

Idaho Public Health Guidance for Zika Virus Testing

Zika virus diagnosis is based on a combination of travel history, clinical signs and symptoms, and specialized laboratory tests of blood or other tissues. Characteristic clinical findings are acute onset of fever with maculopapular rash, arthralgia, or conjunctivitis. Other commonly reported symptoms include myalgia and headache. Clinical illness is usually mild with symptoms lasting for several days to a week. Symptoms typically begin 2 to 7 days after being bitten by an infected mosquito. However, symptoms may occur up to two weeks after being bitten by an infected mosquito.

Types of Testing

There are no commercially available diagnostic tests for Zika virus disease. Zika virus testing is performed at the CDC Arbovirus Diagnostic Laboratory, as follows:

| Test Name | Specimen Type | Minimum Volume |
|--|--|-------------------|
| Reverse transcriptase-polymerase chain reaction (RT-PCR) | Serum Cerebrospinal fluid Umbilical cord blood Amniotic fluid | 0.25 mL |
| | Fresh frozen tissue (placenta, umbilical cord, fetal tissue, other products of conception) | 1 cm ³ |
| Serology: Zika virus-specific IgM and Plaque-reduction neutralization testing (PRNT) | Serum Umbilical cord blood | 0.5 mL |
| | Cerebrospinal fluid | 1 mL |
| Histopathology and immunohistochemistry | Fixed tissue (placenta, umbilical cord, fetal tissue, other products of conception) | 1 cm ³ |

For symptomatic persons, RT-PCR testing can be offered during days 1 through 7 after illness onset and serology testing can be offered after 4 or more days after illness onset. It is important to note that cross-reaction with IgM antibodies against related flaviviruses is common in areas where there is co-circulation of viruses. Since test results are normally available 4 to 14 days after specimen receipt, testing for other flaviviruses (e.g., dengue) for clinical evaluation and diagnosis should be ordered from a commercial laboratory to ensure timely results. If the first of paired samples is diagnostic, testing of the second sample by CDC is not expected.

Indications for Testing

Testing for Zika virus infection through public health agencies is indicated for:

- Pregnant women who report symptoms consistent with Zika virus disease during or within two weeks of returning from travel to an area with Zika virus transmission
- Asymptomatic pregnant women within 2–12 weeks after returning from travel to an area with Zika virus transmission
- Infants born to women who traveled to or resided in an area with Zika virus transmission during pregnancy who 1) were diagnosed with microcephaly or intracranial calcifications detected prenatally or at birth, or 2) have mothers with positive or inconclusive test results for Zika virus infection



- Mothers of infants without microcephaly or intracranial calcifications who had clinical illness and travel history consistent with Zika virus disease during pregnancy
- Currently ill persons who report symptoms consistent with Zika virus disease during or within two weeks of completing travel to an area with Zika virus transmission and for whom test results would aid in differential diagnosis to inform treatment

Testing for Zika virus infection through public health agencies is not recommended for:

- Asymptomatic pregnant women who completed travel to an area with Zika virus transmission more than a week *before* becoming pregnant
- Infants without microcephaly or intracranial calcifications born to mothers with negative test results for Zika virus infection
- Currently ill persons who report onset of symptoms consistent with Zika virus disease two or more weeks after returning from travel to an area with Zika virus transmission
- Well persons with a history of travel to an area with Zika virus transmission and for whom test results will not aid in clinical evaluation
- Male persons with a history of travel to an area with Zika virus transmission for the purpose of assessing risk for sexual transmission.

Healthcare providers who have questions about testing may contact the following for more information:

Idaho Local Public Health Districts

<http://healthandwelfare.idaho.gov/Health/HealthDistricts/tabid/97/Default.aspx>

Division of Public Health

Bureau of Communicable Disease Prevention, Epidemiology Program: 208-334-5939

Idaho Bureau of Laboratories

208-334-2235

References

CDC Guidance for Health Care Providers: <http://www.cdc.gov/zika/hc-providers/index.html>

CDC instructions for submitting diagnostic specimens:
<http://www.cdc.gov/ncezid/dvbd/specimensub/arboviral-shipping.html>

