

Zika virus (ZIKV) is a member of the Flaviviridae virus family and the Flavivirus genus, transmitted through the bite of daytime-active infected *Aedes* mosquito. This is the same mosquito that is known to transmit infections like dengue and chikungunya. Zika virus was first identified in Uganda in 1947.



World Health Organization has reported 22 countries and territories in Americas from where local transmission of Zika virus has been reported. As per the data from WHO these are ; Brazil, Barbados, Bolivia, Columbia, Dominican Republic, Equador, El Salvador, French Guyana. Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Martinique, Mexico, Panama, Paraguay, Puerto Rico, St Martin, Suriname, Virgin Island and Venezuela. It may be noted that this list is likely to change with time. Hence, updated information should be checked periodically.

Zika virus disease has the potential for further international spread given the wide geographical distribution of the mosquito vector, a lack of immunity among population in newly affected areas and the high volume of international travel. Marcos Espinal, director of communicable diseases and health analysis for the Pan American Health Organization, said Zika is likely to spread to the same areas where dengue exists As of now, the disease has not been reported in India. However, the mosquito that transmits Zika virus, namely *Aedes aegypti*, that also transmits dengue virus, is widely prevalent in India

According to Centers for Disease Control United States has 31 confirmed cases in 11 states and the District of Columbia. Brazil has counted a surge of almost 4000 cases of microcephaly in new-born since October 2015. The pathogen, which was virtually unheard of in the region a year ago, is spreading so fast that it could infect as many as 3 million to 4 million people within 12 months. Therefore **World Health Organization has declared the mosquito-borne Zika virus an international public health emergency International Concern (PHEIC) on 1<sup>st</sup> February, 2016** but said curbs on travel or trade were not necessary at present. This marks the fourth time the WHO has declared a global health

emergency since such procedures were put in place in 2007, with the others arising from influenza 2009, Ebola 2014 and polio resurgence in 2014.

Based on the available information of previous outbreaks, severe forms of disease requiring hospitalization is uncommon and fatalities are rare. **There is no vaccine or drug available to prevent/treat Zika virus disease at present.**

### **Clinical Symptoms :**

Incubation period : 2-14 days

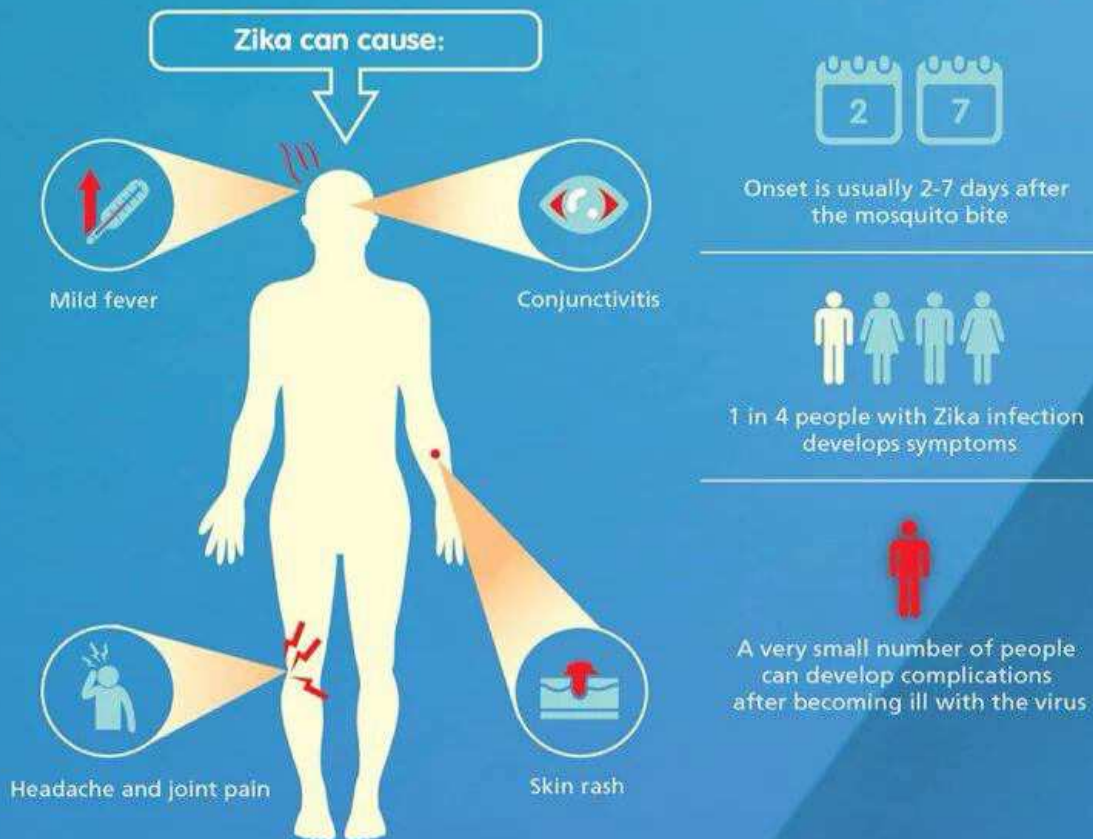
For adults, a Zika infection is generally a mild illness. A majority of those infected with Zika virus disease either remain asymptomatic (up to 80%) or show mild symptoms which usually disappear within a week. It should be suspected in patients reporting with acute onset of fever, maculo-papular rash conjunctivitis, body ache and arthralgia, among those individuals who travelled to areas with ongoing transmission during the two weeks preceding the onset of illness.



