

## CDPH Zika Virus FAQs for Healthcare Providers

August 19, 2016

### Recommendations for Couples who are Not Pregnant but Planning Pregnancy

#### **Q: What are the recommendations for couples who are actively trying to conceive and planning travel to an area with active Zika virus transmission?**

- Pregnant women in any trimester should consider not traveling to any area where there is Zika virus transmission.
- CDC recommends that women trying to get pregnant and their male partners talk to their healthcare provider before traveling to areas where there is Zika virus transmission.
- Healthcare providers should discuss pregnancy intention and reproductive options with women of reproductive age. In the context of the ongoing Zika virus transmission, preconception care should include a discussion (ideally before travel) about mosquito bite prevention, signs and symptoms of Zika virus infection, and the potential risks associated with travel and Zika virus infection.
- Couples could consider several factors regarding risk:
  - Risk of acquiring vector-borne Zika depends on the duration and extent of exposure to infected mosquitoes and the steps taken to prevent mosquito bites.
  - Most infections are asymptomatic when they occur.
- If couples do travel, because sexual transmission is possible, both men and women should strictly follow steps to prevent mosquito bites during the trip.
- Couples can monitor for symptoms of fever, maculopapular rash, conjunctivitis, or arthralgia. The timing from exposure to development of symptoms is thought to be a few days to two weeks, but up to 80% of infected persons may be asymptomatic.
- See below for specific recommendations.

#### **Q: Are there any recommendations for persons who traveled to areas with ongoing Zika Virus transmission prior to conception?**

For women and men who have been *diagnosed with Zika virus disease or who have symptoms of Zika* (fever, rash, joint pain, or red eyes) after possible exposure to Zika virus, CDC recommends that healthcare providers:

- Advise women to wait **at least 8 weeks** after their symptoms first appeared before trying to get pregnant.
- Advise men to wait **at least 6 months** after their symptoms first appeared before trying to get their partner pregnant.
- People with Zika should use condoms (or other barriers to protect against infection) for sex or not have sex during this time period, if they are concerned about the possibility of transmitting Zika virus to their sex partners. To be effective, condoms must be used every time, from start to finish during vaginal, anal and oral sex.

For men and women *without* symptoms of Zika virus but who had possible exposure to Zika from recent travel or sexual contact, healthcare providers should recommend their patients wait **at least 8 weeks** after their possible exposure before trying to get pregnant.

- There is no current evidence to suggest that a fetus conceived after maternal viremia has resolved would be at risk for fetal infection.
- Zika virus testing for the purpose of assessing the risk of sexual transmission is of uncertain value, because the current understanding of the duration and pattern of shedding in the male and female genitourinary tract is limited. Therefore, testing of specimens to assess risk for sexual transmission is currently not recommended.

**Q: What are the special considerations for couples undergoing fertility treatment?**

- Fertility treatment for sexually intimate couples using their own gametes and embryos should follow the timing recommendations for persons attempting conception; although recommendations may need to be adjusted depending on individual circumstances (see above recommended wait periods).
- The Food and Drug Administration has developed guidance for donated tissues in the context of a Zika virus outbreak, including donated sperm, oocytes, and embryos. The guidance states that living donors will be deemed ineligible for anonymous donation if they have any of the following risk factors:
  - Medical diagnosis of Zika virus infection in the past 6 months
  - Residence in or travel to an area with active Zika virus transmission within the past 6 months
  - Within the past 6 months, had sex with a male partners who, during the 6 months before sexual contact, received a diagnosis of or experienced an illness consistent with Zika virus disease, or had traveled to an area or active Zika virus transmission

(See April 1, 2016 MMWR-Update: *Interim Guidance for Health Care Providers Caring for Women of Reproductive Age with Possible Zika Virus Exposure—United States in References*)

## Recommendations for Pregnant Women

**Q: What are the recommendations for testing pregnant women?**

- Testing is recommended for all pregnant women with possible exposure to Zika virus including exposure through travel to an area with active Zika transmission or sexual contact. For symptomatic and asymptomatic pregnant women *not* living in areas with active transmission and < 2 weeks after symptom onset or exposure, RT-PCR (urine and serum) is indicated. If PCR negative, IgM testing should be done with serum samples from asymptomatic pregnant women collected between 2 weeks and 12 weeks after exposure. See Health Care Provider Testing FAQ or [http://www.cdc.gov/zika/pdfs/testing\\_algorithm.pdf](http://www.cdc.gov/zika/pdfs/testing_algorithm.pdf) for more information.
- Symptoms consistent with Zika virus disease include one or more of the following signs or symptoms: acute onset of fever, maculopapular rash, arthralgia, or conjunctivitis, *during or within 2 weeks of travel*.
- For women living in or frequent travel to an area with active Zika virus transmission, IgM antibody testing is recommended as part of routine obstetric care during the first and second trimester for asymptomatic women. Additional testing may be indicated based on IgM results. See Health Care Provider Testing FAQ or [http://www.cdc.gov/zika/pdfs/testing\\_algorithm.pdf](http://www.cdc.gov/zika/pdfs/testing_algorithm.pdf) for more information.

