

Zika Virus

Zika is a viral infection spread by mosquitoes that for most people is mild and not harmful. If pregnant, there is a risk of birth defects in the unborn child, in particular microcephaly (small head). In adults, there is thought to be a link to Guillain-Barré Syndrome, a neurological disorder that can result in progressive muscle weakness and paralysis.

Diagnosis

Zika may be suspected based on symptoms, history, and recent travel to infected areas. For a definitive diagnosis, laboratory tests on blood or other bodily fluids such as urine, saliva, semen, or amniotic fluid would be required.

Treatment

As symptoms are generally mild, no specific treatment is required. If symptoms worsen, then medical advice should be sought. Otherwise, it is important to ensure that you get plenty of rest and stay hydrated. Paracetamol helps to reduce aches and pains and reduces fever. Do not take aspirin or any non-steroidal anti-inflammatory medications (such as ibuprofen).



Symptoms

In general, symptoms are mild and do not usually require hospital admission. The incubation period (time from infection to symptoms) is 3-14 days. Symptoms can last from 2-7 days and include:

- Mild fever
- Headache
- Joint pain and possibly swelling mainly in the smaller joints of the hands and feet
- Muscle pain
- Skin rash
- Itching over the body
- Red eyes/conjunctivitis/pain behind the eyes
- Lethargy

Prevention

No vaccine is available for Zika, so it is crucial to ensure that preventative measures are sought if travelling to an area exposed to Zika. Be aware of peak exposure times in terms of bites from the Aedes mosquito to mitigate the risk of infection and avoid stagnant water where mosquitoes are known to breed. Wear loose clothes (preferably light in colour) that cover as much skin as possible, tuck in shirts and trousers (pants) into socks, wear shoes/boots instead of sandals and use repellents for clothes as well as on exposed skin. Use mosquito bed nets that reach the floor or can be tucked under the mattress and are ideally pre-treated with an insecticide.

Insect repellents containing DEET, picaridin (20%), IR3535, oil of lemon eucalyptus or para-menthane-diol (derived from the eucalyptus tree), or 2-undecanone are safe and effective even for pregnant women or if breast-feeding as long as they are used as directed. However, these products should not be used on infants less than 2 months old and products containing the active ingredients oil of lemon eucalyptus or para-menthane-diol should not be used on children less than 3 years old.

Insect repellents should be reapplied on exposed skin throughout the day and should also be used at night both indoors and outdoors. It should also be reapplied after swimming and in hot countries more frequent application may be required. DEET protection varies according to concentration; 20% concentration provides 1-3 hours protection, 30% up to 6 hours and 50% up to 12 hours. Concentrations below 20% are not considered appropriate and concentrations greater than 50% do not provide any further protection.

Studies have shown that DEET (33% concentration) reduces sunscreen protection from SPF15. However, in concentrations >33% DEET, sunscreen does not reduce the efficacy of the

insect repellent. It is therefore recommended that, if both sunscreen and insect repellent are required, then 30-50 SPF sunscreen should be used and DEET should be reapplied after the sunscreen. It is also important to stay in places with air-conditioning and window and door screens.

As Zika is also known to be transmitted sexually it is important to take the relevant precautions and use condoms or avoid having sex. On return from travel from an area known to have Zika, women should avoid becoming pregnant for a further 2 months. If both partners have travelled, or only the male partner, then avoid becoming pregnant for a further 3 months. If pregnant and have returned recently from an area with Zika, seek advice from your family doctor or midwife, stating where you have visited, even if you have not been unwell. The risks can be discussed with you by your healthcare professionals and ultrasound scans to monitor your baby's growth can be arranged. If the mother is diagnosed with Zika, it does not necessarily mean this will be passed on to the fetus. Current literature suggests approximately 1 in 10 women infected with the Zika virus, will have an infant born with microcephaly and other associated symptoms.

Cause

Zika is caused by a positive-stranded RNA (ribonucleic acid) virus belonging to the genus Flavivirus.

Transmission

Transmission is via:

- A mosquito bite, Aedes genus
- From a pregnant woman to her fetus
- Sexual intercourse
- A blood transfusion

Predominantly infection is via the Aedes mosquito which tends to bite in the early morning and late afternoon and evening.

General Information

Zika is a mosquito-borne viral infection originally identified in the Zika Forest, near Entebbe, Uganda in 1947 in monkeys and in 1952 in humans in Uganda and the United Republic of Tanzania. For around 50 years it caused sporadic infections in humans across Africa and Asia resulting in mild illness. Spreading eastward, the first large outbreak was 2007 on the Island of Yap, in the Federated States of Micronesia. From 2013 further Pacific outbreaks occurred in French Polynesia, Easter Island, the Cook Islands and New Caledonia. The virus continued to spread reaching South and Central America and the Caribbean in 2015 and North America in 2016.

Serious health complications can include congenital brain abnormalities (congenital Zika syndrome) including microcephaly (small head) in infants born to Zika-infected women, which includes developmental problems in the baby. In addition, there are links to Guillain-Barré Syndrome in Zika-infected adults, a neurological disorder of the nervous system resulting in progressive paralysis and loss of reflexes. As a result of these health complications and the continued geographical expansion of both the mosquito vector and virus, Zika poses a significant public health risk.



Figure 1. Image of Aedes genus mosquito.

Always call the Everbridge Assistance line if help is required with medications or any medical issues during travel.

References

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