

# Zika Virus Disease

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## Abstract

Zika virus disease (Zika), is a disease caused by the Zika virus, which is spread to people primarily through the bite of an infected *Aedes* species mosquito. The most common symptoms of Zika are fever, rash, joint pain, and conjunctivitis (red eyes). The illness is usually mild with symptoms lasting for several days to a week after being bitten by an infected mosquito. People usually don't get sick enough to go to the hospital, and they very rarely die of Zika. For this reason, many people might not realize they have been infected. However, Zika virus infection during pregnancy can cause a serious birth defect called microcephaly, as well as other severe fetal brain defects. Once a person has been infected, he or she is likely to be protected from future infections.

**Keywords:** Zika Virus; Microcephaly; Brith Defects.

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## Introduction

Zika virus was first discovered in 1947 and is named after the Zika Forest in Uganda. In 1952, the first human cases of Zika were detected and since then, outbreaks of Zika have been reported in tropical Africa, Southeast Asia, and the Pacific Islands. Zika outbreaks have probably occurred in many locations. Before 2007, at least 14 cases of Zika had been documented, although other cases were likely to have occurred and were not reported. Because the symptoms of Zika are similar to those of many other diseases, many cases may not have been recognized.

In May 2015, the Pan American Health Organization (PAHO) issued an alert regarding the first confirmed Zika virus infection in Brazil.

January 22, 2016, CDC activated its Incident Management System and, working through the Emergency Operations Center (EOC), centralized its response to the outbreaks of Zika occurring in the Americas and increased reports of birth defects and Guillain-Barré syndrome in areas affected by Zika..

On February 1, 2016, the World Health Organization (WHO) declared Zika virus a Public Health Emergency of International Concern (PHEIC). Local transmission has been reported in many other countries and territories. Zika virus will likely continue to spread to new areas.

### *About Virus*

Zika is an arbovirus. It is spread by mosquitoes of the genus *Aedes*, the same mosquitoes that spread Chikungunya and dengue. These mosquitoes bite during the day as well as at night . infected human and non human primates appear to be the main reservoirs of the virus, providing virus-rich blood to the insect vector.

### *Spread*

- By mosquito bite

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- In limited ways it can spread through ,
  - Amniotic fluid and placenta
  - Mother to baby in early perinatal period
  - Sexual transmission
  - Blood transfusion

### *Symptoms*

- ✓ Fever
- ✓ Maculopapular rash
- ✓ Joint pain
- ✓ Nonpurulent conjunctivitis
- ✓ Muscle pain
- ✓ Headache

Once a person had been infected he or she is likely to be protected from future infections.

The illness is usually mild with symptoms lasting for several days to a week .

### *Investigation*

- The symptoms of Zika are similar to those of dengue and chikungunya, diseases spread through the same mosquitoes that transmit Zika.
- See your doctor or other healthcare provider if you develop the symptoms described above and have visited an area where Zika is found.
- If you have recently traveled, tell your doctor or other healthcare provider when and where you traveled.
- Your doctor or other healthcare provider may order blood tests to look for Zika or other similar viruses like dengue or chikungunya.
- RT-PCR Testing [Reverse transcriptase-Polymerase chain reaction]

### *Treatment*

- There is no vaccine to prevent or medicine to treat Zika virus.
- Treat the symptoms:
  - ⇒ Get plenty of rest.
  - ⇒ Drink fluids to prevent dehydration.
  - ⇒ Take medicine such as acetaminophen (Tylenol®) or paracetamol to reduce fever and pain.

- ⇒ Do not take aspirin and other non-steroidal anti-inflammatory drugs (NSAIDs) until dengue can be ruled out to reduce the risk of bleeding.
- ⇒ If you are taking medicine for another medical condition, talk to your doctor or other healthcare provider before taking additional medication.
- If you have Zika, prevent mosquito bites for the first week of your illness.
  - ⇒ During the first week of infection, Zika virus can be found in the blood and passed from an infected person to a mosquito through mosquito bites.
  - ⇒ An infected mosquito can then spread the virus to other person

### *Complication*

#### *Microcephaly and Other Brain Defects*

The association between Zika and microcephaly is not fully understood, the seriousness of the problem led the center for disease control and prevention to take the unprecedented step of advising pregnant women to avoid travel to affected area.

### *Prevention*

- Wear long-sleeved shirts and long pants.
- Stay in places with air conditioning and window and door screens to keep mosquitoes outside.
- Take steps to control mosquitoes inside and outside your home.
- Sleep under a mosquito bed net if you are overseas or outside and are not able to protect yourself from mosquito bites.
- Use Environmental Protection Agency (EPA)-registered insect repellents with one of the following active ingredients: DEET, picaridin, IR3535, oil of lemon eucalyptus, or para-menthane-diol. Choosing an EPA-registered repellent ensures the EPA has evaluated the product for effectiveness. When used as directed, EPA-registered insect repellents are proven safe and effective, even for pregnant and breast-feeding women.
  - ⇒ Always follow the product label instructions.
  - ⇒ Reapply insect repellent as directed.
  - ⇒ Do not spray repellent on the skin under clothing.
  - ⇒ If you are also using sunscreen, apply sunscreen

- before applying insect repellent.
- To protect your child from mosquito bites:
    - ⇒ Do not use insect repellent on babies younger than 2 months old.
    - ⇒ Do not use products containing oil of lemon eucalyptus or para-menthane-diol on children younger than 3 years old.
    - ⇒ Dress your child in clothing that covers arms and legs.
    - ⇒ Cover crib, stroller, and baby carrier with mosquito netting.
    - ⇒ Do not apply insect repellent onto a child's hands, eyes, mouth, and cut or irritated skin.
    - ⇒ Adults: Spray insect repellent onto your hands and then apply to a child's face.
  - Treat clothing and gear with permethrin or purchase permethrin-treated items.
    - ⇒ Treated clothing remains protective after multiple washings. See product information to learn how long the protection will last.
    - ⇒ If treating items yourself, follow the product instructions carefully.
    - ⇒ Do NOT use permethrin products directly on skin. They are intended to treat clothing.

### Reference

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