# ZIKA VIRUS

## What is Zika?

Zika is a virus transmitted by the *Aedes* mosquito, which also transmits dengue and chikungunya.



Pan American  
Health  
Organization



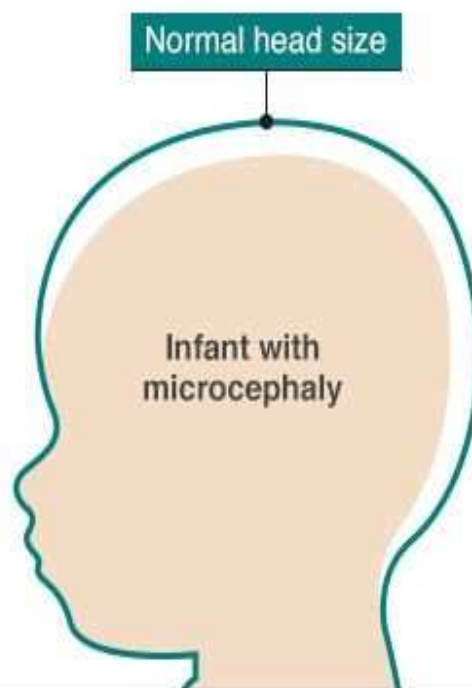
World Health  
Organization  
REGIONAL OFFICE FOR THE  
Americas

#zika  
#FightAedes  
#ZikaVirus  
[www.paho.org/zikavirus](http://www.paho.org/zikavirus)

In pregnant female association has been seen with microcephaly in the newborn and other neurological syndromes (Guillain Barre Syndrome). However, there are a number of genetic and other causes for microcephaly and neurological syndromes like Guillain Barre Syndrome.

## Microcephaly

- Symptoms include below-average head size
- Often caused by failure of brain to grow at normal rate
- Head circumference measuring **less than 31.5-32cm** at birth
- Affects **25,000 children** in US each year

