



# ZIKA VIRUS: INFORMATION FOR HEALTH PROFESSIONALS

## PREPARE FOR PATIENTS SEEKING A DIAGNOSIS

### TRANSMISSION

The Zika virus is primarily a mosquito-borne disease.

*Aedes aegypti* and *Aedes albopictus* are the primary vector species transmitting the Zika virus. These mosquitoes:

- can carry dengue virus and chikungunya
- are usually found in tropical climates

The Zika virus can also be transmitted by:

- sexual transmission through the:
  - » semen of infected men
  - » vaginal fluids of infected women
- an infected pregnant woman to her developing fetus
- infected people who donate:
  - » cells
  - » blood
  - » tissue
  - » semen
  - » organs

### FAMILIARIZE YOURSELF WITH COUNTRIES OR AREAS WITH RISK OF ZIKA VIRUS

Include Zika virus in your differential diagnosis for travellers returning from Zika-affected countries or areas.

Currently, there is only one area in Canada (Windsor, Ontario) where the *Aedes* mosquitoes that transmit Zika virus have been found. A small number of these mosquitoes likely were introduced into this area through the transport of goods. They will not likely become permanently established.

Overall, there is a **very low probability** of mosquito-borne transmission of the Zika virus in Canada.

Review our [Travel Health Notice on Zika virus](#) on [Travel.gc.ca](#) for more information.

### CLINICAL MANIFESTATIONS

Asymptomatic infections are more common than symptomatic infections. Only **1 in 4** people infected with Zika virus are believed to develop symptoms. This fact is particularly important when discussing Zika virus infection with:

- pregnant women
- women planning a pregnancy
- sexual partners of pregnant women or those planning a pregnancy
- women who may become pregnant after recent travel to Zika-affected countries or areas



## THE MAIN SYMPTOMS INCLUDE:

- rash
- headaches
- conjunctivitis
- lack of energy
- low grade fever
- muscle or joint pain

The incubation period ranges from 3 to 14 days. The symptoms are usually mild and last for 2 to 7 days. Most people recover fully without severe complications and only require simple supportive care. Hospitalization rates are low.

## CONGENITAL ZIKA SYNDROME

The Zika virus is a neurotropic virus. There is scientific consensus that exposure to Zika virus during fetal development causes Congenital Zika Syndrome. Congenital Zika Syndrome involves a spectrum of neurological and other developmental deficits, including but not limited to:

- hearing loss
- club foot and arthrogryposis
- abnormal brain development including:
  - » microcephaly
  - » cerebral atrophy
  - » callosal hypoplasia
  - » diffuse subcortical calcification
  - » abnormal cortical development
- vision impairment and ocular anomalies such as:
  - » cataracts
  - » microphthalmia
  - » retinal abnormalities
- other neurologic abnormalities including:
  - » seizures
  - » spasticity
  - » irritability

## GUILLAIN-BARRÉ SYNDROME

A number of countries have reported a correlation between Zika virus infection and the development of Guillain-Barré Syndrome (GBS). This is being further investigated through research studies.

## DIAGNOSIS

Preliminary diagnosis is based on the patient's places and dates of travel and clinical presentation. This is particularly important for:

- pregnant women
- women planning a pregnancy
- sexual partners of pregnant women or those planning a pregnancy
- women who have become pregnant after recent travel to Zika-affected countries or areas

## RECOMMENDATIONS

Review our [Travel Health Notice on Zika virus](#) on Travel.gc.ca for recommendations for travellers **going to** and **returning from** Zika-affected countries or areas.

## LABORATORY TESTING

We encourage health care providers to use the Decision-tree for [Zika Virus Laboratory Testing](#).

## ADDITIONAL TESTING RECOMMENDATIONS AND CONSIDERATIONS

We recommend that neonates and infants be tested if:

- the mother visited an area where Zika virus transmission was occurring during the time of her visit and microcephaly or other congenital neurological manifestations are either observed at birth or develop thereafter **or**
- the mother tested positive for Zika during the pregnancy but no microcephaly or other congenital neurologic manifestations are observed

Consider testing for couples who are planning a pregnancy after recent travel to Zika-affected countries or areas:

- only in instances where there is a medical reason why pregnancy cannot be delayed for the recommended time.

