



# Zika Virus Disease Fact Sheet

## Medical Entomology Environmental Health Hazards

### What is Zika virus?

Zika virus infection causes an illness known as Zika virus disease which includes symptoms such as a mild fever, rash, conjunctivitis and muscle or joint pain. Recent evidence suggests that Zika virus infection in women during the first trimester of pregnancy may also be linked to abnormal foetal brain development.

The global incidence of Zika virus disease has grown dramatically in recent years. Since it was first isolated in 1947, Zika virus activity was limited to equatorial regions of Africa, with occasional small outbreaks occurring in Asia. However, it has recently spread to the Pacific Ocean, Central America, the Caribbean and South America.

### How is Zika virus spread?

Zika virus is transmitted to humans through the bites of infective female *Aedes* mosquitoes, most commonly *Aedes aegypti*; the same species that transmits dengue, chikungunya and yellow fever. Mosquitoes acquire the virus while feeding on the blood of an infected person. After virus incubation for around 10 days, an infected mosquito is capable of transmitting the virus.

Infected humans and monkeys are the main hosts and multipliers of the virus, serving as a source of the virus for uninfected mosquitoes. The virus circulates in the blood of infected hosts for two to seven days, at approximately the same time that they have a fever; *Aedes* mosquitoes may acquire the virus when they feed on an individual during this period.

### Where is Zika virus found?

Local outbreaks of Zika virus disease have been reported from tropical regions in Africa and Asia with activity recently spreading into the Pacific Ocean, Central America, the Caribbean and South America – particularly Brazil and Columbia.

Local transmission of Zika virus does not occur in Western Australia. However travellers to the above regions should take care to [avoid being bitten by mosquitoes](#). In January 2016 the Department of Foreign Affairs and Trade released a [travel advice](#) bulletin warning pregnant women to reconsider the need to travel to regions where Zika virus outbreaks are occurring (see map below).



## What are the symptoms?

Only around one quarter of those infected by Zika virus experience symptoms of the disease. Those who do experience a mild, flu-like illness characterised by fever, rash, conjunctivitis, muscle/joint pain and general tiredness. Symptoms occur within two to seven days of being bitten by an infected mosquito which usually also lasts for around two to seven days.

Recent evidence has linked Zika virus infection during the first trimester of pregnancy to an increased risk of reduced foetal brain development known as microcephaly which can result in permanent brain damage to the unborn child.

## Is there a treatment?

Currently there is no vaccine or specific treatment available for Zika virus disease. Supportive treatment includes plenty of oral fluids and paracetamol for relief of fever and body aches and pains. Anyone who has travelled to countries where Zika virus is found and has returned home with an illness should seek medical attention. Zika virus infection is usually diagnosed through a specific blood test, after being referred by a GP.

## How can Zika virus disease be avoided?

Only the female mosquito bites humans and therefore transmits the virus. *Aedes aegypti* commonly bites during the day usually in dark, protected indoor situations such as under tables, in closets, or behind curtains. It is important to avoid being bitten by mosquitoes by taking precautions such as: cover up, repel, clean up.



### Cover up

Wear long, loose-fitting, light coloured clothing, covering as much of the body as you can. Mosquitoes can bite through tight clothes like jeans. Make sure children are also appropriately covered up.



### Repel

Use insect repellent containing DEET (diethyltoluamide) or picaridin and always follow instructions on the label.

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### Clean up

Stop mosquitoes breeding in water pooling around your home or holiday accommodation by emptying water from containers.

## How to prevent establishment of Zika virus in WA?

Western Australia is at risk from 'introduced' mosquitoes, such as *Aedes aegypti*, establishing here and leading to disease outbreaks. The mosquitoes could be transported in freight as adults, larvae or eggs attached to previously wet containers.

In places where it occurs, *Aedes aegypti* breeds mainly around urban environments in clean fresh water in man-made receptacles such as buckets, tyres, bottles, tins, roof gutters, rainwater tanks, wells and below-ground service pits. It does not breed in ground pools, swamps or dirty storm water drains.

It is important that householders take the following steps to minimise potential breeding sites to avoid the establishment of *Aedes aegypti* mosquitoes:

- Dispose of unwanted rubbish around the yard that may collect water e.g. plastic sheets tarpaulins, wheelbarrows, tyres, foam boxes
- Empty and apply surface spray to any unused container that has held water and may contain mosquito eggs, e.g. tyres, plastic containers, black sheet plastic or pot plant drip trays. Store containers upside down and undercover.
- Avoid using saucers or drip trays under pot plants. Let pots drain directly onto the ground or make sure saucers are emptied at least once/week. Wipe their inner surface firmly with a cloth several times or fill with sand, or regularly apply surface spray.
- Empty bird baths and pet drinking water containers at least weekly and wipe as above or use methoprene pellets (available from hardware shops for mosquito control).
- Cover and completely seal septic tanks, rainwater tanks or other large water storage containers. Use methoprene briquettes in unsealed tanks as a temporary measure (available from some pesticide suppliers). Liquid mosquito film (thin spreading oil) can be applied to non-drinking water containers.



Potential breeding habitats for *Aedes aegypti* (Photo: DoH WA)



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