

CDC Updates Interim Guidance on Caring for Women with Possible Exposure to Zika Virus

Key Points for Practice

- Women with Zika virus disease should wait at least eight weeks after symptom onset before attempting to conceive.
- Men with Zika virus disease should wait at least six months after symptom onset before attempting to conceive.
- Asymptomatic women and men with possible Zika virus exposure should be advised to wait at least eight weeks after the last date of exposure before attempting to conceive.
- Serum testing for evidence of Zika virus infection should be performed in persons who have acute onset of fever, rash, arthralgia, or conjunctivitis within two weeks of possible exposure to the virus.
- Pregnant women who do not live in an area with active Zika virus transmission but who may have been exposed to the virus during pregnancy or in the eight weeks before conception should be tested.

From the AFP Editors

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This series is coordinated by Sumi Sexton, MD, Associate Deputy Editor.

A collection of Practice Guidelines published in AFP is available at <http://www.aafp.org/afp/practguide>.

The current Zika virus outbreak was identified in Brazil in May 2015, and knowledge about the virus, its transmission, and its potential adverse effects on pregnancy outcomes is evolving. Epidemiologic, clinical, laboratory, and pathologic evidence supports a link between infection during pregnancy and outcomes such as pregnancy loss, fetal microcephaly, intracranial calcifications, and fetal brain and eye abnormalities. The level of risk of these outcomes is not known. Studies suggest that it may be as high as 29%, but microcephaly caused by viral destruction of brain tissue is likely part of a spectrum of neurologic damage caused by Zika virus, and this percentage may substantially underestimate the proportion of infants affected.

Thirty-nine countries and U.S. territories had reported active Zika virus transmission as of March 23, 2016. Updated information is available at <http://wwwnc.cdc.gov/travel/notices>. Based on limited evidence on the persistence of Zika virus RNA in blood and semen, the Centers for Disease Control and Prevention (CDC) has updated its interim guidance on caring for reproductive-aged women who may have been exposed to

the virus, including those who do not live in areas with active transmission. Further updates to this guidance and other clinical information on Zika virus are available at <http://www.cdc.gov/zika/hc-providers/index.html>.

Preconception Counseling

Physicians should provide preconception counseling to women who do not live in areas with active Zika virus transmission, but who may have been exposed to the virus. Discussions should include information about the signs and symptoms of Zika virus disease and the potential adverse outcomes associated with infection during pregnancy. Women with Zika virus disease should wait at least eight weeks after symptom onset before attempting to conceive. The risk of congenital infection in pregnant women with asymptomatic infection is not known. However, asymptomatic women with possible Zika virus exposure should be advised to wait at least eight weeks after the last date of exposure before attempting to conceive.

Sexual transmission of Zika virus can occur, but it is not known whether men with asymptomatic infection can transmit the virus sexually. Based on the limited data currently available, men with possible Zika virus exposure and their female partners should wait to attempt conception until the risk of sexual transmission is minimal. Men who have been diagnosed with Zika virus disease should wait at least six months after symptom onset before attempting to conceive. Men who may have been exposed to the virus but do not have clinical illness consistent with Zika virus disease should wait at least eight weeks before attempting to conceive. If symptoms do not develop, the couple could consider attempting conception or waiting longer.

Testing in Persons Attempting to Conceive

Serum testing for evidence of Zika virus infection should be performed in persons who have acute onset of fever, rash, arthralgia, or conjunctivitis within two weeks of possible exposure to the virus. Routine testing is not recommended for women or men who are attempting to conceive and have possible exposure but no clinical illness. Testing in asymptomatic persons may not be necessary, and results might be difficult to interpret. It is not known whether a positive serologic test result in an asymptomatic man indicates that the virus may be present in semen, or if a negative serologic test result precludes the presence of the virus in semen. Testing of semen for Zika virus is not recommended because a positive or negative result does not provide sufficient data to guide recommendations about attempting conception.

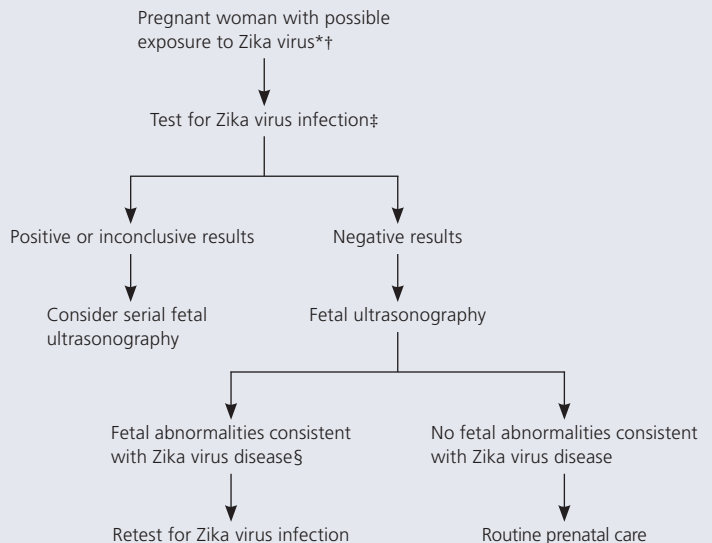
Women Undergoing Fertility Treatment

Although there have been no documented instances of Zika virus transmission during fertility treatment, transmission through donated gametes or embryos is possible because the virus can be present in semen, and sexual transmission has occurred. Zika virus is not likely to be destroyed in the cryopreservation process. Fertility treatment using a couple's own gametes and embryos should follow the timing recommendations for persons attempting conception.

