



ZIKA VIRUS

What is Zika Virus?



Zika virus is a flavivirus transmitted by the *Aedes* spp. mosquito. The same genus of mosquitoes also transmits other viral diseases, including dengue fever, chikungunya, West Nile, and yellow fever. In 1947, Zika virus was first found in monkeys living in the Zika forest located in the African country of Uganda. Zika virus was common mainly in Africa and Asia until a major outbreak occurred May 2015 in Brazil. There are two strains of the virus, the African strain and the newly emerged Pacific and Americas strain. Zika virus has now spread to many other countries in

the Western Hemisphere including Mexico, Bolivia, Puerto Rico, and the Dominican Republic. The World Health Organization (WHO) estimates in 2016 there could be up to four million people who become infected with Zika virus in the Americas.

How is Zika Virus Impacting Global Travel?

The Centers for Disease Control (CDC) has issued travel notices due to Zika virus for several areas across the globe. The Caribbean, Pacific Islands, South America, Mexico, Central America, Cape Verde, and Samoa are all under Alert Level 2. Alert Level 2 means travelers should follow enhanced precautions when visiting these areas. Pregnant women should avoid traveling to areas where infected mosquitoes have been identified.

Zika virus and travel information:
<http://wwwnc.cdc.gov/travel/notices>

Local Zika virus information:
<http://texaszika.org/>

How Can Zika Virus be Prevented When Traveling?

- The best way to prevent Zika infection is to avoid being bitten by mosquitoes.
- Clothing should cover as much of the body as possible. Cover exposed skin by wearing long-sleeved shirts and pants.
- Treat clothing with permethrin or an Environmental Protection Agency (EPA) approved insecticide since mosquitoes can bite through clothes. DO NOT apply permethrin directly to the skin.
- Use EPA approved insect repellent on exposed skin and reapply according to label directions. Effective active ingredients in insect repellent include DEET, Picaridin, Oil of Lemon Eucalyptus (OLE), and IR3535. Effective name brand insect repellents include Off!, Cutter, Sawyer, Ultrathon, Autan, Repel, Skin So Soft Bug Guard Plus, and SkinSmart.
- Keep windows and doors closed or use screens to prevent mosquitoes from entering.
- If staying outside or in poorly screened spaces, a World Health Organization Pesticide Evaluation Scheme (WHOPES) approved bed net to cover the sleeping area should be used.
- Drain standing water, clean clogged rain gutters, change the water in birdbaths/fountains/animal troughs weekly, and keep in mind “dump it, clean it, drain it, or fill it” to reduce the presence of mosquitoes.

Disclaimer Be advised that as an emerging new pathogen, information about the transmission, effects, treatment, and prevention of Zika virus infection changes frequently. While this is the most current information, this is subject to change upon further scientific discovery.

Why is Zika Virus Becoming a Major Concern?

Zika virus rarely results in hospitalization or death; however, serious birth defects are being linked to Zika virus infection, including microcephaly—a brain birth defect which causes the baby’s head to be smaller than normal due to incomplete brain development.

There is also evidence that Zika virus may cause Guillain-Barre Syndrome (GBS) in

adults. GBS is a disorder which causes an individual’s immune system to attack their own nerve cells. The damage in the nerve cells leads to muscle weakness and sometimes paralysis which can last anywhere from a few weeks to several months. GBS may result in permanent nerve damage. A significant increase in GBS cases have been seen in areas where Zika virus is prevalent.

How is Zika Virus Transmitted?

- Bite by an *Aedes spp.* mosquito carrying the virus;
- Sexual contact with an infected individual;
- Passed by an infected mother to the fetus during pregnancy or the child during delivery; or
- Blood transfusion from an infected individual.

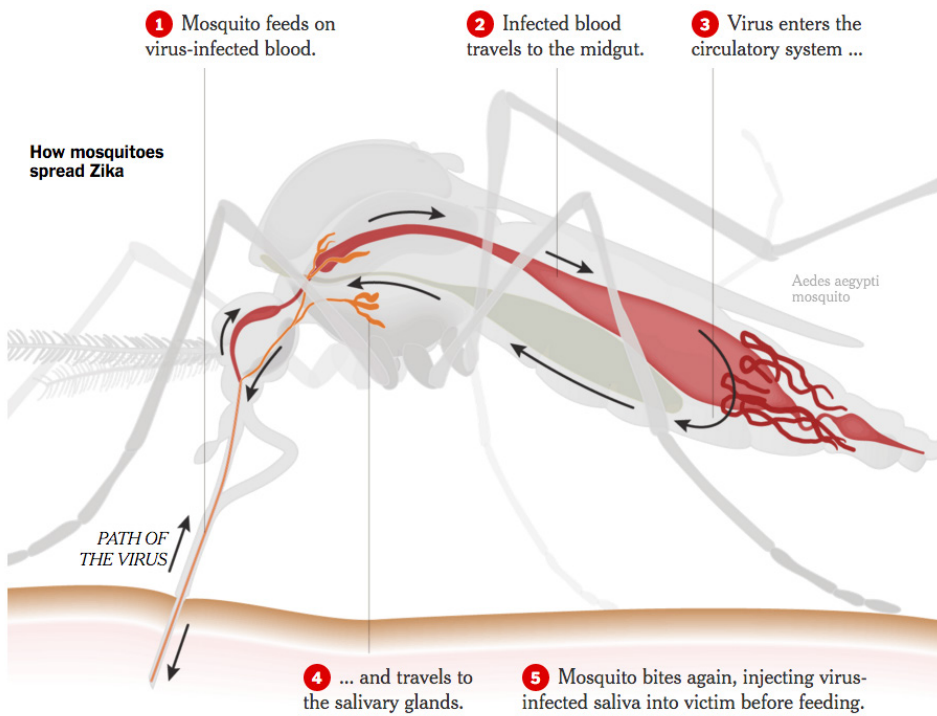
What are Symptoms of Zika Virus?

Symptoms of Zika virus typically appear three to twelve days following infection and include low-grade fever, skin rash, muscle/joint pain, and red eyes, although approximately 80 percent of infected individuals may never experience any symptoms of infection at all. Symptoms usually last from two to seven days.



How is Zika Virus Diagnosed and Treated?

Zika virus is diagnosed by a blood test which measures viral RNA or the presence of Zika virus antibodies. Currently there is no vaccine to prevent or medicine available to treat the Zika virus infection. To alleviate symptoms of Zika virus infection, rest, fluids, and over-the-counter medication to reduce fever and pain are recommended. Products containing aspirin are not recommended.



By Sarah Almukhtar and Mika Gröndahl | Sources: Dr. W. Augustine Dunn; Oxitec; *The Anatomical Life of the Mosquito*, R. E. Snodgrass

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