

What is Zika virus infection?

Zika virus infection is caused by the bite of an infected *Aedes* mosquito, usually causing mild fever, rash, conjunctivitis, and muscle pain. The virus was isolated for the first time in 1947 in the Zika forest in Uganda. Since then, it has remained mainly in Africa, with small and sporadic outbreaks in Asia. In 2007, a major epidemic was reported on the island of Yap (Micronesia), where nearly 75% of the population was infected.

On 3 March 2014, Chile notified PAHO/WHO that it had confirmed a case of indigenous transmission of Zika virus on Easter Island, where the virus continued to be detected until June 2014.

In May 2015, the public health authorities of Brazil confirmed the transmission of Zika virus in the northeast of the country. Since October 2015, other countries and territories of the Americas have reported the presence of the virus.

Transmission

Through mosquito bites

Zika virus is transmitted to people primarily through the bite of an infected *Aedes* species mosquito. These are the same mosquitoes that spread dengue and chikungunya viruses.

- These mosquitoes typically lay eggs in and near standing water in things like buckets, bowls, animal dishes, flower pots and vases. They are aggressive daytime biters, prefer to bite people, and live indoors and outdoors near people.
- Mosquitoes become infected when they feed on a person already infected with the virus. Infected mosquitoes can then spread the virus to other people through bites.

Rarely, from mother to child

- A mother already infected with Zika virus near the time of delivery can pass on the virus to her newborn around the time of birth, but this is rare.
- It is possible that Zika virus could be passed from mother to fetus during pregnancy. This mode of transmission is being investigated.
- To date, there are no reports of infants getting Zika virus through breastfeeding. Because of the benefits of breastfeeding, mothers are encouraged to breastfeed even in areas where Zika virus is found.

Possibly through infected blood or sexual contact

- There has been one report of possible spread of the virus through blood transfusion and one report of possible spread of the virus through sexual contact.

The most common symptoms of Zika virus infection are mild fever and exanthema (skin rash), usually accompanied by conjunctivitis, muscle or joint pain, and general malaise that begins 2-7 days after the bite of an infected mosquito.

One out of four infected people develops symptoms of the disease. Among those who do, the disease is usually mild and can last 2-7 days. Symptoms are similar to those of dengue or

chikungunya, which are transmitted by the same type of mosquito. Neurological and autoimmune complications are infrequent, but have been described in the outbreaks in Polynesia and, more recently, in Brazil. As the virus spreads in the Americas, giving us more experience with its symptoms and complications, it will be possible to characterize the disease better.

Symptoms

- About 1 in 5 people infected with Zika virus become ill (i.e., develop Zika).
- The most common symptoms of Zika are fever, rash, joint pain, or conjunctivitis (red eyes). Other common symptoms include muscle pain and headache. The incubation period (the time from exposure to symptoms) for Zika virus disease is not known, but is likely to be a few days to a week.
- The illness is usually mild with symptoms lasting for several days to a week.
- Zika virus usually remains in the blood of an infected person for a few days but it can be found longer in some people.
- Severe disease requiring hospitalization is uncommon.
- Deaths are rare.

Diagnosis

- The symptoms of Zika are similar to those of dengue and chikungunya, diseases spread through the same mosquitoes that transmit Zika.
- See your healthcare provider if you develop the symptoms described above and have visited an area where Zika is found.
- If you have recently traveled, tell your healthcare provider when and where you traveled.
- Your healthcare provider may order blood tests to look for Zika or other similar viruses like dengue or chikungunya.

Treatment

- No vaccine or medications are available to prevent or treat Zika infections.
- Treat the symptoms:
 - Get plenty of rest
 - Drink fluids to prevent dehydration
 - Take medicines, such as acetaminophen or paracetamol, to relieve fever and pain
 - Do not take aspirin and other non-steroidal anti-inflammatory drugs (NSAIDs), like ibuprofen and naproxen. Aspirin and NSAIDs should be avoided until dengue can be ruled out to reduce the risk of hemorrhage (bleeding). If you are taking medicine for another medical condition, talk to your healthcare provider before taking additional medication.
- If you have Zika, avoid mosquito bites for the first week of your illness.

- During the first week of infection, Zika virus can be found in the blood and passed from an infected person to another mosquito through mosquito bites.
- An infected mosquito can then spread the virus to other people.

Prevention

- No vaccine exists to prevent Zika virus disease (Zika).
- Prevent Zika by avoiding mosquito bites (see below).
- Mosquitoes that spread Zika virus bite mostly during the daytime.
- Mosquitoes that spread Zika virus also spread dengue and chikungunya viruses.

When traveling to countries where Zika virus or other viruses spread by mosquitoes are found, take the following steps:

- Use insect repellents
 - When used as directed, insect repellents are safe and effective for everyone, including pregnant and nursing women.
 - Most insect repellents can be used on children. Do not use products containing oil of lemon eucalyptus in children under the age of three years.
 - Repellents containing DEET, picaridin, IR3535, and some oil of lemon eucalyptus and para-menthane-diol products provide long lasting protection.
 - If you use both sunscreen and insect repellent, apply the sunscreen first and then the repellent.
 - Do not spray insect repellent on the skin under your clothing.
 - Treat clothing with permethrin or purchase permethrin-treated clothing.
 - Always follow the label instructions when using insect repellent or sunscreen.
- When weather permits, wear long-sleeved shirts and long pants.
- Use air conditioning or window/door screens to keep mosquitoes outside. If you are not able to protect yourself from mosquitoes inside your home or hotel, sleep under a mosquito bed net.
- Help reduce the number of mosquitoes inside and outside your home or hotel room by emptying standing water from containers such as flowerpots or buckets.

Sources: ECDC,WHO,CDC