and Human Services are recommending that serum be tested for both IgM and IgG, and that CSF be tested for IgM. A positive serum or CSF IgM in the absence of detectable IgG will be considered acute infection. In some cases paired acute and convalescent serum may be needed to confirm the diagnosis. The Nebraska Public Health Laboratory (NPHL) will be working closely with CDC to obtain confirmatory WNV tests (plaque-reduction neutralization assay) on specimens which test positive for WNV at NPHL. This is useful to differentiate WNV infection from other Flavivirus infections. The serology test for WNV is not specific, and cross-reacts with antibodies from other members of the Flavivirus family including St. Louis Encephalitis Virus, which is also found in Nebraska.

There will be a charge for the serum IgM/IgG panel this year. Please call Client Services at 354-4541 or Toll free at 888-432-8980 for current charges. The tests will be performed once a week at NPHL until the season starts and then twice a week or more depending on test volume. The IgM/IgG panel requires 2 ml serum minimum (or pediatric volume: 0.5 ml) and CSF samples require 1.0 ml minimum (or pediatric volume: 0.5 ml) and should be refrigerated.

The NPHL WNV program will not charge patients or providers for testing specimens from patients with neuroinvasive disease (meningitis and encephalitis). Specimens from such patients should include serum for IgM/IgG testing with accompanying CSF for IgM testing.

The Health Department will contact the ordering Physician directly on all positive results to obtain patient information for epidemiological risk factors and to assess severity and nature of infection. Please remember that WNV fever, meningitis, and encephalitis are required to be reported to the state as are viral meningitis and encephalitis.

### **WNV INFECTION**

After infection with WNV, the incubation period is 3 to 14 days and the presenting symptoms vary from none to severe illness:

- 80% of people who are infected never have symptoms but will develop antibodies.
- 20% of people who become infected develop WNV fever and will have mild symptoms including fever, headache, body aches, nausea, vomiting, swollen lymph nodes and a skin rash on chest, stomach and back. Symptoms usually last 3-6 days.
- Less than 1% develop severe disease with symptoms which include WNV fever symptoms along with alterations in mental status which can progress to coma and death, severe muscle weakness, flaccid paralysis, ataxia, extrapyramidal signs, cranial nerve abnormalities, myelitis, optic neuritis, polyradiculitis and seizures.

### **WHAT ELSE YOU SHOULD KNOW:**

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- No vaccine available for humans. There is a vaccine for horses.
- While there is no approved drug treatment, please contact infectious disease specialists regarding enrollment of seriously ill patients in experimental protocols.
- WNV is rarely spread through blood transfusions, organ donation, breast-feeding and pregnancy.
- Aseptic meningitis caused by Enterovirus can look like WNV. If CSF is obtained and this is a concern, order Enterovirus PCR. If CSF not available, a throat swab placed immediately into viral transport media, refrigerated and sent in for Enterovirus culture may help with clinical diagnosis.

**THE GOOD NEWS – WEST NILE VIRUS CAN BE PREVENTED:**

- Use insect repellants containing DEET.
- Use window screens in good repair.
- Consider staying indoors when mosquitoes are most active at dusk and dawn.
- Prevent mosquitoes from breeding – get rid of standing water

**FOR MORE INFORMATION:**

<http://www.cdc.gov/ncidod/dvbid/westnile>, <http://www.hhs.state.ne.us>

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