

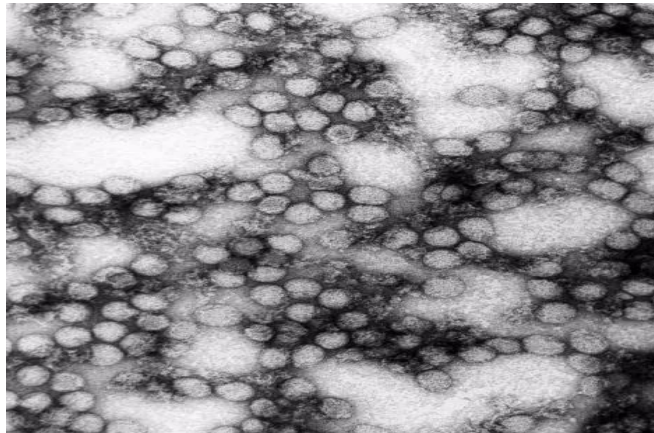
ZIKA VIRUS

Causes, Symptoms, Treatment and Prevention



Introduction

- Zika virus is spread to people through mosquito bites.
- The most common symptoms of Zika virus disease are fever, rash, joint pain, and conjunctivitis (red eyes).
- The illness is usually mild with symptoms lasting from several days to a week. Severe disease requiring hospitalization is uncommon.
- In May 2015, the Pan American Health Organization (PAHO) issued an alert regarding the first confirmed Zika virus infection in Brazil. The outbreak in Brazil led to reports of Guillain-Barre syndrome and pregnant women giving birth to babies with birth defects and poor pregnancy outcomes.



What is the Zika virus?

- The Zika virus, a tropical infection new to the Western Hemisphere, is a mosquito-transmitted infection related to dengue, yellow fever and West Nile virus.
- Although it was discovered in the Zika forest in Uganda in 1947 and is common in Africa and Asia, it did not begin spreading widely in the Western Hemisphere until last May, when an outbreak occurred in Brazil.
- Until now, almost no one on this side of the world had been infected. Few of us have immune defenses against the virus, so it is spreading rapidly. Millions of people in tropical regions of the Americas may have had it.



How is the virus spread?

- Zika is spread by mosquitos but only certain species, namely the Aedes species, which usually feed during the day.
- The Aedes aegypti mosquito is mostly responsible for the spread of the Zika virus.
- The Asian tiger mosquito, Aedes albopictus, is also known to transmit the virus, but it is not clear how efficiently. That mosquito ranges as far north as New York and Chicago in summer.