The U.S. Food and Drug Administration recommends that persons be considered ineligible for anonymous donation if they have been diagnosed with Zika virus infection in the past six months; have lived in or traveled to an area with active Zika virus transmission within the past six months; or within the past six months had sex with a male partner who, within the six months before sexual contact, was diagnosed with or had an illness consistent with Zika virus disease or traveled to an area of active Zika virus transmission. These recommendations apply to anonymous donors, but not to sexually intimate couples. Directed donors must undergo the same evaluation and eligibility determination as anonymous donors. However, gametes or embryos from

ineligible directed donors may be used if the tissue is labeled to indicate potential increased risk, all participating parties are aware of and willing to incur the risk, and ►

Testing for Zika Virus Infection



NOTE: Testing is recommended for pregnant women with clinical illness consistent with Zika virus disease, including one or more of the following signs or symptoms: acute onset of fever, rash, arthralgia, or conjunctivitis during or within two weeks of travel or possible sexual exposure. Tests include Zika virus reverse transcription–polymerase chain reaction (RT-PCR) testing, Zika virus immunoglobulin M (IgM), and neutralizing antibodies on serum specimens. More information is available at <http://www.cdc.gov/mmwr/PDF/wk/mm5612a1.pdf>. Because of the overlap of symptoms and areas where other viral illnesses are endemic, physicians should evaluate for possible dengue or chikungunya virus infection.

*—Risk factors for exposure to Zika virus include travel to an area with active Zika virus transmission (<http://wwwnc.cdc.gov/travel/notices>) or vaginal or anal intercourse or fellatio without a condom with a man who traveled to or resided in an area with active Zika virus transmission. Testing is not currently recommended for pregnant women with possible sexual exposure to Zika virus if both partners are asymptomatic.

†—Testing can be offered to pregnant women without clinical illness consistent with Zika virus disease. If performed, testing should include Zika virus IgM, and if the IgM test result is positive or indeterminate, neutralizing antibodies on serum specimens. Testing should be performed two to 12 weeks after travel.

‡—Laboratory evidence of maternal Zika virus infection includes Zika virus RNA detected by RT-PCR in any clinical specimen, or positive Zika virus IgM with confirmatory neutralizing antibody titers that are at least fourfold higher than dengue virus neutralizing antibody titers in serum. Testing is considered inconclusive if Zika virus neutralizing antibody titers are less than fourfold higher than dengue virus neutralizing antibody titers.

§—Fetal abnormalities consistent with Zika virus disease include microcephaly, intracranial calcifications, and brain and eye abnormalities. Fetal ultrasonography may not detect abnormalities until the late second or early third trimester of pregnancy.

Figure 1. Algorithm for testing for Zika virus infection in women with possible exposure who do not live in areas with active virus transmission.

Adapted from Petersen EE, Polen KN, Meaney-Delman D, et al. Update: interim guidance for health care providers caring for women of reproductive age with possible Zika virus exposure—United States, 2016. *MMWR Morb Mortal Wkly Rep.* 2016;65(12):319.



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physicians are aware of the status of gametes or embryos.

Testing in Persons with Possible Exposure

Physicians—especially those who care for pregnant women living near the U.S.–Mexico border—should assess their patient's travel histories, including the frequency of cross-border trips. Pregnant women who do not live in an area with active Zika virus transmission but who may have been exposed to the virus should be tested (Figure 1), and those who may have been exposed during the eight weeks before conception can be offered serologic testing within two to 12 weeks of the possible exposure. A negative immunoglobulin M test result obtained two to 12 weeks after exposure suggests that infection did not occur and may rule out the need for serial ultrasonography. Pregnant women who have had sex without a condom with a male partner who may have been exposed to Zika virus should be tested if they develop any sign or symptom of Zika virus disease, or if their partner is diagnosed with Zika virus disease or a clinical illness consistent with Zika virus disease.

Amniocentesis should be considered on a case-by-case basis. It is not known how sensitive or specific reverse transcription–polymerase chain reaction testing of amniotic fluid is for detecting congenital Zika virus infection or whether a positive result predicts subsequent fetal abnormalities. The optimal time to perform amniocentesis to diagnose congenital Zika virus infection is not known; Zika virus RNA has been detected in amniotic fluid as early as four weeks after maternal symptom onset and as early as 17 weeks' gestation.

Guideline source: Centers for Disease Control and Prevention

Evidence rating system used? No

Literature search described? No

Guideline developed by participants without relevant financial ties to industry? Not reported

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Available at: <http://www.cdc.gov/mmwr/volumes/65/wr/pdfs/mm6512e2.pdf>

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