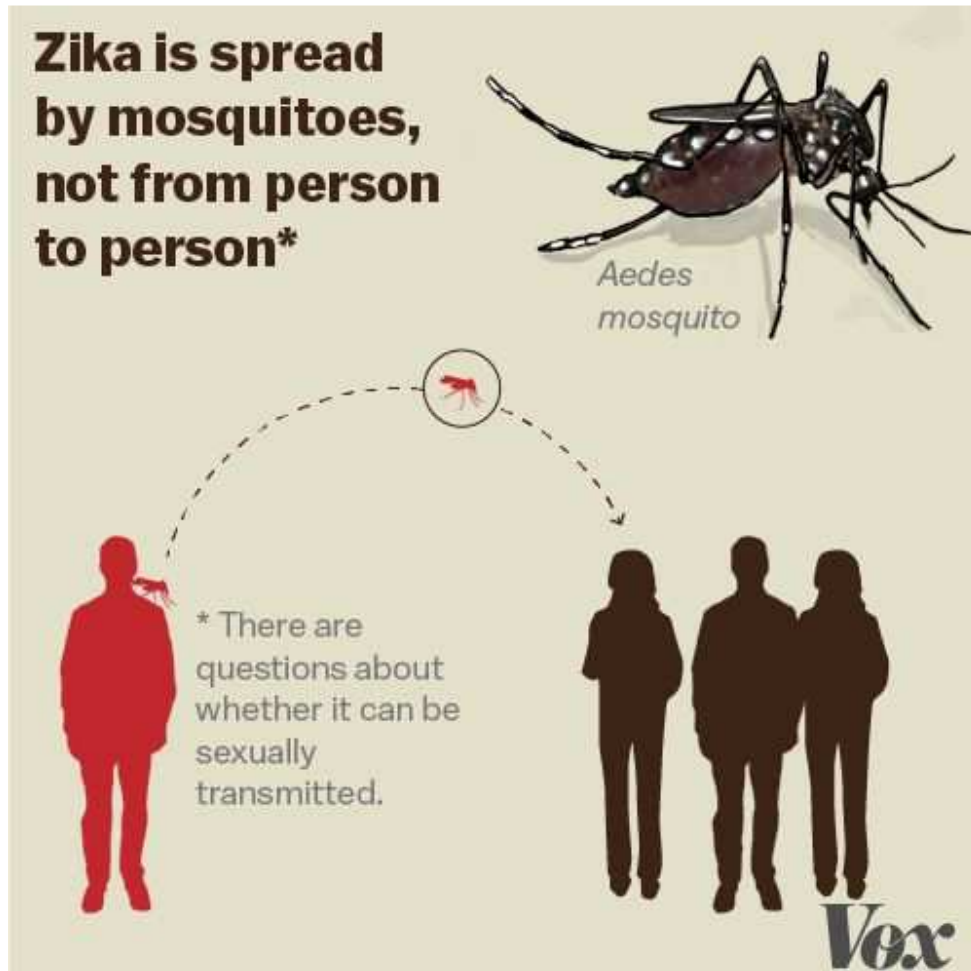


Source: ADAM, WHO

BBC

## Transmission :

By Bite of Aedes Mosquito. Doubtful transmission through Sexual Contact



**Wait 28 days to donate blood after visiting Zika areas.** In response to the Zika outbreak, the American Red Cross is asking people to avoid donating blood if they traveled to Latin America or the Caribbean in the past 28 days as the virus is believed to remain in the blood for less than 28 days. The Canadian Blood Services is barring people from giving blood within 21 days of traveling outside of Canada, the continental USA and Europe. During an outbreak of Zika in French Polynesia from 2013 to 2014, doctors found the virus in 3% of blood donors without any symptoms, according to a study published in October in Emerging Infectious Diseases.

## Diagnosis

The diagnosis of Zika virus infection should be suspected in individuals with relevant epidemiologic exposure (travel to an area where the *Aedes* mosquito is present and where imported or local cases have been reported, within two weeks prior to onset of illness)

Diagnosis is mainly clinical. Characteristic clinical symptoms (two or more of the following):

- Low-grade fever (37.8 to 38.5°C)
- Maculopapular rash
- Arthralgia (notably the small joints of hands and feet)
- Conjunctivitis (non purulent)

Women who have made such trips and develop Zika symptoms — fever, rash, muscle aches, and conjunctivitis — during or within 2 weeks of their travel should be tested for the virus. Clinicians should report positive tests to the appropriate local or state health department. In addition, they should schedule regular ultrasounds to monitor fetal growth in Zika-positive pregnant women

The diagnosis is definitively established via reverse-transcription polymerase chain reaction (RT-PCR) for viral RNA or serology

- 0-7 days: after onset of symptoms go for RT-PCR of serum for detection of Zika virus RNA. The test is positive only for a brief window (three to seven days) when the infected person has viremia; therefore, negative results cannot exclude infection. RT-PCR testing for dengue virus and chikungunya virus should also be pursued.
- After 4 days of the onset of symptoms: Do Zika virus IgM and neutralizing antibody titers that are  $\geq 4$ -fold higher than dengue virus neutralizing antibody titers in serum. Measuring virus-specific neutralizing antibodies is useful for discriminating between cross-reacting antibodies from other flavivirus infections; testing is considered inconclusive if Zika virus neutralizing antibody titers are  $< 4$ -fold higher than dengue virus neutralizing antibody titers. Acute and convalescent sera should be obtained to detect an increased antibody titer in paired samples with an interval of two to three weeks. Serologic testing for dengue virus infection and chikungunya virus infection should also be pursued. All serologic results should be interpreted with caution since there can be cross-reactivity with other flaviviruses (including dengue virus and West Nile virus). However serological test sensitivity and specificity is still an area of concern.