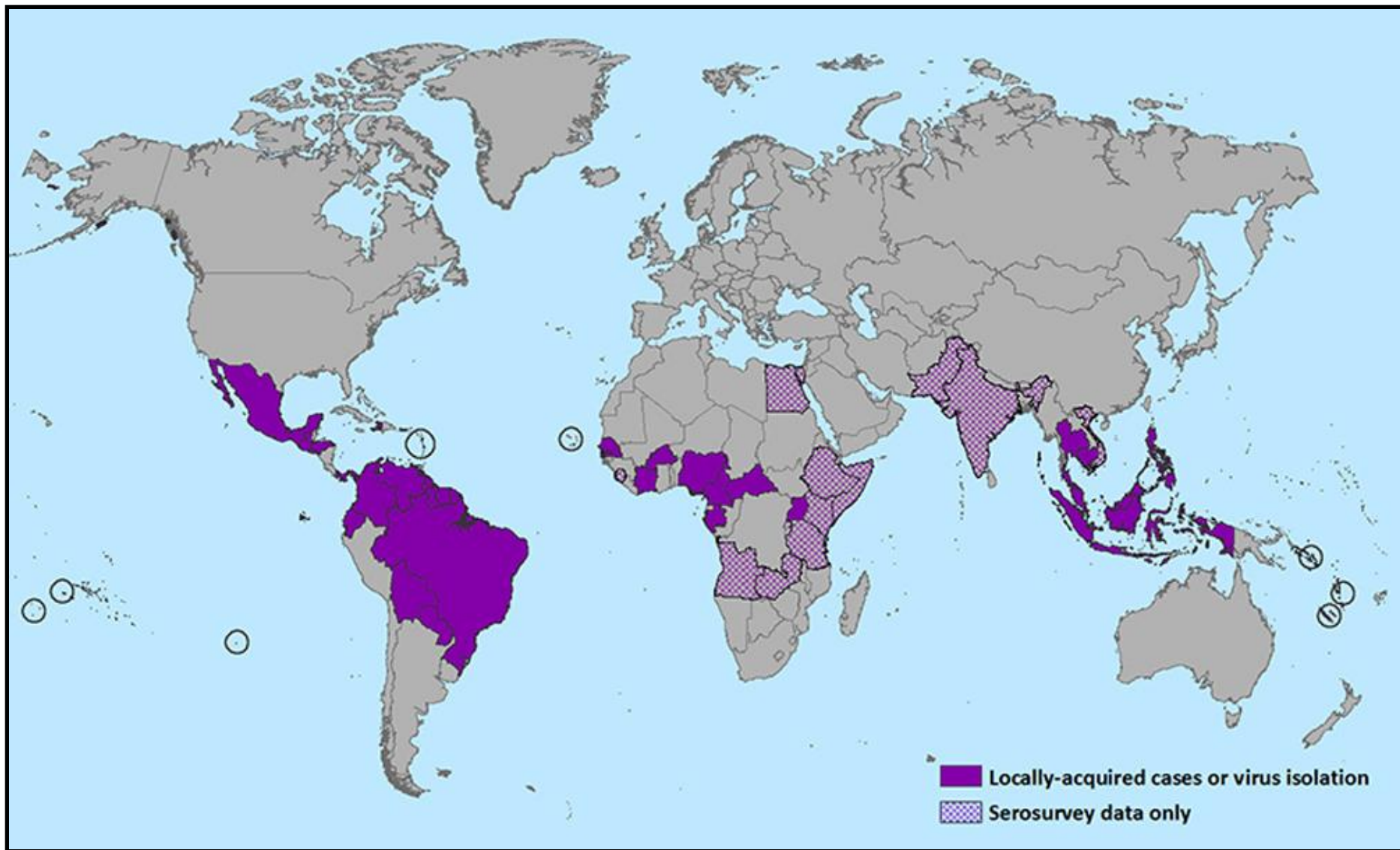


What is the current situation?

- In December 2015, the first local transmission of [Zika](#) virus infection (Zika) was reported in the Caribbean. Local transmission means that mosquitoes in the area have been infected with Zika virus, spreading it to people. Since then, the following Caribbean destinations have reported ongoing transmission of Zika:
- [Barbados](#)
- [Dominican Republic](#)
- [Guadeloupe](#)
- [Haiti](#)
- [Martinique](#)
- [The Commonwealth of Puerto Rico, a U.S. territory](#)
- [Saint Martin](#)
- [U.S. Virgin Islands](#)

- Because Zika virus is spread by mosquitoes, CDC-(Centers for Disease Control and Prevention) recommends that travelers to the Caribbean [protect themselves from mosquito](#)

Countries and Territories with active Zika virus transmission



Countries and Territories with active Zika virus transmission

AMERICAS

- Barbados
- Bolivia
- Brazil
- Colombia
- Dominican Republic
- Ecuador
- El Salvador
- French Guiana
- Guadeloupe
- Guatemala
- Guyana
- Haiti
- Honduras
- Martinique
- Mexico
- Panama
- Paraguay
- Puerto Rico
- Saint Martin
- Suriname
- U.S. Virgin Islands
- Venezuela

OCEANIA/PACIFIC ISLANDS

- Samoa

AFRICA

- Cape Verde

Transmission of Zika

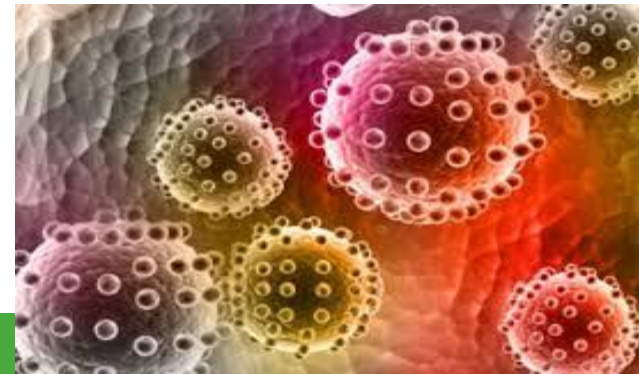
- Zika virus is transmitted to people primarily through the bite of an infected *Aedes* species mosquito. These are the same mosquitoes that spread [dengue](#) and [chikungunya](#) viruses.
- These mosquitoes typically lay eggs in and near standing water in things like buckets, bowls, animal dishes, 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.