**Q: What are the guidelines for a pregnant woman whose partner has traveled to or resides in an area with active Zika virus transmission?**

- Individuals, male and female, who travel to or reside in an area with active Zika virus transmission and have a pregnant partner should correctly and consistently use condoms or abstain from sex for the duration of the pregnancy.
- All pregnant women should be tested if they have had possible exposure to Zika virus, including sexual exposure.

**Q: What are the guidelines for testing a pregnant woman who traveled to a country declared**

**as having active Zika virus transmission immediately *after* her return?**

CDC updates its advisory whenever the Pan American Health Organization (PAHO) adds a new country of active viral transmission. It is likely that Zika virus is circulating in a country months before it is declared as Zika positive due to the lag time in detecting human cases, especially when the virus is circulating at low levels.

- There is no standard in terms of exposure risk relative to the timing of when a country is declared as having Zika transmission activity.
- CDPH has been using a 30-day window from reported detection, knowing that the virus was circulating prior to the first detection.
- See [VRDL Zika Testing Quicksheet](#).

**Q: What are the guidelines for testing a pregnant woman who became pregnant *after* she was exposed to Zika virus?**

- CDC guidance recommends that asymptomatic pregnant women who were exposed to Zika virus within 8 weeks prior to conception (6 weeks prior to last menstrual period) follow the same testing recommendations as women exposed during pregnancy.
- See [VRDL Zika Testing Quicksheet](#).

**Q: Why does a positive IgM result for Zika virus require confirmatory testing by plaque reduction neutralization test (PRNT)?**

- **Confirmatory testing is needed because IgM testing for Zika virus may give some false positive results.** Because testing for Zika virus is new, we don't yet know the percentage of expected false positive results. The main reason for false positive results is that there is serologic cross reactivity between viruses in the flavivirus family including dengue, West Nile, yellow fever, and Japanese encephalitis viruses. Previous exposure to or vaccination against a flavivirus could result in a false positive Zika virus IgM. Some false positives may be due to other non-specific reactions without prior virus exposure.

**Q: What other information helps suggest whether the preliminary Zika virus IgM result may be a true or false positive test?**

- Other helpful information might include:
  - History of other virus infection or vaccination
  - Symptoms of acute infection and timing related to exposure
  - Confirmed Zika infection in a sexual partner
  - Other evidence of congenital Zika infection or complication, such as fetal microcephaly or intracranial calcifications

**Q: What are the possible final results of the confirmatory PRNT after a preliminary positive report for Zika virus serology (IgM)?**

- Confirmatory testing results could come back as:
  - Evidence of a recent infection with Zika virus
  - Evidence of a recent infection with a different flavivirus (such as dengue)
  - Evidence of infection with an unspecified flavivirus, specific virus cannot be determined (positive for more than one virus)
  - No evidence of infection (preliminary IgM test is false positive)

**Q: Should cases of asymptomatic pregnant women who traveled to areas with ongoing Zika virus transmission while pregnant and request Zika virus testing be reported to**

**the local health department?**

- Yes. Any patient for whom Zika testing is recommended should be reported to the local health department. Providers who are using the CalREDIE Provider Portal may enter the information directly into CalREDIE. Otherwise, providers should check with their local health department on how to report cases. Reporting of these patients will enable patient tracking and expedite testing and reporting of results.

**Q: What are the recommendations for follow-up based on Zika test results?**

Pregnant women with laboratory evidence of recent flavivirus infection are considered to have probable/possible Zika virus infection and should be monitored frequently.

- Pregnant women with confirmed or probable/possible Zika virus infection should be counseled and monitored with serial fetal ultrasounds every 3–4 weeks to assess fetal anatomy, particularly neuroanatomy, and to monitor growth.
- Pregnant women with preliminary/presumptive positive Zika virus infection should also be counseled and monitored with serial ultrasounds pending final Zika test results.

