

What is Zika virus?

Zika virus is a flavivirus (same family as Dengue virus) that was first isolated in 1947 in Uganda and is transmitted by mosquitos. Since its discovery it has caused outbreaks in Africa and Asia and then made its way to the Pacific Islands where it caused significant outbreaks in Micronesia and French Polynesia in 2007 and 2013, respectively. In 2014 an outbreak began in Brazil and there was subsequent rapid spread throughout South America, Central America, and Mexico. This outbreak was noted to be associated with significant congenital abnormalities in infants born to mothers who were infected with Zika virus during pregnancy.

Where is Zika virus acquired?

Currently there is active transmission of Zika virus reported in Africa, Central and South East Asia, Pacific Islands, and Central and South America (for exact countries see CDC World Map of Areas with Risk of Zika). There are currently no reported cases of Zika virus transmission in Australia or New Zealand, however there is a risk of local transmission of Zika virus in Australia due to the presence of the vector *Aedes aegypti* in North Queensland.

How is Zika virus acquired?

In countries with endemic Zika transmission the most common mode of transmission is via the bite of infected mosquitos. Zika virus can also be acquired congenitally (from mother to child) when the mother is infected during pregnancy. There are also rare reports of sexual transmission and transmission via transfusion of blood products.

What are the symptoms?

Most people infected with Zika virus are asymptomatic. Characteristic symptoms are acute onset of fever, maculopapular rash, arthralgia or conjunctivitis which is sometimes associated with headache and myalgias. The disease is usually mild with symptoms lasting for days to weeks; however there appears to be an increased risk of Guillain-Barre syndrome following infection. Infants born to mothers during pregnancy are at risk of significant neurological sequelae with the most severe cases having microcephaly. Any pregnant woman infected with Zika virus should be referred for specialist review and monitored for congenital infection and abnormalities in the perinatal period.

How is it diagnosed?

Zika virus is diagnosed via detection of viral RNA in blood or urine and/or the detection of specific Zika virus antibodies. Zika virus RNA is usually detectable in the serum for 3-7 days after the development of symptoms; Zika RNA may remain detectable for a longer period in urine; a negative result does NOT exclude Zika virus infection. Zika virus IgM is detectable within 5-7 days and for up to 6-8 weeks, and IgG is detectable by 18-21 days and remain detectable for years. The Zika virus serologic tests lack specificity and can cross react with other flavivirus infections as well as vaccinations including Japanese encephalitis and yellow fever. All positive IgM results are forwarded to our reference laboratory for confirmatory testing.

What is the treatment?

There is no specific treatment for Zika virus infection and care is based on symptoms. Pregnant patients with a diagnosis of Zika virus should be referred for specialist evaluation and monitored for congenital abnormalities in the fetus.

How can infection be prevented?

To reduce the risk of acquisition of Zika virus on travel to endemic countries, patients should avoid mosquito bites and use insect repellent, protective clothing and permethrin impregnated mosquito nets.

Pregnant patients are advised not to travel to countries with current Zika transmission. Partners of pregnant patients who travel to countries with current Zika transmission are advised to use barrier protection or not have sex for the remainder of the pregnancy to prevent sexual transmission to their partner.

Couples who are planning pregnancy should not travel to countries with current Zika transmission. If they do, it is recommended to wait at least 3 months before trying to conceive. If only the woman has had potential exposure then the waiting time is 2 months. This difference is due to the fact that the virus can persist longer in semen compared to other body fluids.

Reference: Centres for Disease Control and Prevention, 2017. Zika Virus. [ONLINE] Available at: <https://www.cdc.gov/zika/index.html>. [Accessed 12 December 2018]