Symptoms, Diagnosis & Treatment

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:

- Wear long-sleeved shirts and long pants.
- Stay in places with air conditioning or that use window and door screens to keep mosquitoes outside.
- Sleep under a mosquito bed net if you are overseas or outside and are not able to protect yourself from mosquito bites.
- Use Environmental Protection Agency (EPA)-registered insect repellents. All EPA-registered insect repellents are evaluated for effectiveness.
 - Always follow the product label instructions
 - Reapply insect repellent as directed.
 - Do not spray repellent on the skin under clothing.
 - If you are also using sunscreen, apply sunscreen before applying insect repellent.



Prevention (cont'd)

- If you have a baby or child:
 - Do not use insect repellent on babies younger than 2 months of age.
 - Dress your child in clothing that covers arms and legs, or
 - Cover crib, stroller, and baby carrier with mosquito netting.
 - Do not apply insect repellent onto a child's hands, eyes, mouth, and cut or irritated skin.
 - Adults: Spray insect repellent onto your hands and then apply to a child's face.
- Treat clothing and gear with permethrin or purchase permethrin-treated items.
 - Treated clothing remains protective after multiple washings. See product information to learn how long the protection will last.
 - If treating items yourself, follow the product instructions carefully.
 - Do NOT use permethrin products directly on skin. They are intended to treat clothing.



If you have Zika, protect others from getting sick

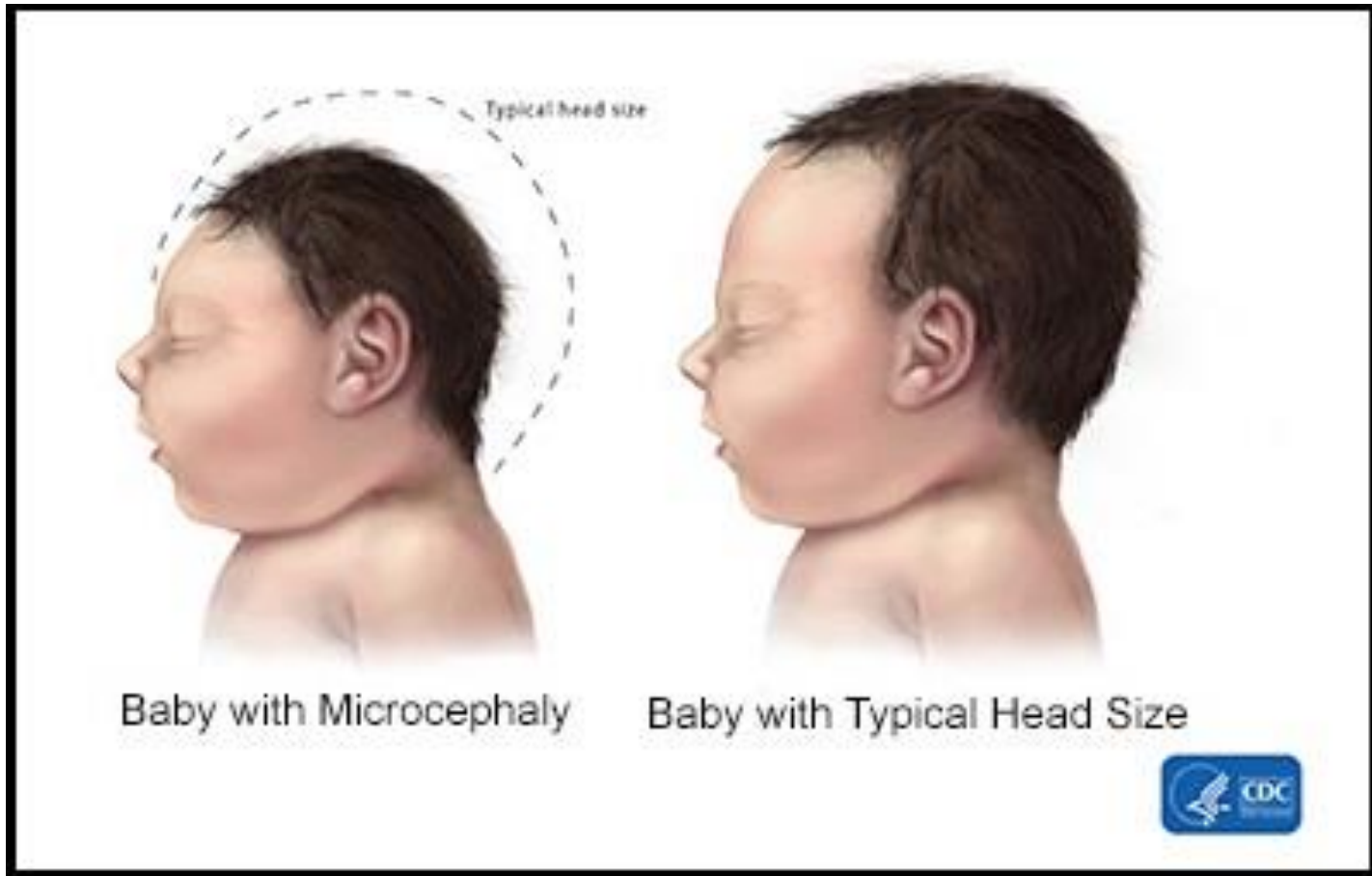
- During the first week of infection, Zika virus can be found in the blood and passed from an infected person to another mosquito through mosquito bites. An infected mosquito can then spread the virus to other people.
- To help prevent others from getting sick, avoid mosquito bites during the first week of illness.