Ultrasound findings that have been associated with congenital Zika virus syndrome include microcephaly, intracranial calcifications, ventriculomegaly, arthrogryposis, and abnormalities of the corpus callosum, cerebrum, cerebellum, and eyes.

See Table 1, MMWR: Update: Interim Guidelines for Health Care Providers Caring for Pregnant Women with Possible Zika Virus Exposure – United States, 2016; July 25, 2016.

**Q: What are the recommendations for amniocentesis for Zika virus testing?**

- Amniocentesis should be individualized for each clinical circumstance, similar to evaluation of other congenital infections.
- It is unknown how sensitive or specific RT-PCR testing of amniotic fluid is for congenital Zika virus infection or whether a positive test is predictive of subsequent fetal abnormalities.

**Q: Should women be tested if travel to areas with Zika virus transmission occurred more than 12 weeks ago?**

- For symptomatic and asymptomatic pregnant women with possible Zika virus exposure who seek care >12 weeks after symptom onset or possible exposure, IgM antibody testing might be considered and if fetal abnormalities are present, rRT-PCR testing should also be performed on maternal serum and urine.
- Because IgM antibody and viral RNA levels decline over time, negative testing conducted greater than 12 weeks after symptom onset or possible exposure may be a false negative result and does not rule out recent Zika virus infection.
- Therefore, when testing beyond 12 weeks after symptom onset or possible exposure, serial fetal ultrasounds should be considered.

**Q: At what gestational age should Zika ultrasound screenings begin?**

- At this time, there are no specific recommendations on the timing of ultrasound with regard to gestational age.

**Q: What type of "container" should be used to submit an amniotic fluid sample for Zika virus testing?**

- The recommendation is to collect the amniotic fluid in a CSF collection tube. The sample should be frozen (-70C) and shipped on dry ice. See [VRDL Zika Testing Quicksheet](#).

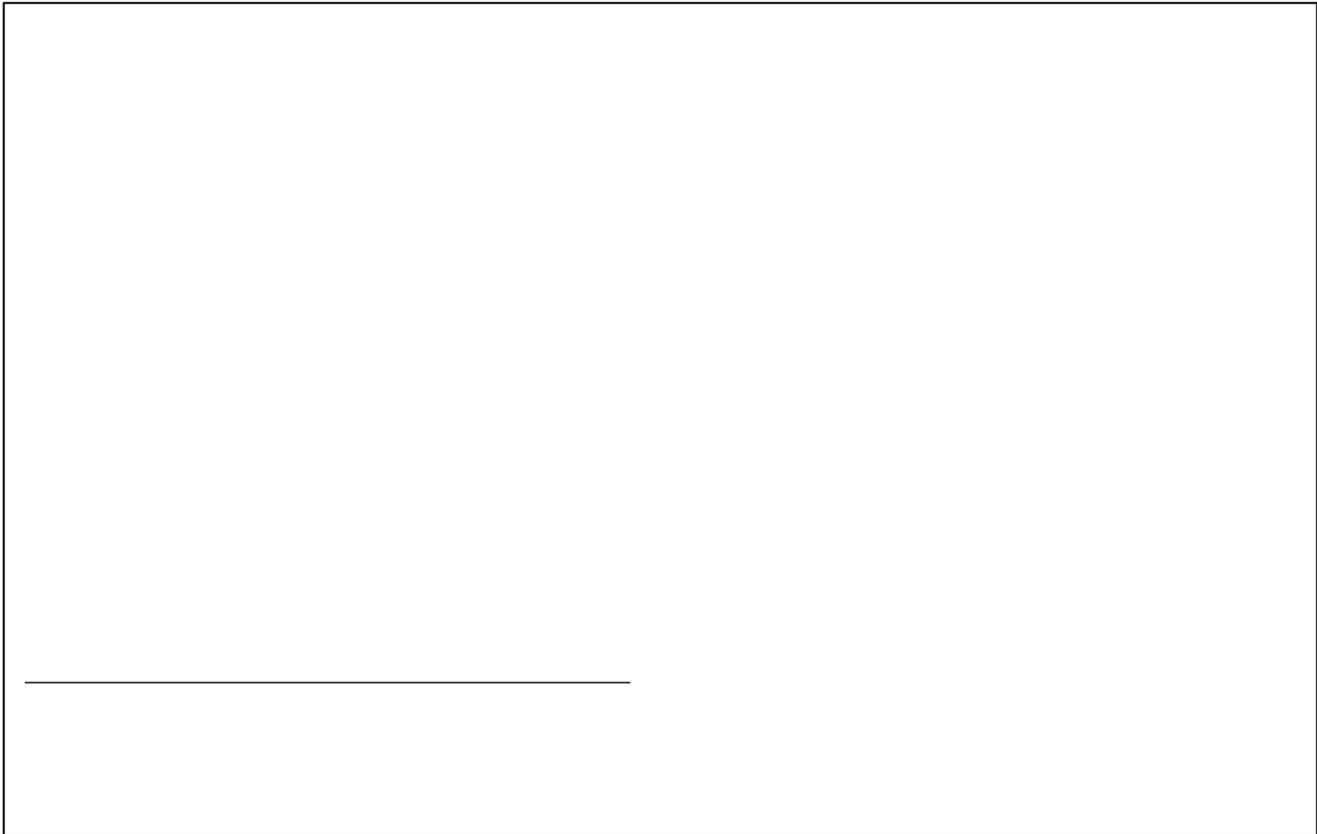
**Q: How long does it take to get the results from Zika testing?**

