

**This is an official**  
**CDC HEALTH ADVISORY**

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**Recognizing, Managing, and Reporting Zika Virus Infections in  
Travelers Returning from Central America, South America, the  
Caribbean, and Mexico**

**Summary**

In May 2015, the World Health Organization reported the first local transmission of Zika virus in the Western Hemisphere, with autochthonous (locally acquired) cases identified in Brazil. As of January 15, 2016, local transmission had been identified in at least 14 countries or territories in the Americas, including Puerto Rico (See Pan American Health Organization [PAHO] link below for countries and territories in the Americas with Zika virus transmission). Further spread to other countries in the region is likely.

Local transmission of Zika virus has not been documented in the continental United States. However, Zika virus infections have been reported in travelers returning to the United States. With the recent outbreaks in the Americas, the number of Zika virus disease cases among travelers visiting or returning to the United States likely will increase. These imported cases may result in local spread of the virus in some areas of the continental United States, meaning these imported cases may result in human-to-mosquito-to-human spread of the virus.

Zika virus infection should be considered in patients with acute onset of fever, maculopapular rash, arthralgia or conjunctivitis, who traveled to areas with ongoing transmission in the two weeks prior to illness onset. Clinical disease usually is mild. However, during the current outbreak, Zika virus infections have been confirmed in several infants with microcephaly and in fetal losses in women infected during pregnancy. We do not yet understand the full spectrum of outcomes that might be associated with infection during pregnancy, nor the factors that might increase risk to the fetus. Additional studies are planned to learn more about the risks of Zika virus infection during pregnancy.

Healthcare providers are encouraged to report suspected Zika virus disease cases to their state health department to facilitate diagnosis and to mitigate the risk of local transmission. State health departments are requested to report laboratory-confirmed cases to CDC. CDC is working with states to expand Zika virus laboratory testing capacity, using existing RT-PCR protocols.

This CDC Health Advisory includes information and recommendations about Zika virus clinical disease, diagnosis, and prevention, and provides travel guidance for pregnant women and women who are trying to become pregnant. Until more is known and out of an abundance of caution, pregnant women should consider postponing travel to any area where Zika virus transmission is ongoing. Pregnant women who do travel to these areas should talk to their doctors or other healthcare providers first and strictly follow steps to avoid mosquito bites during the trip. Women trying to become pregnant should consult with their healthcare providers before traveling to these areas and strictly follow steps to avoid mosquito bites during the trip.

## **Background**

Zika virus is a mosquito-borne flavivirus transmitted primarily by *Aedes aegypti*. *Aedes albopictus* mosquitoes might also transmit the virus. Outbreaks of Zika virus disease have been reported previously in Africa, Asia, and islands in the Pacific.

### *Clinical Disease*

About one in five people infected with Zika virus become symptomatic. Characteristic clinical findings include acute onset of fever, maculopapular rash, arthralgia, or conjunctivitis. Clinical illness usually is mild with symptoms lasting for several days to a week. Severe disease requiring hospitalization is uncommon and fatalities are rare. During the current outbreak in Brazil, Zika virus RNA has been identified in tissues from several infants with microcephaly and from fetal losses in women infected during pregnancy. The Brazil Ministry of Health has reported a marked increase in the number of babies born with microcephaly. However, it is not known how many of the microcephaly cases are associated with Zika virus infection and what factors increase risk to the fetus. Guillain-Barré syndrome also has been reported in patients following suspected Zika virus infection.

### *Diagnosis*

Zika virus infection should be considered in patients with acute onset of fever, maculopapular rash, arthralgia, or conjunctivitis who recently returned from affected areas. To confirm evidence of Zika virus infection, RT-PCR should be performed on serum specimens collected within the first week of illness. Immunoglobulin M and neutralizing antibody testing should be performed on specimens collected  $\geq 4$  days after onset of illness. Zika virus IgM antibody assays can be positive due to antibodies against related flaviviruses (e.g., dengue and yellow fever viruses). Virus-specific neutralization testing provides added specificity but might not discriminate between cross-reacting antibodies in people who have been previously infected with or vaccinated against a related flavivirus.