Zika Virus in Pregnancy



- Zika virus can be spread from a pregnant woman to her unborn baby. There have been reports of a serious birth defect of the brain called [microcephaly](#) and other poor pregnancy outcomes in babies of mothers who were infected with Zika virus while pregnant. Knowledge of the link between Zika and these outcomes is evolving, but until more is known, CDC recommends special precautions for the following groups:
- Women who are pregnant (in any trimester):
 - Consider postponing travel to any area where Zika virus transmission is ongoing.
 - If you must travel to one of these areas, talk to your doctor first and strictly follow [steps to prevent mosquito bites](#) during your trip.
- Women who are trying to become pregnant:
 - Before you travel, talk to your doctor about your plans to become pregnant and the risk of Zika virus infection.
 - Strictly follow [steps to prevent mosquito bites](#) during your trip.
- Specific areas where Zika virus transmission is ongoing are often difficult to determine and are likely to change over time. As more information becomes available, this travel notice will be updated. Please check back frequently for the most up-to-date recommendations. Travelers can also consult [PAHO](#) for a list of Latin American countries with ongoing transmission.

Comparison of Baby Head size





Q: Is there a vaccine to prevent or medicine to treat Zika?

A: No. There is no vaccine to prevent infection or medicine to treat Zika.

Q: I am pregnant. Should I travel to a country where cases of Zika have been reported?

A: Until more is known, and out of an abundance of caution, CDC recommends special precautions for pregnant women and women trying to become pregnant:

Pregnant women in any trimester should consider postponing travel to the areas where Zika virus transmission is ongoing. Pregnant women who do travel to one of these areas should talk to their doctor or other healthcare provider first and strictly follow steps to avoid mosquito bites during the trip.

Women trying to become pregnant who are thinking about becoming pregnant should consult with their healthcare provider before traveling to these areas and strictly follow steps to prevent mosquito bites during the trip.

Because specific areas where Zika virus transmission is ongoing are difficult to determine and likely to change over time, CDC will update this travel notice as information becomes available. Check the CDC travel website frequently for the most up-to-date recommendations.

Q: I am pregnant. How will Zika virus affect me or my unborn baby?

