

The Zika Virus is Serious – Take These Precautions

Zika virus disease cases have been reported in 45 States. Read the latest updates about Zika Virus vaccine and precautions to take [here](#).

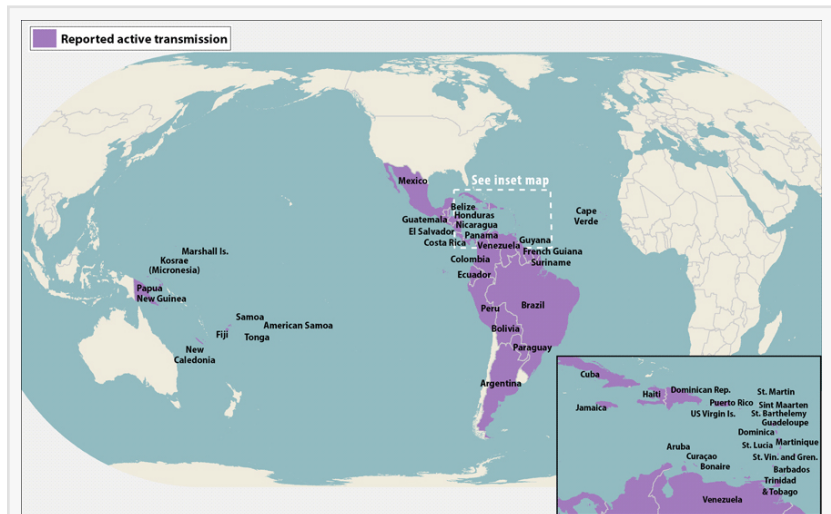
AUSTIN, TEXAS, UNITED STATES, July 13, 2016 /EINPresswire.com/ -- Given that the Centers for Disease Control and Prevention (CDC) now recommends pregnant women consider delaying travel to Zika virus affected areas, we have to ask: what do we know about Zika and how can we protect ourselves from this newly emerging threat?

A string of troubling news reports about the spread of Zika virus has caused widespread alarm among public health officials and the public alike. Particularly troubling are the recently broadcasted images of Brazilian newborns with severe birth defects, such as microcephaly — which causes babies to be born with abnormally small heads.

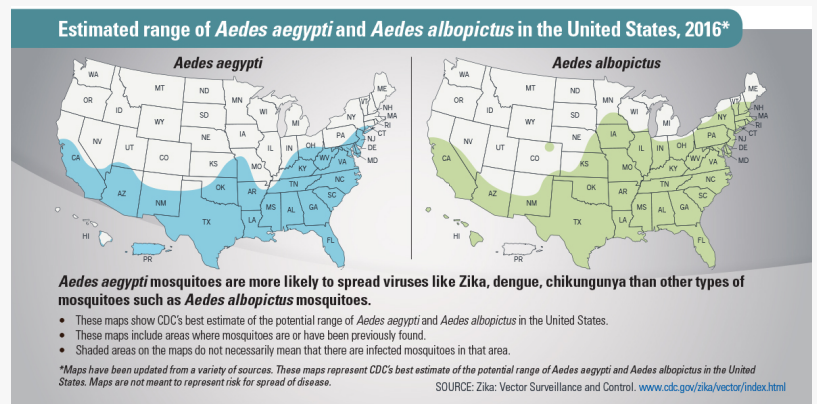
According to the Director of the CDC, Dr. Tom Friden, “Our birth defects specialists tell us a single child with birth defects can cost \$1 million dollars to care for – or more.”

What is the underlying cause of this devastating outbreak?

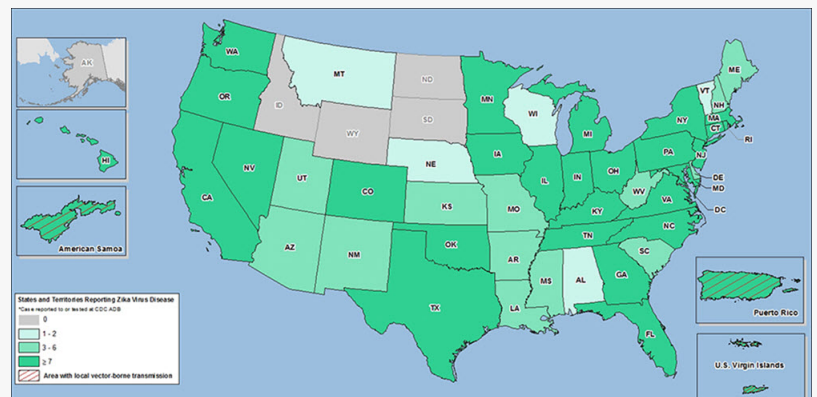
The Zika virus is part of the single-stranded RNA virus family known as Flaviviruses. Over the years, Zika virus received scant attention compared to the other well-known diseases in the Flavivirus family — which includes yellow fever, West Nile, dengue, Hepatitis C, and several encephalitis diseases.



