

# CLINICAL PATIENT SPECIMEN SUBMISSION PROCEDURES WEST NILE VIRUS

Oregon Health Authority  
Center for Public Health Practice  
Acute and Communicable Disease Prevention

## SUBMISSION PROCEDURES

Testing for West Nile virus (WNV) will be done on serum and cerebrospinal fluid (CSF) from patients with:

- 1) Fever  $\geq 37.8^{\circ}\text{C}$  ( $100^{\circ}\text{F}$ )  
**AND**
- 2) At least one of the following acute syndromes:
  - a) Encephalopathy,
  - b) Flaccid paralysis, and/or
  - c) Aseptic meningitis.

If you have a suspected case of West Nile virus (WNV) infection, please do the following:

- Call the local public health authority for the county in which the patient resides and report the suspected case. Use the current [Oregon local public health authorities contact information](#).
- The laboratory submitting the specimen should also notify the Oregon State Public Health Lab (OSPHL) at 503-693-4100 before sending the specimen.
- Collect specimens as follows:
  - Serum – collect  $\geq 3$  cc of whole blood ( $\geq 1$  cc of serum) at presentation or as soon as possible thereafter for IgM testing. If the test for IgM is negative, collect a convalescent specimen  $\geq 10$  days after the acute specimen is collected for IgG testing.
  - CSF – collect  $\geq 1$  cc of CSF at presentation or as soon as possible thereafter. If the CSF tests positive, collect serum as soon as possible afterwards for confirmatory testing.
  - Complete the OSPHL Virology/Immunology Test Request Form #42 for specimen submission.
    - Access and submit an [online fillable form](#), OR
    - Access the [print-and-write version](#) of the form to send via fax.
- To transport specimens:
  - Complete the [OSPHL Specimen Transport Manifest form](#). This form helps communicate to the OSPHL which specimens you are sending, so they can verify the lab received everything you intended to send.
  - If you do not use this form, please use a format of your choice to meet the same goal.
- Submit the specimen(s)—refrigerated or on wet ice, but not frozen—along with the completed form(s) to:

**Virology/Immunology Section**  
**Oregon State Public Health Laboratory**  
7202 NE Evergreen Parkway, Suite 100  
Hillsboro, Oregon 97124

## TEST INTERPRETATION

Serum and CSF will be tested for West Nile virus at the Oregon State Public Health Laboratory. Serum by enzyme immunoassay. IgM antibody is present in most cases by day eight after symptom onset. By three weeks after onset, almost all cases will have IgG antibody. In general, convalescent specimens should be drawn no less than ten days after acute phase specimens.

A negative test result on a specimen obtained less than eight days after onset of illness will be interpreted as “inconclusive.” A second (convalescent) specimen, obtained at least ten days after the first specimen, will be needed to make a final determination.

A positive test result on an acute specimen will be reported as “suspect positive” and sent to the California Department of Health Services for confirmation by the plaque reduction neutralization test. Cross-reaction may occur with yellow fever or Japanese encephalitis vaccine, or a previous history of viral encephalitis (e.g., St. Louis encephalitis) or dengue fever.

### Full URL addresses for linked resources

Please copy and paste into browser if embedded links do not work correctly.

#### Oregon Local Public Health Authorities Contact Information

<https://www.oregon.gov/oha/ph/providerpartnerresources/localhealthdepartmentresources/pages/lhd.aspx>

#### OSPHL Virology/Immunology Test Request Form #42

##### Online Fillable Form

<https://sharesystems.dhsoha.state.or.us/DHSForms/Served//le0042.pdf>.

##### Print-and-write Form

<https://sharesystems.dhsoha.state.or.us/DHSForms/Served//le0042p.pdf>.

#### OSPHL Specimen Transport Manifest Form

<https://www.oregon.gov/oha/PH/LABORATORYSERVICES/COMMUNICABLEDISEASETESTING/Documents/manifest.pdf>