There is no commercially available test for Zika virus. Zika virus testing is performed at the CDC Arbovirus Diagnostic Laboratory and a few state health departments. CDC is working to expand laboratory diagnostic testing in states, using existing RT-PCR protocols. Healthcare providers should contact their state or local health department to facilitate testing.

### *Treatment*

No specific antiviral treatment is available for Zika virus disease. Treatment is generally supportive and can include rest, fluids, and use of analgesics and antipyretics. Because of similar geographic distribution and symptoms, patients with suspected Zika virus infections also should be evaluated and managed for possible dengue or chikungunya virus infection. Aspirin and other non-steroidal anti-inflammatory drugs (NSAIDs) should be avoided until dengue can be ruled out to reduce the risk of hemorrhage. In particular, pregnant women who have a fever should be treated with acetaminophen. People infected with Zika, chikungunya, or dengue virus should be protected from further mosquito exposure during the first few days of illness to reduce the risk of local transmission.

### *Prevention*

No vaccine or preventive drug is available. The best way to prevent Zika virus infection is to:

- Avoid mosquito bites.
- Use air conditioning or window and door screens when indoors.
- Wear long sleeves and pants, and use insect repellents when outdoors. Most repellents, including DEET, can be used on children older than two months. Pregnant and lactating women can use all Environmental Protection Agency (EPA)-registered insect repellents, including DEET, according to the product label.

## **Recommendations for Health Care Providers and Public Health Practitioners**

- Zika virus infection should be considered in patients with acute fever, rash, arthralgia, or conjunctivitis, who traveled to areas with ongoing transmission in the two weeks prior to onset of illness.
- All travelers should take steps to avoid mosquito bites to prevent Zika virus infection and other mosquito-borne diseases.

- Until more is known and out of an abundance of caution, pregnant women should consider postponing travel to any area where Zika virus transmission is ongoing. Pregnant women who do travel to one of these areas should talk to their doctors or other healthcare providers first and strictly follow steps to avoid mosquito bites during the trip. Women trying to become pregnant should consult with their healthcare providers before traveling to these areas and strictly follow steps to avoid mosquito bites during the trip.
- Fetuses and infants of women infected with Zika virus during pregnancy should be evaluated for possible congenital infection and neurologic abnormalities.
- Healthcare providers are encouraged to report suspected Zika virus disease cases to their state or local health department to facilitate diagnosis and to mitigate the risk of local transmission.
- Health departments should perform surveillance for Zika virus disease in returning travelers and be aware of the risk of possible local transmission in areas where *Aedes* species mosquitoes are active.
- State health departments are requested to report laboratory-confirmed Zika virus infections to CDC.

#### For More Information

- General information about Zika virus and disease: <http://www.cdc.gov/zika/>
- Zika virus information for clinicians: <http://www.cdc.gov/zika/hc-providers/index.html>
- Protection against mosquitoes: <http://wwwnc.cdc.gov/travel/yellowbook/2016/the-pre-travel-consultation/protection-against-mosquitoes-ticks-other-arthropods>
- Travel notices related to Zika virus: <http://wwwnc.cdc.gov/travel/notices>
- Information about Zika virus for travelers and travel health providers: <http://wwwnc.cdc.gov/travel/yellowbook/2016/infectious-diseases-related-to-travel/zika>
- Pan American Health Organization (PAHO): [http://www.paho.org/hq/index.php?option=com\\_topics&view=article&id=427&Itemid=41484&lang=en](http://www.paho.org/hq/index.php?option=com_topics&view=article&id=427&Itemid=41484&lang=en)
- Information on microcephaly: <http://www.cdc.gov/ncbddd/birthdefects/microcephaly.html>
- Approximate distribution of *Aedes aegypti* and *Ae. albopictus* mosquitoes in the United States: <http://www.cdc.gov/chikungunya/resources/vector-control.html>

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