

Update: Interim Guidance for Prevention of Sexual Transmission of Zika Virus — United States, July 2016

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Zika virus has been identified as a cause of congenital microcephaly and other serious brain defects (1). CDC issued interim guidance for the prevention of sexual transmission of Zika virus on February 5, 2016, with an initial update on April 1, 2016 (2). The following recommendations apply to all men and women who have traveled to or reside in areas with active Zika virus transmission* and their sex partners. The recommendations in this report replace those previously issued and are now updated to reduce the risk for sexual transmission of Zika virus from both men and women to their sex partners. This guidance defines potential sexual exposure to Zika virus as having had sex with a person who has traveled to or lives in an area with active Zika virus transmission when the sexual contact did not include a barrier to protect against infection. Such barriers include male or female condoms for vaginal or anal sex and other barriers for oral sex.[†] Sexual exposure includes vaginal sex, anal sex, oral sex, or other activities that might expose a sex partner to genital secretions.[§] This guidance will be updated as more information becomes available.

As of July 20, 2016, 15 cases of Zika virus infection transmitted by sexual contact had been reported in the United States.[¶] Sexually transmitted Zika virus infection has also been reported in other countries (3). In published reports, the longest interval after symptom onset that sexual transmission from a man might have occurred was 32–41 days (4). Using real-time reverse transcription–polymerase chain reaction (rRT-PCR), which

detects viral RNA but is not necessarily a measure of infectivity, Zika virus RNA has been detected in semen up to 93 days after symptom onset (5). In addition, one report describes an asymptotically infected man with Zika virus RNA detected by rRT-PCR in his semen 39 days following departure from a Zika virus-affected area and who might have sexually transmitted Zika virus to his partner (6). In most cases, serial semen specimens were not collected until Zika virus RNA was no longer detectable so that the precise duration and pattern of infectious Zika virus in semen remain unknown. Zika virus also has been transmitted from a symptomatically infected woman to a male sex partner (7), and Zika virus RNA has been detected in vaginal fluids 3 days after symptom onset and in cervical mucus up to 11 days after symptom onset (8). For sex partners of infected women, Zika virus might be transmitted through exposure to vaginal secretions or menstrual blood. Sexual transmission of infections, including those caused by other viruses, is reduced by consistent and correct use of barriers to protect against infection.

With this update, CDC is expanding its existing recommendations to cover all pregnant couples, which includes pregnant women with female sex partners. This guidance also describes what other couples (those who are not pregnant or planning to become pregnant) can do to reduce the risk for Zika virus transmission. CDC's recommendations for couples planning to become pregnant have been published separately (9).

Updated Recommendations

Recommendations for pregnant couples. Zika virus infection is of particular concern during pregnancy. Pregnant women with sex partners (male or female) who live in or who have traveled to an area with active Zika virus transmission should consistently and correctly use barriers against infection during sex or abstain from sex for the duration of the

* <http://www.cdc.gov/zika/geo/index.html>.

[†] Barrier methods to protect against infection include male or female condoms for vaginal or anal sex, male condoms for oral sex (mouth-to-penis), and male condoms cut to create a flat barrier or dental dams for oral sex (mouth-to-vagina).

[§] For the purpose of these guidelines, sex is specifically defined as vaginal sex (penis-to-vagina sex), anal sex (penis-to-anus sex), oral sex (mouth-to-penis sex or mouth-to-vagina sex), and the sharing of sex toys.

[¶] <http://www.cdc.gov/zika/geo/united-states.html>.



pregnancy. These recommendations reduce the risk for sexual transmission of Zika virus during pregnancy, which could have adverse fetal effects. Pregnant women should discuss with their health care provider their own and their sex partner's history of having been in areas with active Zika virus transmission and history of illness consistent with Zika virus disease^{**}; providers can consult CDC's guidance for evaluation and testing of pregnant women (10).

Recommendations for couples who are not pregnant and are not planning to become pregnant. Several factors could influence a couple's level of concern about sexual transmission of Zika virus. The risk for acquiring mosquito-borne Zika virus infection in areas with active transmission depends on the duration and extent of exposure to infected mosquitoes and the steps taken to prevent mosquito bites.^{††} According to currently available information, most Zika virus infections appear to be asymptomatic, and when illness does occur, it is usually mild, with symptoms lasting from several days to a week; severe disease requiring hospitalization is uncommon (11).

Men and women who want to reduce the risk for sexual transmission of Zika virus should use barrier methods against infection consistently and correctly during sex or abstain from sex when one sex partner has traveled to or lives in an area with active Zika virus transmission. Based on expert opinion and on limited but evolving information about the sexual transmission of Zika virus, the recommended duration of consistent use of a barrier method against infection or abstinence from sex depends on whether the sex partner has confirmed infection or clinical illness consistent with Zika virus disease and whether the sex partner is male or female (Box). The rationale for these time frames has been published previously (9).

Couples who do not desire pregnancy should use available strategies to prevent unintended pregnancy and might consider multiple options, including (in addition to condoms, the only method that protects against both pregnancy and sexual transmission of Zika virus) use of the most effective contraceptive methods that can be used correctly and consistently (9,12). In addition, couples should be advised that correct and consistent use of barrier methods against infection, such as condoms, reduces the risk for other sexually transmitted infections.