- The testing algorithm varies depending upon sample type submitted and timing of sample collection from onset. Some individual tests are rapid (1 day) while others take up to 6 days to complete. Final patient results may involve a combination of several of these tests.

**Zika Virus Exposure and Testing – For Infants with Possible Congenital Zika Virus Infection**

**Q: What are the testing guidelines for infants born to mothers exposed to Zika virus through travel or sexual contact during or within 8 weeks prior to pregnancy?**

- CDC recommends that testing should be guided by whether the infant had microcephaly or intracranial calcifications detected prenatally or at birth **and** the mother's Zika virus testing results.
- An infant without microcephaly or intracranial calcifications whose mother has negative Zika virus test results or who was not tested for Zika virus should receive routine care.
- In a mother with confirmed positive, possible/probable, or presumptive/preliminary test for Zika virus infection or unspecified flavivirus, conduct a thorough physical examination and perform Zika virus testing in the newborn infant. **See Box 1** below. <http://www.cdc.gov/mmwr/volumes/65/wr/mm6507e1.htm>
- In the case of a *fetal loss*: Zika virus rRT-PCR and IHC staining of fetal tissues is recommended for confirmed maternal Zika/flavivirus cases and should be considered for presumptive/preliminary positives. See Table 1, <http://www.cdc.gov/mmwr/volumes/65/wr/mm6529e1.htm>



**Q: What are the guidelines for the evaluation and management of infants born to**

**symptomatic mothers exposed to Zika virus through travel or sexual contact within 2 weeks of delivery?**

- Because maternal-infant transmission of Zika virus is possible during delivery, acute Zika virus disease should be suspected in an infant whose mother traveled to or resided in an affected area within 2 weeks of delivery and who has  $\geq 2$  of the following manifestations: fever, rash, conjunctivitis, or arthralgia.
- If an infant shows signs and symptoms of acute Zika virus disease within the first 2 weeks of life, CDC recommends that both the mother and infant be tested for Zika virus infection.

See Box 1.

<http://www.cdc.gov/mmwr/volumes/65/wr/mm6507e1.htm>

**California and the U.S. Zika Pregnancy Registry**

**Q: Is California participating in the CDC's U.S. Zika Pregnancy Registry?**

- Yes, CDPH is the point of contact for Registry data submission for California to CDC.

**Q: What is the U.S. Zika Pregnancy Registry?**

- The U.S. Zika Pregnancy Registry includes both asymptomatic and symptomatic pregnant women with laboratory evidence of possible Zika virus infection and their infants up to 1 year of age.
- The national Registry will provide data to further elucidate the full range of potential outcomes for fetuses and infants of mothers with Zika virus infection during pregnancy and will also be used to anticipate and plan to meet the needs of pregnant women and their families for clinical and public health services.

**Q. What data collection points are included in the U.S. Zika Pregnancy Registry?**

- At maternal diagnosis
- Second trimester
- Third trimester
- At delivery
- Infant follow-up at 2, 6, and 12 months

**Q. What is the process for reporting data to the U.S. Zika Pregnancy Registry?**

- Healthcare providers should report suspected cases of Zika to their local health department.
- To report follow-up data on pregnant women with Zika virus infection and their infants, providers may contact their local health department or the California Department of Public Health at [ZikaOutcomes@cdph.ca.gov](mailto:ZikaOutcomes@cdph.ca.gov). All data should be sent by secure e-mail. For more information, visit the CDPH Zika webpage [Reporting Zika Pregnancy and Infant Outcomes in California](#). Questions? Contact us at [ZikaOutcomes@cdph.ca.gov](mailto:ZikaOutcomes@cdph.ca.gov) or call (510) 620-3151.