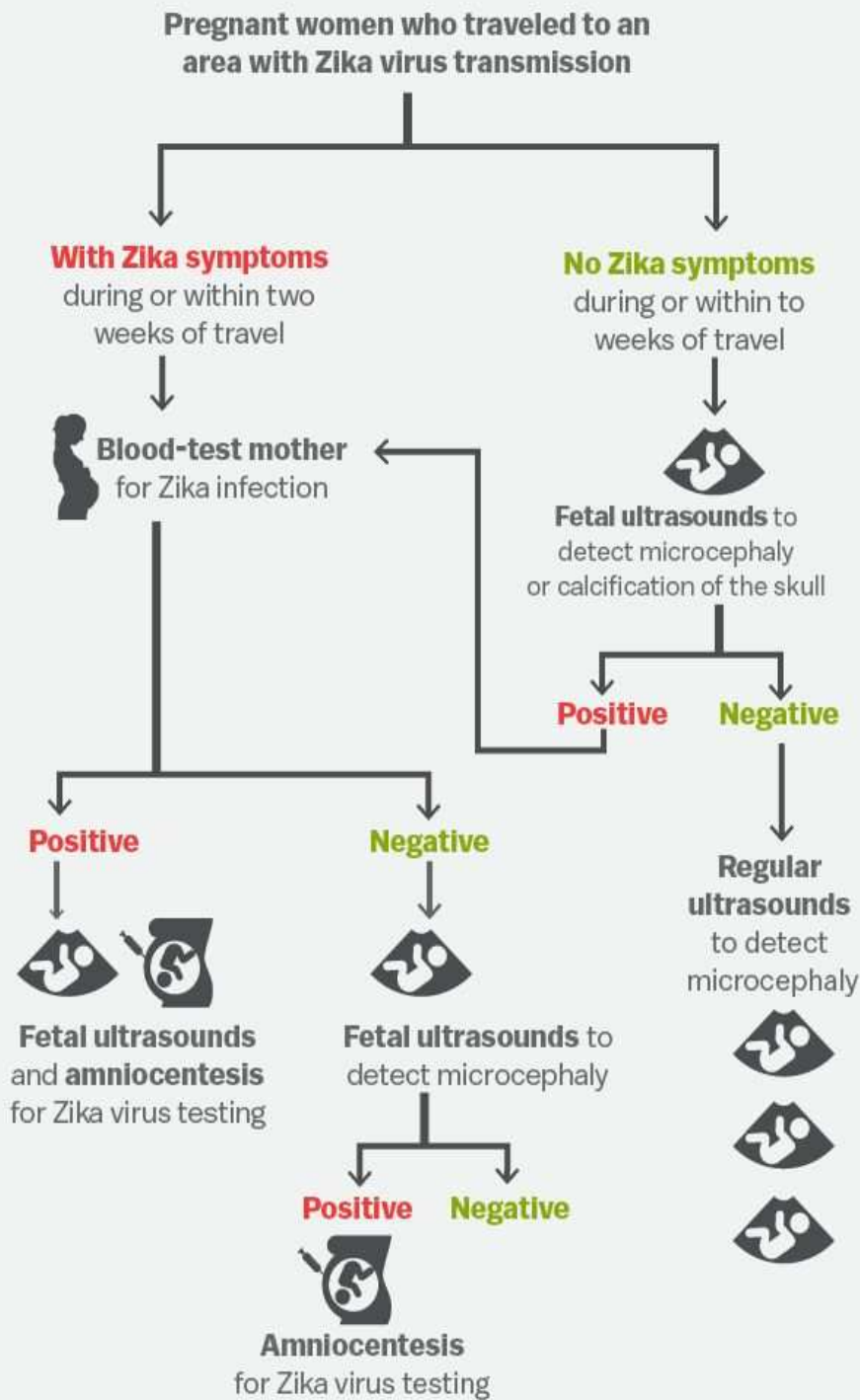
For patients presenting four to seven days after onset of symptoms, both RT-PCR and serology may be performed. Laboratory testing for asymptomatic pregnant women with Zika virus exposure and positive ultrasound findings should consist of serologic testing.

Latest guidelines issued by GOI do not recommend serological testing

## Treatment :

Self limiting. Patient recover within 7 days. only symptomatic management Rest, Rehydration and Antipyretic

# Are you pregnant and worried about the Zika virus? Here's what to do.



SOURCE: CDC testing algorithm January 19, 2016

**Vox**

## **Prevention :**

There is no vaccination available. Only protection is to avoid mosquito bite.

Take following precaution :

1. Wearing long-sleeved shirts and long pants
2. staying in lodgings with screened-in windows and air conditioning
3. consider using an insecticide-treated mosquito net when napping, as Aedes mosquitoes often bite in the daytime
- 4 Use EPA–registered insect repellents; according to the CDC, insect repellents containing DEET, picaridin, and IR3535 are safe for pregnant women when used as directed
- 5 use protection against mosquitoes throughout the day, and both outdoors and indoors, as Aedes mosquitoes are often found inside.
6. Get rid of rain barrels, bird baths, tires, tins, and other sources of standing water. Mosquitoes like to breed in stagnant water.
- 7 Dump out any water that collects in your garbage cans, and turn pails upside down so they don't collect water.
8. Inside your home, change water in flower vases every other day, and dump out excess water from flower pot plates. Aedes mosquitoes will breed, if given the chance.

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