



# ZIKA VIRUS: INFORMATION FOR HEALTH PROFESSIONALS

## PREPARE FOR PATIENTS SEEKING A DIAGNOSIS

### TRANSMISSION

Zika virus is primarily a mosquito-borne disease. *Aedes aegypti* and *Aedes albopictus* are the primary vector species transmitting Zika virus – the same mosquitoes that can carry dengue virus and chikungunya.

Currently, the *Aedes* mosquitoes that transmit Zika virus are not established in Canada due to the climate. So there is a **very low probability** of mosquito-borne transmission in Canada.

### FAMILIARIZE YOURSELF WITH AREAS WITH ZIKA VIRUS:

Include Zika virus in your differential diagnosis for travellers returning from countries, or areas in the United States, with reported cases of mosquito-borne Zika virus transmission.

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

### ZIKA VIRUS CAN ALSO BE TRANSMITTED BY:

- an infected, pregnant woman to her fetus
- sexual transmission
- cell, blood and tissue donations from infected donors

### 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 is particularly important when discussing Zika virus infection with pregnant women, sexual partners of pregnant women, those planning pregnancies or women who may become pregnant after recent travel to affected areas.

### MAIN SYMPTOMS INCLUDE:

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

The incubation period ranges from 3 to 12 days. Symptoms are usually mild and last for 2 to 7 days. Most people recover fully without severe complications and only require simple supportive care.

### MICROCEPHALY & GUILLAIN-BARRÉ SYNDROME

There is scientific consensus that Zika virus is a cause of **microcephaly** in developing fetuses. Other nervous system malformations and pregnancy related complications have also been detected in fetuses



and newborns infected with Zika virus before birth, including ocular defects, auditory deficits and impaired growth. There have also been increased reports of Guillain-Barré syndrome, other neurological syndromes and non-neurological complications.

## DIAGNOSIS

Preliminary diagnosis is based on the patient's places and dates of travel and clinical presentation. This is particularly important for pregnant women, partners of pregnant women who have a travel history to affected areas and women who are planning a pregnancy or have become pregnant after recent travel to affected areas.

## RECOMMENDATIONS

See our [Travel Health Notice on Zika virus](#) on [Travel.gc.ca](#) for recommendations for travellers **going to** and **returning from** countries and areas in the United States with reported mosquito-borne Zika virus transmission.

## LABORATORY TESTING

Testing for Zika virus infection should be considered for:

- pregnant women who travelled while pregnant, women who became pregnant after recent travel
- pregnant women whose sexual partner travelled and was subsequently diagnosed with Zika virus
- couples who are planning a pregnancy after recent travel to affected areas (ONLY in instances where there is a medical reason why pregnancy cannot be delayed for the recommended time)
- returning travellers with symptoms
- individuals with symptoms whose sexual partner travelled to an affected area (sexual transmission)
- neonates/infants - if microcephaly/other congenital neurological manifestations are either observed at birth or develop thereafter, when the mother's Zika infection status is unknown

AND

- the mother visited an area where Zika virus transmission is ongoing or widespread

AND

- the mother has symptom onset (link to symptoms) within 3 days after arrival and up to 14 days after departing.

Testing should also be considered for returning ill travellers:

- with compatible epidemiologic and clinical history (ie. travel and symptoms)
- who developed more serious symptoms that could be consistent with Zika virus infection, including GBS or other neurological manifestations.

Laboratory diagnosis is achieved by testing serum, plasma or urine via PCR or serology to detect any of the following:

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

Zika virus may be present in detectable levels of a patient's blood and/or urine for up to two weeks after symptom onset. However, it's recommended that a serum sample be taken 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.

## DEFERRAL OF BLOOD/ ORGAN/CELL/TISSUE/SEMEN DONATIONS

### BLOOD DONATIONS

Anyone who has travelled outside of Canada, the continental United States and Europe is currently **ineligible to give blood for three weeks (21 days)** after their return. Zika virus does not last long in the blood, typically 3-5 days following the beginning of symptoms, and is cleared within 21 days.

## ORGAN AND STEM CELL DONATIONS

For living organ donors and donors of fresh lymphohematopoietic stem cells (derived from bone marrow/blood), Health Canada's guidance recommends these donations be postponed for a minimum of 21 days from when the donor has a) returned from a Zika-affected area, b) recovered from signs or symptoms of a Zika virus infection that developed within two weeks of their return from a Zika-affected area, or c) had sex with a male diagnosed with Zika virus infection within six months before the sexual contact or who lived in/travelled to a Zika-affected area within the past six months.

However, exceptions may be considered case-by-case, e.g. 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 six months.

## SEMEN DONATIONS

Semen donors are deferred from donating if they have been diagnosed with Zika virus infection in the past six months or they have lived in/travelled to an area with active Zika virus transmission within the past six months.

## CORD BLOOD AND BIRTH TISSUE DONATIONS

Donors of cord blood and birth tissues are deferred from donating if the mother has a) been diagnosed with Zika virus infection at any point during that pregnancy, b) lived in/travelled to a Zika-affected area at any point during her pregnancy, or c) had sex during her pregnancy with a male diagnosed with Zika virus infection within six months prior to the sexual contact or who lived in/travelled to a Zika-affected area within the past six months.

## TREATMENT

Currently, there is no prophylaxis, vaccine or treatment for Zika virus infection. Rest, fluids, analgesics and antipyretics can be offered to help with symptom relief.

## SURVEILLANCE IN CANADA

You play a critical role in identifying and reporting cases of Zika virus infection. Remember to report to your local public health authority.

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

[http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/16vol42/dr-rm42-5/ar-01-eng.php?id=zika\\_virus\\_16\\_phac\\_catmat](http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/16vol42/dr-rm42-5/ar-01-eng.php?id=zika_virus_16_phac_catmat)

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