



- The specimen is accompanied by a completed NPHL requisition [http://dhhs.ne.gov/publichealth/Pages/puh\\_epi\\_wnv\\_healthpros.aspx](http://dhhs.ne.gov/publichealth/Pages/puh_epi_wnv_healthpros.aspx)
- The sample collection date is between June 1 and October 31.
- The submitted specimens include a CSF for WNV IgM antibody testing. Health care providers should routinely include a serum specimen for IgM/IgG WNV testing on patients suspected of neuroinvasive disease. Serum specimens will be tested for WNV IgM/IgG antibodies at public health expense provided there is an accompanying CSF specimen.
- Convalescent serum will routinely be tested in patients with suspected neuroinvasive WNV disease provided that CSF from the patient is or was previously submitted. (Serum specimens without a concurrent or prior CSF specimen require pre-authorization).

Because serum IgM antibody may persist for more than a year, physicians must determine whether the antibody is the result of a WNV infection in the previous year and unrelated to the current clinical presentation. The following procedures are recommended:

- The most conclusive diagnostic method to identify persons with WNV infection of the central nervous system (CNS) is detecting WNV-specific IgM antibody in CSF using MAC-ELISA. This can be done with a CSF specimen obtained during initial clinical presentation. Because IgM antibody does not readily cross the blood-brain barrier, IgM antibody in CSF strongly suggests acute CNS infection.
- If CSF is not obtained and serum samples are used to make the diagnosis, paired acute- and convalescent-phase serum samples should be acquired. The acute-phase specimen should be obtained during initial clinical presentation and the convalescent-phase specimen should be obtained at least 14 days later. Both samples should be tested with MAC-ELISA.
- If a convalescent-phase specimen cannot be obtained, the acute-phase specimen should be tested with MAC-ELISA. If the specimen is IgM-negative, then the illness is very unlikely to be an acute WNV infection. If the specimen is IgM-positive and the illness is clinically compatible, then recent WNV infection should be a serious consideration.

### **WNV Test Interpretation Guidelines**

Tests	Results	Interpretation
IgM IgG	negative negative	Antibody not detected = not a case of WNV
IgM IgG	negative positive	Infection at undetermined time = past infection
IgM IgG	positive negative	Evidence of recent or current infection
IgM IgG	positive positive	Evidence of recent or current infection*; further testing necessary‡
IgM IgG	indeterminate negative	Inconclusive ‡request convalescent serum

\*Note that some individuals may have persisting antibodies from the previous WNV season

‡ Paired acute and convalescent serum samples may be useful for demonstration of seroconversion