

HEALTH AND TRAVEL ADVISORY – May 2016

Zika, Chikungunya, and Dengue in Latin America and the Caribbean

Certain regions of Latin America and the Caribbean have experienced a significant increase in Zika infections and continued chikungunya and dengue cases in 2015-2016. If you are traveling to an area with Zika, chikungunya, and/or dengue, the California Department of Public Health recommends taking appropriate precautions for avoiding mosquito bites during the day and at night.

Zika

Since the emergence of Zika in Brazil in 2015, Zika virus has spread rapidly throughout Latin America and the Caribbean. Currently, Zika outbreaks are ongoing in 44 countries and territories, including in Mexico where the highest number of cases are in the southern part of the country. Zika virus infection during pregnancy can cause a serious birth defect called microcephaly, as well as other severe fetal brain defects. Zika virus infection has also been tied to Guillain-Barré Syndrome, a rare disorder that can cause muscle weakness and paralysis. Although primarily transmitted by mosquitoes, Zika virus can also be sexually transmitted.

Chikungunya

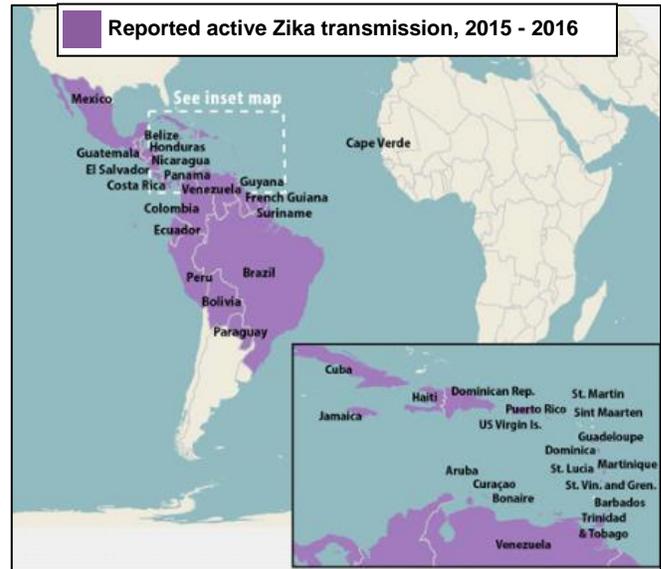
In Mexico, the number of reported chikungunya cases grew from 155 cases in 5 states in 2014 to over 11,500 cases in 28 states in 2015. Chikungunya transmission continues to occur in the Caribbean and Central and South America, with over 32,000 confirmed cases reported in 2015. Countries in the Americas with the highest numbers of confirmed chikungunya cases include Mexico, Nicaragua, Ecuador, Colombia, Guatemala, and French Guiana.

Dengue

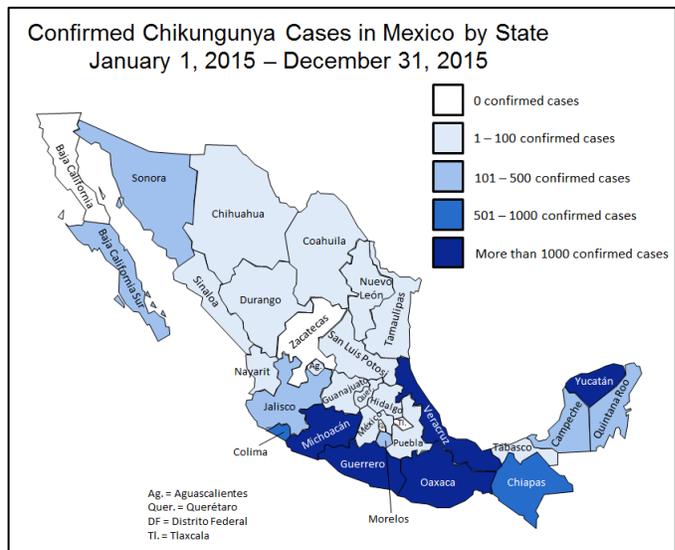
Dengue transmission has been widespread throughout Latin American countries in recent years. Cases of dengue continue to be reported in Mexico. In 2015 there were over 26,500 confirmed cases in 30 Mexican states. Countries with the highest numbers of confirmed dengue cases in 2015 included Brazil, Mexico, Peru, El Salvador, Paraguay, Nicaragua, Panama, and Ecuador.

Mosquito Vectors

Zika, chikungunya, and dengue viruses are transmitted by *Aedes aegypti* and *Aedes albopictus* mosquitoes. These two mosquitoes are aggressive day-biters that can potentially transmit the virus after biting an infected person. These mosquitoes typically develop in small, water-filled containers. The presence of *Aedes aegypti* has been established in Mexican cities along the California-Mexico border, such as Mexicali, Tecate, and Tijuana. In California, *Aedes aegypti* and *Aedes albopictus* mosquitoes have been detected in [twelve and five counties](#), respectively.