Zika Virus Testing and Sexual Transmission

At present, Zika virus testing for the assessment of risk for sexual transmission is of uncertain value, because current understanding of the duration and pattern of shedding of

BOX. Recommendations for prevention of sexual transmission of Zika virus for couples in which one or both partners have traveled to or reside in an area with active Zika virus transmission

Couples in which a woman is pregnant

- Couples in which a woman is pregnant should use barrier methods against infection consistently and correctly or abstain from sex for the duration of the pregnancy.

Couples who are not pregnant and are not planning to become pregnant*

- Couples in which a partner had confirmed Zika virus infection or clinical illness consistent with Zika virus disease should consider using barrier methods against infection consistently and correctly or abstain from sex as follows:
 - Men with Zika virus infection for at least 6 months after onset of illness;
 - Women with Zika virus infection for at least 8 weeks after onset of illness.
- Couples in areas without active Zika transmission in which one partner traveled to or resides in an area with active Zika virus transmission but did not develop symptoms of Zika virus disease should consider using barrier methods against infection or abstaining from sex for at least 8 weeks after that partner departed the Zika-affected area.
- Couples who reside in an area with active Zika virus transmission might consider using barrier methods against infection or abstaining from sex while active transmission persists.

* Couples who do not desire pregnancy should use the most effective contraceptive methods that can be used correctly and consistently in addition to barrier methods to protect against infections, such as condoms, which reduce the risk for both sexual transmission of Zika and other sexually transmitted infections. Couples planning conception might have multiple factors to consider, which are discussed in more detail in the following: 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;65:315–22.

Zika virus in the male and female genitourinary tract is limited. Therefore, testing of specimens to assess risk for sexual transmission is currently not recommended.

Zika virus testing is recommended for persons who have had possible sexual exposure to Zika virus and who develop signs or symptoms consistent with Zika virus disease.^{§§} All pregnant women should be tested if they have had possible exposure to Zika virus, including sexual exposure (9,10). CDC urges health care providers to report to local and state health departments all cases of Zika virus disease, including those suspected to have occurred by sexual transmission.

§§ <http://www.cdc.gov/zika/hc-providers/diagnostic.html>.

** Clinical illness consistent with Zika virus disease includes one or more of the following signs or symptoms: acute onset of fever, maculopapular rash, arthralgia, or conjunctivitis.

†† <http://www.cdc.gov/zika/prevention>.

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References

- Rasmussen SA, Jamieson DJ, Honein MA, Petersen LR. Zika virus and birth defects—reviewing the evidence for causality. *N Engl J Med* 2016;374:1981–7. <http://dx.doi.org/10.1056/NEJMSr1604338>
- Oster AM, Russell K, Stryker JE, et al. Update: interim guidance for prevention of sexual transmission of Zika virus—United States, 2016. *MMWR Morb Mortal Wkly Rep* 2016;65:323–5. <http://dx.doi.org/10.15585/mmwr.mm6512e3>
- World Health Organization. Prevention of sexual transmission of Zika virus: interim guidance update. June 7, 2016. Geneva, Switzerland: World Health Organization; 2016. http://apps.who.int/iris/bitstream/10665/204421/1/WHO_ZIKV_MOC_16.1_eng.pdf?ua=1
- Turmel JM, Abgueuen P, Hubert B, et al. Late sexual transmission of Zika virus related to persistence in the semen. *Lancet* 2016;387:2501. [http://dx.doi.org/10.1016/S0140-6736\(16\)30775-9](http://dx.doi.org/10.1016/S0140-6736(16)30775-9)
- Mansuy J, Pasquier C, Daudin M, et al. Zika virus in semen of a patient returning from a non-epidemic area. *Lancet Infect Dis* 2016;16:894–5. [http://dx.doi.org/10.1016/S1473-3099\(16\)30153-0](http://dx.doi.org/10.1016/S1473-3099(16)30153-0)
- Fréour T, Mirallié S, Hubert B, et al. Sexual transmission of Zika virus in an entirely asymptomatic couple returning from a Zika epidemic area, France, April 2016. *Euro Surveill* 2016;21(23).
- Davidson A, Slavinski S, Komoto K, Rakeman J, Weiss D. Suspected female-to-male sexual transmission of Zika virus—New York City, 2016. *MMWR Morb Mortal Wkly Rep* 2016;65:716–7. <http://dx.doi.org/10.15585/mmwr.mm6528e2>
- Prisant N, Bujan L, Benichou H, et al. Zika virus in the female genital tract. *Lancet Infect Dis* 2016. Epub July 11, 2016. [http://dx.doi.org/10.1016/S1473-3099\(16\)30193-1](http://dx.doi.org/10.1016/S1473-3099(16)30193-1)
- 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;65:315–22.
- Oduyebo T, Igbino I, Petersen EE, et al. Update: interim guidance for health care providers caring for pregnant women with possible Zika virus exposure—United States, July 2016. *MMWR Morb Mortal Wkly Rep* 2016. Epub July 25, 2016.
- Duffy MR, Chen TH, Hancock WT, et al. Zika virus outbreak on Yap Island, Federated States of Micronesia. *N Engl J Med* 2009;360:2536–43. <http://dx.doi.org/10.1056/NEJMoa0805715>
- CDC. Reproductive health: contraception. Atlanta GA: US Department of Health and Human Services, CDC; 2016. <http://www.cdc.gov/reproductivehealth/unintendedpregnancy/contraception.htm>

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