

# Interim Guidelines for Prevention of Sexual Transmission of Zika Virus — United States, 2016

Alexandra M. Oster, MD<sup>1</sup>; John T. Brooks, MD<sup>1</sup>; Jo Ellen Stryker, PhD<sup>1</sup>; Rachel E. Kachur<sup>2</sup>, MPH; Paul Mead, MD<sup>3</sup>; Nicki T. Pesik, MD<sup>4</sup>; Lyle R. Petersen, MD<sup>3</sup>

*On February 5, 2016 this report was posted as an MMWR Early Release on the MMWR website (<http://www.cdc.gov/mmwr>).*

Zika virus is a mosquito-borne flavivirus primarily transmitted by *Aedes aegypti* mosquitoes (1,2). Infection with Zika virus is asymptomatic in an estimated 80% of cases (2,3), and when Zika virus does cause illness, symptoms are generally mild and self-limited. Recent evidence suggests a possible association between maternal Zika virus infection and adverse fetal outcomes, such as congenital microcephaly (4,5), as well as a possible association with Guillain-Barré syndrome. Currently, no vaccine or medication exists to prevent or treat Zika virus infection. Persons residing in or traveling to areas of active Zika virus transmission should take steps to prevent Zika virus infection through prevention of mosquito bites (<http://www.cdc.gov/zika/prevention/>).

Sexual transmission of Zika virus is possible, and is of particular concern during pregnancy. Current information about possible sexual transmission of Zika is based on reports of three cases. The first was probable sexual transmission of Zika virus from a man to a woman (6), in which sexual contact occurred a few days before the man's symptom onset. The second is a case of sexual transmission currently under investigation (unpublished data, 2016, Dallas County Health and Human Services). The third is a single report of replication-competent Zika virus isolated from semen at least 2 weeks and possibly up to 10 weeks after illness onset; reverse transcriptase-polymerase chain reaction testing of blood plasma specimens collected at the same time as the semen specimens did not detect Zika virus (7). The man had no sexual contacts. Because no further testing was conducted, the duration of persistence of Zika virus in semen remains unknown.

In all three cases, the men developed symptomatic illness. Whether infected men who never develop symptoms can transmit Zika virus to their sex partners is unknown. Sexual transmission of Zika virus from infected women to their sex partners has not been reported. Sexual transmission of many infections, including those caused by other viruses, is reduced by consistent and correct use of latex condoms.

The following recommendations, which apply to men who reside in or have traveled to areas with active Zika virus transmission (<http://wwwnc.cdc.gov/travel/notices/>) and their sex partners, will be revised as more information becomes available.

## Recommendations for men and their pregnant partners

Men who reside in or have traveled to an area of active Zika virus transmission who have a pregnant partner should abstain from sexual activity or consistently and correctly use condoms during sex (i.e., vaginal intercourse, anal intercourse, or fellatio) for the duration of the pregnancy. Pregnant women should discuss their male partner's potential exposures to mosquitoes and history of Zika-like illness (<http://www.cdc.gov/zika/symptoms>) with their health care provider; providers can consult CDC's guidelines for evaluation and testing of pregnant women (8).

## Recommendations for men and their nonpregnant sex partners

Men who reside in or have traveled to an area of active Zika virus transmission who are concerned about sexual transmission of Zika virus might consider abstaining from sexual activity or using condoms consistently and correctly during sex. Couples considering this personal decision should take several factors into account. Most infections are 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. The risk for acquiring vector-borne Zika virus in areas of active transmission depends on the duration and extent of exposure to infected mosquitoes and the steps taken to prevent mosquito bites (<http://www.cdc.gov/zika/prevention/>). After infection, Zika virus might persist in semen when it is no longer detectable in blood.

Zika virus testing has been recommended to establish a diagnosis of infection in some groups, such as pregnant women (8). At present, Zika virus testing for the assessment of risk for sexual transmission is of uncertain value, because current understanding of the incidence and duration of shedding in the male genitourinary tract is limited to one case report in which Zika virus persisted longer than in blood (7). At this time, testing of men for the purpose of assessing risk for sexual transmission is not recommended. As we learn more about the incidence and duration of seminal shedding from infected men and the utility and availability of testing in this context, recommendations to prevent sexual transmission of Zika virus will be updated.

## Acknowledgments

Brian Foy, Colorado State University, Ft. Collins, Colorado; Joel Gallant, Southwest CARE Center, Santa Fe, New Mexico; King Holmes, University of Washington, Seattle, Washington; Tom Quinn, Johns Hopkins University, Baltimore, Maryland; Wendy Chung, Dallas County Health and Human Services, Dallas Texas.

<sup>1</sup>Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, CDC; <sup>2</sup>Division of STD Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, CDC; <sup>3</sup>Division of Vector-Borne Diseases, National Center for Emerging and Zoonotic Infectious Diseases, CDC; <sup>4</sup>Office of the Director, National Center for Emerging and Zoonotic Infectious Diseases, CDC.

Corresponding author: John T. Brooks, [zud4@cdc.gov](mailto:zud4@cdc.gov), 404-639-3894.

## References

- Hayes EB. Zika virus outside Africa. *Emerg Infect Dis* 2009;15:1347–50. <http://dx.doi.org/10.3201/eid1509.090442>.
- CDC. Zika virus. Atlanta, GA: US Department of Health and Human Services, CDC; 2016. <http://www.cdc.gov/zika/index.html>.
- 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>.
- European Centre for Disease Prevention and Control. Rapid risk assessment: Zika virus epidemic in the Americas: potential association with microcephaly and Guillain-Barré syndrome. Stockholm, Sweden: European Centre for Disease Prevention and Control; 2015. <http://ecdc.europa.eu/en/publications/Publications/zika-virus-americas-association-with-microcephaly-rapid-risk-assessment.pdf>.
- Oliveira Melo AS, Malinger G, Ximenes R, Szejnfeld PO, Alves Sampaio S, Bispo de Filippis AM. Zika virus intrauterine infection causes fetal brain abnormality and microcephaly: tip of the iceberg? *Ultrasound Obstet Gynecol* 2016;47:6–7. <http://dx.doi.org/10.1002/uog.15831>.
- Foy BD, Kobylinski KC, Foy JLC, et al. Probable non-vector-borne transmission of Zika virus, Colorado, USA. *Emerg Infect Dis* 2011;17:880–2. <http://dx.doi.org/10.3201/eid1705.101939>.
- Musso D, Roche C, Robin E, Nhan T, Teissier A, Cao-Lormeau VM. Potential sexual transmission of Zika virus. *Emerg Infect Dis* 2015;21:359–61. <http://dx.doi.org/10.3201/eid2102.141363>.
- Oduyebo T, Petersen EE, Rasmussen SA, et al. Update: interim guidelines for health care providers caring for pregnant women and women of reproductive age with possible Zika virus exposure—United States, 2016. *MMWR Morb Mortal Wkly Rep* 2016;65(5).