

IN THIS ISSUE: ZIKA VIRUS

Zika Virus

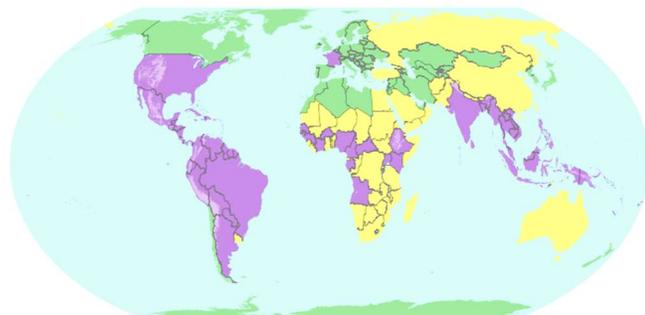
Introduction

Zika virus is spread predominately through the bite of infected *Aedes* species mosquitos (*Ae. aegypti* and *Ae. albopictus*).¹ It also can be passed from a pregnant woman to her fetus, causing birth defects, such as microcephaly, as well as miscarriage and stillbirth. Transmission can also occur through sex even if not symptomatic. While many areas in the United States (US) have the type of mosquitoes that can spread Zika virus no cases in the US have been reported since 2019.²

Epidemiology

The first human case of Zika virus was documented in 1952 in Uganda; however, before 2007, only 14 cases of Zika had been documented.¹ In 2015, reports of Zika virus outbreaks began to occur in the Americas. In 2015, 62 travel-associated cases of Zika virus disease were reported in the US.³ The following year, almost 5,000 travel-associated Zika virus disease cases and 224 locally-acquired cases were reported in the US (with 23 cases in Nevada and five in Washoe County).³⁻⁵ Since 2018, no local US mosquito-borne Zika virus transmission has occurred and no cases have been reported at all (including travel-associated) in the US since 2019.^{2,6} There are currently no Zika outbreaks in any country [Fig 1].⁷

Figure 1: Areas of risk for Zika as of Dec. 6, 2023



Map Legend

- Country or territory with current Zika outbreak¹
 - Country or territory that has ever reported Zika cases² (past or current)
 - Country or territory with mosquito³ but no reported Zika cases
 - Country or territory with no mosquitoes that spread Zika
 - Areas with low likelihood of Zika infection because of high elevation (above 6,500ft/2,000m)
- ¹ No areas are currently reporting Zika outbreaks
² Locally acquired, mosquito-borne Zika cases
³ *Aedes aegypti*

Source: <https://wwwnc.cdc.gov/travel/page/zika-travel-information>

However, symptoms of Zika are similar to other illnesses spread through mosquito bites (e.g., dengue and chikungunya), thus many infections may not be recognized.

Prevention

Anyone who lives in or travels to an area with risk of Zika and has not already been infected with Zika virus is at risk for infection.⁶ No vaccine currently exists for Zika virus. To prevent Zika virus infection:

- Check CDC’s travel recommendations for areas with risk of Zika before travel.
- Pregnant women should not travel to areas with Zika outbreaks.
- If visiting an area with Zika, prevent mosquito bites both day and night (e.g., use EPA-registered insect repellents, wear long-sleeved shirt and pants).
- Avoid sex with someone who may have been exposed to Zika virus or use condoms or dental dams to reduce the risk of sexual transmission.

People infected with Zika virus should avoid further mosquito exposure during the first few days of illness to prevent other mosquitoes from becoming infected and increasing the risk of local transmission.⁸

Signs & Symptoms

Many infections are asymptomatic.⁸ When there are symptoms, they are usually mild and include acute onset of fever with maculopapular rash, arthralgia, conjunctivitis, myalgia, and headache. Symptoms can last for several days to a week. Severe disease requiring hospitalization or death is uncommon.

If infected during pregnancy, microcephaly and other severe fetal brain defects can occur in utero.⁸ Rarely, Zika may cause Guillain-Barré syndrome or swelling of

the brain or spinal cord or a blood disorder which can result in bleeding, bruising or slow blood clotting.⁹

Diagnosis & Testing

Preliminary diagnosis is based on clinical features and exposure history (e.g., recent travel history).⁸ Nucleic acid amplification tests (NAAT) assays are the preferred method of diagnosis, but Zika virus immunoglobulin (Ig) M antibody testing is recommended in certain situations (see testing algorithm and guidance at <https://www.cdc.gov/zika/hc-providers/testing-guidance.html>).¹⁰ Both are available through commercial laboratories. IgM levels generally become positive starting in the first week after onset of symptoms through 12 weeks post symptom onset or exposure but may persist for months to years. If Zika virus IgM antibody testing is positive and definitive diagnosis is needed, confirmatory plaque reduction neutralization tests (PRNT) should be performed. However, PRNTs must be done by CDC by contacting Northern Nevada Public Health.

Testing should be performed for:¹⁰

- Symptomatic pregnant women who had recent travel to areas with a risk of Zika.
- Symptomatic pregnant women who have had sex with someone who lives in or recently traveled to areas with a risk of Zika.
- Pregnant women who have a fetus with prenatal ultrasound findings consistent with congenital Zika virus infection who live in or traveled to areas with a risk of Zika during pregnancy.

Testing should NOT be performed for:¹⁰

- Asymptomatic non-pregnant women.
- Symptomatic non-pregnant persons (based on the current epidemiology of these viruses).
- As part of preconception screening.

Due to similar geographic distribution and symptoms, patients with suspected Zika virus infections should also be evaluated for dengue and chikungunya virus.¹⁰

Treatment⁸

There is no specific antiviral treatment available for Zika virus disease. Treatment is generally supportive and can include rest, fluids, and use of analgesics

and antipyretics. Aspirin and other non-steroidal anti-inflammatory drugs (NSAIDs) should be avoided until dengue is ruled out to reduce the risk of hemorrhage.

Reporting

The list of reportable communicable diseases and reporting forms can be found at:

<http://tinyurl.com/WashoeDiseaseReporting>

Report communicable diseases to Northern Nevada Public Health. To report a communicable disease, please call 775-328-2447 or fax your report to the NNPH at 775-328-3764.

Acknowledgement

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