**Q. Do providers need to do additional clinical evaluation in order to contribute data to the U.S. Zika Pregnancy Registry?**

- No. Data collection for the Registry is intended to capture existing information in the medical record.

**Zika Virus Transmission – Pregnant and/or Lactating Women**

**Q: Can the virus be transmitted via breast milk/breastfeeding?**

- Although Zika virus RNA has been detected in breast milk, transmission of Zika infection through breastfeeding has not been documented.
- Mothers are encouraged to breastfeed infants even in areas where Zika virus is found, as available evidence indicates the benefits of breastfeeding outweigh any theoretical risks associated with Zika virus infection transmission through breast milk.  
<http://www.cdc.gov/mmwr/volumes/65/wr/mm6507e1.htm>

**Q: Can breast milk be tested in addition to the other body fluids mentioned?**

- There are no current recommendations to test breast milk.

**Q: Is there any information on the timing of exposure (trimester) to Zika virus in pregnancy and link to birth defects?**

- A CDC evaluation of available data using criteria for assessing potential teratogens concluded that Zika virus infection in pregnant women can cause microcephaly and other serious brain anomalies in infants. Evidence used to support this causal relationship included:
  - Zika virus infection at times during prenatal development that were consistent with the defects observed;
  - A specific, rare phenotype involving microcephaly and associated brain anomalies in fetuses or infants with presumed or confirmed congenital Zika virus infection; and,
  - Data strongly supporting biologic plausibility, including the identification of Zika virus in the brain tissue of affected fetuses and infants.
- However, many questions that are critical to prevention efforts remain, including:
  - The spectrum of defects caused by prenatal Zika virus infection
  - The degree of relative and absolute risks of adverse outcomes among fetuses whose mothers were infected at different times during pregnancy
  - Factors that might affect a woman's risk of adverse pregnancy or birth outcomes
- A second CDC study based on international outbreak data, estimated the risk of microcephaly in the range from 1-13% for first trimester exposures.  
*See Zika virus and birth defects—reviewing the evidence for causality.* N Engl J Med 2016;374:1981-1987.  
*See Zika and the Risk of Microcephaly.* N Engl J Med 2016; 375:1-4.

**Q: Is there any information on the dormancy of Zika and similar viruses? For example, if a woman contracts Zika during one pregnancy, is she at risk for developing the disease, and is her infant at risk for microcephaly during subsequent pregnancies?**

- There is no current evidence that Zika virus infection poses a risk of infection or birth defects in future pregnancies since the risk is thought to be associated with maternal viremia, which is expected to last approximately one week in patients with clinical illness.
- Data from the US Zika Pregnancy Registry and published case reports indicate that Zika virus RNA can persist in serum of some pregnant women longer than had been previously reported; the longest documented duration of Zika virus RNA detection in serum is 10 weeks after symptom onset. In addition, recent data indicate that Zika virus RNA might be detected in the serum or urine of some asymptomatic pregnant women. The frequency of this finding is unknown.  
<http://www.cdc.gov/mmwr/volumes/65/wr/mm6529e1.htm>

**Zika Virus Cases in California**

**Q: How often will the information on the number of cases of Zika virus in California be updated on the Zika website?**

- The Zika website update with the number of confirmed and probable cases is refreshed weekly.
- To date, there has been no local mosquito-borne transmission of Zika virus in California. Thus far, Zika virus infections have been documented only in persons exposed through travel to a Zika affected area or contact with a traveler. See [CDPH Weekly Update on Number of Laboratory Zika-Positive Cases in California](#).

## Patient Education

**Q: Does CDPH have patient education materials that I can use in my office?**

- Yes, CDPH has created various educational materials that you can use for patient outreach. These materials are organized into three toolkits for [Zika and pregnancy](#), [Zika and travel](#), and [Zika and sexual transmission](#). Each toolkit contains educational posters in English and Spanish, talking points for healthcare providers, and social media posts that you can use on your social media sites. Additionally, CDPH has created a [Zika Questions and Answers](#) resource for the public. All of these materials, including the toolkits and their individual components, are available for free download on the CDPH Zika webpage: <http://www.cdph.ca.gov/Zika>

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