Zika Active Territory



Estimated range of *Aedes aegypti* and *Aedes albopictus*
in the United States, 2016



Laboratory-confirmed Zika virus disease cases reported to ArboNET by state or territory — (as of July 6, 2016)

Since its discovery in Uganda in 1947, Zika was known to public health officials and researchers as a



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regional virus — limited to the equatorial belt between the African and Asian continents. However, over the last three years, Zika virus has been on the march across the globe.

During 2013 and 2014, Zika virus was discovered in three South Pacific island groups far from the Asian mainland: the Cook Islands, French Polynesia, and Easter Island. By 2015, the Zika virus had taken hold in the Western Hemisphere. It has spread to parts of Mexico, Central America, the Caribbean and South America — especially Brazil, where the

virus has at times reached pandemic levels. You can watch an interesting animated timeline of the alarming spread of the Zika virus on this website prepared by the [Harvard Medical School](#) and Boston Children's Hospital.

Some Public Health Officials Express Concern over Olympic Games

For some public health officials, the outbreak has called into question whether it makes sense, in a time of potential pandemic, for a vast number of tourists to travel to the 2016 Olympic Games in Rio. While some games participants and countless tourists are reportedly staying home, Olympic game organizers and Brazilian government officials are proceeding with the games despite the warnings, hoping that the cooler temperatures of the Southern Hemisphere's Winter season — combined with an extensive mosquito control program — will limit the spread of the virus.

Will the Olympic Games be safe for the athletes? We will have an answer to this question, but only in retrospect. The efficacy of the Olympic Games' Zika virus protection program will be evaluated by a [National Institutes of Health](#) (NIH) study that will track any Zika virus infections among US Olympic participants — but we will only know the results after the fact.

New Blood Tests to Determine Cases of Zika Virus Infection

As the virus has spread, determining if pregnant women have been exposed to the virus has become an urgent public health issue due to the congenital and neurological birth defects the virus can cause in utero.

In response, the FDA has given emergency use authorizations for several Zika diagnostic tests. These will allow health care providers to determine if a specific individual has a current, active Zika infection or whether at-risk individuals — primarily pregnant women — have been infected at an earlier date.

Zika tests recently approved under the FDA's emergency authorization program include:

Zika MAC-ELISA by the CDC

CDC Trioplex rRT-PCR by the CDC

Zika Virus RNA Qualitative Real-Time RT-PCR test by Focus Diagnostics, Inc.

RealStar Zika Virus RT-PCR Kit U.S. by Altona Diagnostics GmbH

Aptima Zika Virus assay by Hologic, Inc.

Protecting the world's blood supply is also critical. When it became uncertain if Puerto Rico's blood

supply was safe from Zika virus, blood bank officials transferred large quantities of human blood from the US mainland to the Caribbean island. Recently, the FDA has allowed some of the Zika blood test listed above to be used on an emergency basis to determine if blood donations have evidence of Zika infection — in order to prevent them from entering the blood supply at large.

Meanwhile, the FDA has issued guidance for individuals who have visited areas with active Zika transmission (or who might have possibly been infected by other means) to refrain from donating blood.

Synthetic Zika Virus Helps Researchers Track Infections in the [Lab](#)

A major advance in studying the virus came from UTMB researchers in Galveston, Texas, who developed a man-made clone of the Zika virus with a luciferase marker (the chemical that makes fireflies glow) to help scientists understand virus transmission between mosquitoes and small animals. According to Pei-Yong Shi, PhD, study coauthor and professor in the department of biochemistry and molecular biology at UTMB, “the new Zika clone, together with mosquito infection models and the UTMB-developed Zika mouse model, represent a major advance towards deciphering why the virus is tied to serious disease.”

But What About Current Treatments, Such as Vaccines, for the Zika Virus?

At the present time, there is no known cure for Zika virus diseases — but several vaccine programs are being fast-tracked and could be available as soon as two years from now — possibly on a provisional basis initially.

Read more...<https://goo.gl/HDK96w>

Mehmet Atesoglu
Formaspace
8002511505
[email us here](#)

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