Consider testing for individuals who develop more serious symptoms that could be related to Zika virus infection, including GBS or other neurological symptoms.

Laboratory diagnosis is made by testing serum, plasma or urine via PCR or serology to detect any:

- viral genetic material (ribonucleic acid, RNA)
- virus-specific IgM and neutralizing antibodies

Zika virus may be present in detectable levels in a patient's blood and/or urine for up to 2 weeks after symptom onset. We recommend taking a serum sample during the first 5 days after the onset of symptoms.

A second serum sample may be requested to document diagnostic rises in Zika virus specific antibody when identifying cases of viral infection.

## ZIKA VIRUS AND DEFERRAL OF DONATIONS

### BLOOD DONATIONS

Anyone who has travelled outside of Canada, the continental United States and Europe cannot **give blood for 3 weeks (21 days)** after their return.

The Zika virus does not last long in the blood. It is present typically 3 to 5 days following the beginning of symptoms and is cleared within 21 days.

### ORGAN AND STEM CELL DONATIONS

We recommend postponing living organ donors and donors of fresh lymphohematopoietic stem cells (derived from bone marrow/blood) for **a minimum of 21 days** from when the donor has:

- lived in or travelled to a Zika-affected country or area
- recovered from signs or symptoms of a Zika virus infection that developed within 2 weeks of their return from a Zika-affected country or area, or
- had sex with a male diagnosed with Zika virus infection within 6 months before sexual contact

However, exceptions may be considered case-by-case, as, for example, in circumstances where the donation may be life-saving. It is the responsibility of the transplant program to weigh the risks and benefits of postponing a transplant procedure.

### TISSUE DONATIONS

Tissue should not be used from donors diagnosed with Zika virus infection in the past 6 months.

### SEMEN DONATIONS

Semen donors must postpone donating if:

- they have been diagnosed with Zika virus infection in the past 6 months, or
- they have lived in or travelled to a Zika-affected country or area within the past 6 months

### CORD BLOOD AND BIRTH TISSUE DONATIONS

Donors of cord blood and birth tissues must postpone donating if the mother has:

- been diagnosed with Zika virus infection at any point during that pregnancy
- lived in or travelled to a Zika-affected country or area at any point during her pregnancy, or
- had sex with:
  - » a male diagnosed with Zika virus infection within 6 months before the sexual contact
  - » a male who lived in or travelled to a Zika-affected country or area within the past 6 months
  - » a female diagnosed with Zika virus infection within the last 21 days
  - » a female who lived in or travelled to a Zika-affected country or area within the last 21 days

## TREATMENT

Currently, there is no prophylaxis, vaccine or treatment for Zika virus infection. Treatment may be directed toward symptom relief, such as:

- rest
- fluids
- analgesics
  - » avoid acetylsalicylic acid (ASA) and other nonsteroidal anti-inflammatory drugs until dengue infection has been eliminated as a possibility
- antipyretics

## SURVEILLANCE IN CANADA

The Public Health Agency of Canada and provincial and territorial partners work closely to conduct national surveillance on Zika virus cases in Canada.

Health professionals who have questions about follow up in their jurisdiction should contact their local public health authorities for further details.

The National Microbiology Laboratory performs testing to detect the virus and offers testing support to provinces and territories. Some provincial laboratories also offer testing.

### SEE THE COMMITTEE TO ADVISE ON TROPICAL MEDICINE AND TRAVEL STATEMENT ON ZIKA VIRUS FOR DETAILED INFORMATION

<https://www.canada.ca/en/public-health/services/publications/diseases-conditions/zika-virus-prevention-treatment-recommendations.html>

**For more information:** [Canada.ca/zika-virus](https://www.canada.ca/zika-virus)