



Zika virus explained: What is it, where is it, and how does it spread?

By Cristen Tilley

Updated Sun 14 Feb 2016, 5:43pm

After an emergency meeting in Geneva, the World Health Organisation (WHO) has declared Zika virus to be a public health emergency of international concern.

The WHO is deeply worried about the situation for four main reasons:

1. Zika may be linked to birth malformations and neurological syndromes
2. the potential for it to spread further internationally given the wide geographical distribution of the mosquitoes that carry it
3. the lack of immunity in newly affected areas, and
4. the absence of vaccines, specific treatments and rapid diagnostic tests.

What is Zika virus?

Zika virus was first isolated in 1947, in a rhesus monkey at Uganda's Zika Forest.

The World Health Organisation says the symptoms are usually mild and normally last two to seven days. Symptoms are similar to dengue and chikungunya and include:

- a mild fever,
- skin rash,
- aches and pains,
- headache, and
- conjunctivitis

About one in five people infected with the virus become ill. Zika virus usually remains in the blood of an infected person for about a week.

How is it spread?

The virus is spread when people are **bitten by an infected Aedes mosquito**. One type of Aedes mosquito - *Aedes aegypti* - is present in Australia, and is responsible for the spread of dengue fever in far north Queensland.

Global health experts are also investigating whether the virus can be transmitted sexually.

"There is one reported case of Zika virus through possible sexual transmission," US Centres for Disease Control and Prevention (CDC) principal deputy director Anne Schuchat said.

"In another case, Zika virus was found in semen about two weeks after a man had symptoms with Zika virus infection, so that sort of gives you the biologic plausibility of spread."



PHOTO: *Aedes aegypti* mosquito, one of two species known to spread the Zika virus. (Reuters: Josue Decavele)

MAP: Brazil

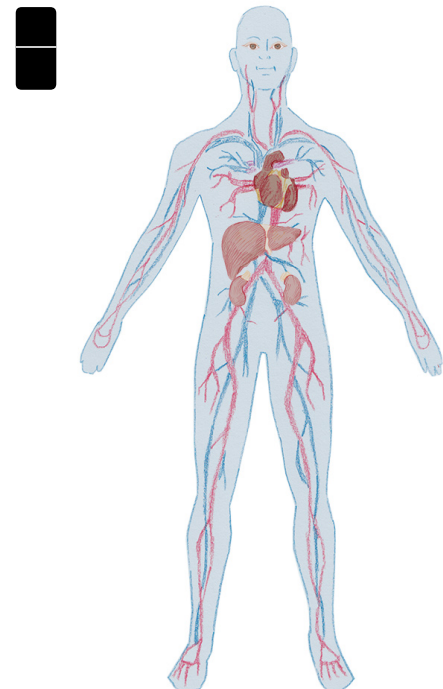


IMAGE: Select the markers to find out what zika virus does to the body

But Ms Schuchat added: "The science is very clear to date that Zika virus is primarily transmitted to people through the bite of an infected mosquito, so that is really where we are putting the emphasis right now."

On February 3, 2016 a county in the US state of Texas reported a patient who was infected by someone who had travelled to Venezuela, indicating sexual transmission.

Where is it found?



YOUTUBE: WHO explains Zika

The virus is known to be present in countries across **Africa, the Americas, Asia** and the **Pacific**.

The first outbreak in the Pacific was in Micronesia in 2007 and there have since been large outbreaks in four other Pacific island nations. The outbreak in French Polynesia was associated with neurological complications at a time when Zika was co-circulating with dengue, says the WHO.

But the the situation is now "dramatically different": Zika arrived in the Americas, where people had no immunity to the disease.

"Last year, the virus was detected in the Americas, where it is now spreading explosively," the WHO's director-general Margaret Chan said.

On January 29 2016, the Department of Foreign Affairs and Trade (DFAT) said that areas of Zika transmission were difficult to determine and likely to change over time. It issued a list of 25 "key countries of concern".

How is it affecting Australia?

The virus has been discovered in Australia in travellers returning from South America.

But Professor Dominic Dwyer, a virologist from Sydney's Westmead Hospital, says there is no evidence yet that the virus has spread in this country.

"The main mosquito carriers of the virus are not present to any great degree in Australia, except perhaps up in the top end of Queensland," he said.

"But we're not entirely sure yet whether some of the Australian mosquitoes could carry Zika virus."

Professor Dwyer says people in Australia should be **alert but not alarmed**.

DFAT issued this advice for overseas travellers on January 29, 2016:

"Until more is known about Zika virus, and taking a very cautious approach, we advise women who are pregnant (in any trimester) or those who are actively seeking to get pregnant to consider postponing travel to any area where Zika virus transmission is ongoing (see list).

If you do decide to travel, talk to your doctor first and strictly follow steps to prevent mosquito bites during your trip."

You can subscribe for further DFAT advice about Zika.

Does it cause birth defects?

There is a lot of concern about a potential link between pregnant women getting the virus and their babies being born with unusually small heads - a condition called microcephaly.

Microcephaly is the result of the brain developing abnormally while the foetus is in the womb or after the baby's birth.

Brazil's ministry of health has blamed a rise in microcephaly cases on the Zika virus, but the link is yet to be scientifically established.

A study on microcephaly in the Brazilian state of Paraiba has raised questions about whether Zika is to blame.

While the potential link between this birth defect and the virus is being investigated, health authorities in several Latin American countries are advising women to delay getting pregnant for the next six to eight months.



PHOTO: Pietro Rafael, who has microcephaly, having an evaluation session with a physiotherapist in Brazil. (Reuters: Ueslei Marcelino)

What is the treatment?

There is currently **no vaccine** to prevent infection, and there is **no medical treatment** for the disease.

The WHO's prevention advice is to remove mosquito breeding sites and reduce contact between mosquitoes and people by:

- using insect repellent;
- wearing clothes (preferably light-coloured) that cover as much of the body as possible;
- using physical barriers such as screens, closed doors and windows; and
- sleeping under mosquito nets.

"It is also important to empty, clean or cover containers that can hold water such as buckets, flower pots or tyres, so that places where mosquitoes can breed are removed," the WHO's advice says.

The CDC says using an insect repellent is safe and effective for pregnant or breastfeeding women.

Topics: diseases-and-disorders, health, brazil

First posted Thu 28 Jan 2016, 10:44pm

×

Rash

One of the symptoms of Zika virus is a rash.

×

Fever

A mild fever is one symptom of Zika virus

×

Headaches, possible Guillain-Barre syndrome

Headaches are a symptom of Zika.

A large outbreak in French Polynesia was associated with neurological complications at a time when Zika was co-circulating with dengue, says the WHO.

Researchers are yet to discover if there is a definite link between Zika virus and Guillain-Barre syndrome (GBS), a condition which weakens the muscles.

×

Sore eyes

Sore eyes and conjunctivitis are symptoms.

×

Possible birth defect

The evidence is not conclusive, but Zika has been associated with a dramatic rise in the number of cases of microcephaly (unusually small heads) in Brazilian babies.