Centers for Disease Control and Prevention



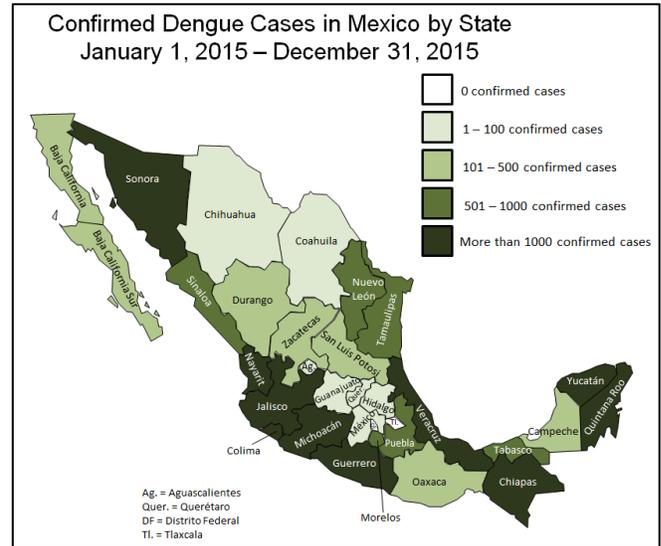
Data Source: Mexican Ministry of Health

Reported Zika Cases in California

As of May 2016, California has seen an increase in the number of reported Zika cases among travelers returning from Zika-affected areas. Since the ongoing Zika virus outbreak in Latin America began in 2015, there have been 49 travel-associated cases of Zika detected in California.

Reported Chikungunya and Dengue Cases in California

California continues to see imported cases of chikungunya and dengue. In 2015, there were 275 chikungunya cases and 137 dengue cases reported in travelers who returned from areas with on-going chikungunya and dengue transmission.



Data Source: Mexican Ministry of Health

Zika Clinical Presentation

Most people infected with Zika virus have no symptoms. If symptoms develop, the most common are fever, rash, joint pain, and/or red eyes. Symptoms usually begin a few days to a week after being bitten by an infected mosquito or having unprotected sex with an infected partner. The illness is usually mild with symptoms lasting for several days to a week. However, Zika virus infection during pregnancy can cause a serious birth defect called microcephaly, as well as other severe fetal brain defects. Pregnant women are advised to avoid travel to Zika-affected areas. Additionally, pregnant women should consider abstaining from sex or using condoms with partners who have traveled to a Zika-affected area for the duration of the pregnancy.

Chikungunya Clinical Presentation

Chikungunya occurs 3 to 7 days after the bite of an infected mosquito. Most people infected with chikungunya virus have symptoms. The most common symptoms of chikungunya are fever and severe joint pain. Joint pain often occurs in the hands and feet and can be debilitating. Other symptoms may include headache, muscle pain, fatigue, and rash. Treatment is supportive and symptoms typically resolve within 7 to 10 days. However some people may have joint pain for months. Chikungunya is not contagious person to person. Persons at risk for more severe disease include newborns, older adults, and persons with chronic medical conditions.

Dengue Clinical Presentation

Dengue occurs 3 to 14 days after the bite of an infected mosquito. The main symptoms of dengue are high fever, severe headache, severe pain behind the eyes, joint pain, muscle and bone pain, rash, and mild bleeding (such as in the nose or gums). Over half of infected people do not have symptoms. Treatment is supportive and symptoms typically resolve within 7 days. Dengue is not contagious from person to person.

More Information for Clinicians

More information on the clinical presentation, epidemiology, and diagnostic criteria for Zika, chikungunya, and dengue is available in the following California Department of Public Health resources: [Information for Clinicians: Aedes aegypti and Aedes albopictus Mosquitoes in California and Reporting Patients with Suspected Dengue or Chikungunya to Public Health](#) and [Zika Virus FAQs for Health Care Providers](#).

Traveler Warning

If you are traveling to an area with Zika, chikungunya, and/or dengue, the California Department of Public Health recommends taking appropriate precautions for avoiding mosquito bites during the day and at night. If you have returned from an affected region and have fever with joint pain or rash within the two weeks following your return, please contact your medical provider and tell the doctor where you have traveled, and use mosquito repellent for three weeks following your return.

Prevention

There are no vaccines to prevent Zika, chikungunya or dengue infections. Preventing mosquito bites is the best way to avoid becoming infected.

- Use insect repellents containing DEET, picaridin, IR3535, oil of lemon eucalyptus, or para-menthane-diol for long lasting protection. If you use both sunscreen and insect repellent, apply the sunscreen first and then the repellent.
- When weather permits, wear long-sleeved shirts and long pants.
- Use air conditioning or window/door screens to keep mosquitoes outside. If you are not able to protect yourself from mosquitoes inside your home or hotel, sleep under a mosquito bed net.
- Help reduce the number of mosquitoes outside your home or hotel room by emptying standing water from containers such as flowerpots or buckets.

Additional Resources

What you can do to reduce the risk of **Zika** infection:

<https://www.cdph.ca.gov/HealthInfo/discond/Pages/Zika.aspx>

<http://www.cdc.gov/Zika/>

<http://www.cdc.gov/zika/prevention/index.html>

What you can do to reduce the risk of **chikungunya** infection:

<https://www.cdph.ca.gov/HealthInfo/discond/Pages/Chikungunya.aspx>

<http://wwwnc.cdc.gov/travel/diseases/chikungunya>

<http://wwwnc.cdc.gov/travel/notices/watch/chikungunya-mexico>

What you can do to reduce the risk of **dengue** infection:

<https://www.cdph.ca.gov/HealthInfo/discond/Pages/Dengue.aspx>

<http://www.cdc.gov/dengue/prevention/index.html>

<http://www.cdc.gov/Dengue/faqFacts/fact.html>

How to **protect yourself from mosquito bites**:

<http://wwwnc.cdc.gov/travel/yellowbook/2016/the-pre-travel-consultation/protection-against-mosquitoes-ticks-other-arthropods>

Information on **invasive Aedes mosquitoes** in California:

<https://www.cdph.ca.gov/HEALTHINFO/DISCOND/Pages/Aedes-albopictus-and-Aedes-aegypti-Mosquitoes.aspx>