A:

- CDC has issued a [travel notice \(Level 2-Practice Enhanced Precautions\)](#) for people traveling to regions and certain countries where Zika virus transmission is ongoing.
- This alert follows reports in Brazil of [microcephaly](#) and other poor pregnancy outcomes in babies of mothers who were infected with Zika virus while pregnant. However, additional studies are needed to further characterize this relationship. More studies are planned to learn more about the risks of Zika virus infection during pregnancy.
- Until more is known, and out of an abundance of caution, CDC recommends special precautions for pregnant women and women trying to become pregnant:
- Pregnant women in any trimester should consider postponing travel to the areas where Zika virus transmission is ongoing. Pregnant women who do travel to one of these areas should talk to their doctor or other healthcare provider first and strictly follow [steps to avoid mosquito bites](#) during the trip.
- Women trying to become pregnant should consult with their healthcare provider before traveling to these areas and strictly follow [steps to prevent mosquito bites during the trip](#).
- Because specific areas where Zika virus transmission is ongoing are difficult to determine and likely to change over time, CDC will update this travel notice as information becomes available. Check [CDCs Zika Travel Information website](#) frequently for the most up-to-date recommendations.

Q: Is it safe to use an insect repellent if I am pregnant or nursing?

A: Yes! Using an insect repellent is safe and effective. Pregnant women and women who are breastfeeding can and should choose an EPA-registered insect repellents and use it according to the product label.

Q: If a woman who is not pregnant is bitten by a mosquito and infected with Zika virus, will her future pregnancies be at risk?

A: We do not know the risk to the infant if a woman is infected with Zika virus while she is pregnant. Zika virus usually remains in the blood of an infected person for only a few days to a week. The virus will not cause infections in an infant that is conceived after the virus is cleared from the blood. There is currently no evidence that Zika virus infection poses a risk of birth defects in future pregnancies. A women contemplating pregnancy, who has recently recovered from Zika virus infection, should consult her healthcare provider after recovering.

Q: Should a pregnant woman who traveled to an area with Zika virus be tested for the virus?

A: See your healthcare provider if you are pregnant and develop a fever, rash, joint pain, or red eyes within 2 weeks after traveling to a country where Zika virus cases have been reported. Be sure to tell your health care provider where you traveled.

Q: Can a previous Zika virus infection cause someone who later becomes pregnant to have an infant with microcephaly?

A: We do not know the risk to the baby if a woman is infected with Zika virus while she is pregnant. However, Zika virus infection does not pose a risk of birth defects for future pregnancies. Zika virus usually remains in the blood of an infected person for about a week. The virus will not cause infections in a baby that is conceived after the virus is cleared from the blood.

Q: Is it safe to get pregnant after traveling to a country with Zika virus?

A: If infected, Zika virus usually remains in the blood of an infected person for about a week. The virus will not cause infections in a baby that is conceived after the virus is cleared from the blood.

Q: Can a pregnant woman be tested for Zika weeks or months after being in a country with Zika?

A: At this time, and for several reasons, we do not recommend routine Zika virus testing in pregnant women who have traveled to a country with known transmission. First, there can be false-positive results due to antibodies that are made against other related viruses. Second, we do not know the risk to the fetus if the mother tests positive for Zika virus antibodies. We also do not know if the risk is different in mothers who do or do not have symptoms due to Zika virus infection.

Q: If a woman who has traveled to an area with Zika virus transmission, should she wait to get pregnant?

A: We do not know the risk to an infant if a woman is infected with Zika virus while she is pregnant. Zika virus usually remains in the blood of an infected person for only a few days to a week. The virus will not cause infections in an infant that is conceived after the virus is cleared from the blood. There is currently no evidence that Zika virus infection poses a risk of birth defects in future pregnancies. A women contemplating pregnancy, who has recently travelled to an area with local Zika transmission, should consult her healthcare provider after returning.

Further Information

- <http://www.cdc.gov/zika/index.html>
- <http://blog.education.nationalgeographic.com/2016/01/20/the-a-to-z-of-zika/>
- http://www.paho.org/hq/index.php?option=com_content&view=article&id=11585&Itemid=41688&lang=en



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