Toi Te Ora
Public Health Service
BAY OF PLENTY DISTRICT HEALTH BOARD
Serving Bay of Plenty and Lakes Districts

Medical Officer of Health Report
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Zika Virus

The Zika virus was first isolated in 1947 from a monkey in the Zika forest of Uganda. In humans the virus causes a relatively mild illness the main characteristics of which are transient fever and joint pain. There is no specific treatment and as yet no vaccine is available although, as with other mosquito borne infections such as malaria and dengue, vaccine development is underway.

Dr Margaret Chan, Director General of the World Health Organisation (WHO), convened a special meeting of the International Health Regulations Emergency Committee on 1 February. At that meeting it was decided to make Zika a public health emergency of international concern due to the recently reported cluster of neurological disorders and neonatal malformations in Brazil. The declaration of a public health emergency will add weight to the significant international effort required to address the problem. This includes confirming if Zika is causing the apparently associated rare medical problems, controlling the Aedes mosquito, developing lab tests and vaccines to protect people at risk, especially during pregnancy. WHO decided there was no need for any formal travel restrictions.

The New Zealand Ministry of Health advice is that pregnant women, and those who may consider becoming pregnant in the near future, should postpone travel to countries with known recent cases of Zika virus infection. Anyone who does travel to the affected countries is advised to take active steps to avoid being bitten by mosquitoes. This includes using a DEET based insect repellent, wearing long sleeved clothing, avoiding localities known to harbour the mosquitoes that spread Zika, staying in accommodation with fly screens on all open windows, and having a mosquito net over your bed.

Mosquitoes are responsible for spreading many different viral infections including malaria, yellow fever, Japanese encephalitis, dengue, West Nile virus and Zika. The relevant virus is picked up by a mosquito when it bites an animal (which can include humans) or bird during a blood meal. The virus multiplies and eventually lodges in the mosquito's salivary glands. The virus is then transmitted to the next animal that the mosquito bites and feeds on. A mosquito can remain infectious for life, without itself being harmed.

The mosquito species responsible for transmitting these viruses are predominantly found in tropical and sub-tropical habitats (an exception being West Nile virus, which has been identified in most states of the USA). The Zika virus is present in mosquitoes in Central America, equatorial parts of South America and some of the island nations of Micronesia and Polynesia, in particular Samoa and Tonga. One of the anticipated consequences of climate change is that the mosquitoes responsible for spreading these viral illnesses are likely to get established in more temperate areas such as the northern parts of New Zealand. This is why in the late 1990s New Zealand set up a comprehensive exotic mosquito surveillance programme. The system is delivered mainly by staff from the Ministry for Primary Industries and public health units such as Toi Te Ora – Public Health Service, and is designed to reduce the risk of exotic mosquitoes becoming established in New Zealand by reducing suitable mosquito habitats (eg swamps and old tyres), trapping of mosquitoes in the vicinity of sea ports to ensure foreign species have not already arrived, and active searching for mosquitoes at points of entry, including air and sea ports.

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