



Zika virus and congenital birth defects: Advice for couples living in Australia who are planning pregnancy

Women should take all reasonable measures to avoid Zika virus infection during pregnancy as this infection may cause severe damage to the unborn baby's brain development and growth.^{1,2}

Zika virus is primarily contracted through bites from the *Aedes aegypti* or *Aedes albopictus*, which has a well-described global distribution. In Australia, these mosquitoes are only present in central and north Queensland. Updated information on countries with ongoing Zika virus transmission is available at the Department of Health

website. <http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-zika-countries.htm>

There have been recent reports of sexual transmission of the Zika virus from an infected male to his sexual partner.^{3,4,5} While sexual transmission is only a minor contributor to the global disease burden, it has particular importance for the spread of the disease to women who subsequently become pregnant or who are already pregnant.

Zika virus has been detected in semen for as long as 62 days after infection. Recent reports include a case of sexual transmission from a man to his female partner more than one month after the couple left an area affected by the epidemic.⁶ There have been no reports of sexual transmission from an infected female to her partner.

Australian residents who do not live in an area with the *Aedes aegypti* or *Aedes albopictus* mosquito may therefore be exposed to a risk of Zika virus infection through:

- i) Travel to an area with ongoing Zika virus transmission, and/or
- ii) Sexual activity with a man who has recently travelled to an area with Zika virus.

Couples planning pregnancy should take steps to reduce the chance of infection at the time of conception and during the remainder of the pregnancy by:

- iii) Avoiding travel to affected areas while attempting conception
- iv) If avoiding travel is not possible, couples should take all precautions to **prevent mosquito bites and use condoms consistently and correctly** when having sex in that country. This includes condom use for vaginal, anal and oral sex.

Upon return to Australia:

Women

It is recommended that women wait at least **8 weeks** after leaving an affected area before attempting pregnancy, regardless of the presence of symptoms of Zika virus infection. If the woman's partner travelled with her, they should also follow the advice below.

Men without symptoms

Men should wait at least **8 weeks** after leaving an affected area before attempting pregnancy or donating sperm if they have not had any symptoms.

Men with symptoms of infection or confirmed Zika virus infection

Zika virus has been detected in semen up to 62 days after symptomatic infection (7). It is therefore recommended that men who have had symptoms of Zika virus infection, or a confirmed diagnosis of infection wait **at least 6 months** before attempting to conceive with their partner or donating sperm. During this waiting period, the couple should use condoms correctly and consistently.

RANZCOG recognises the limitations of the evidence regarding sexual transmission of Zika virus. These recommendations are based on data from case reports and expert opinion, including current advice from the World Health Organization and the Centre for Diseases Control and Prevention (8). Decision-making regarding pregnancy planning must be individualised and take into account the multiple factors, including the magnitude of risk exposure (country and its transmission status (sporadic/limited vs widespread/ongoing), length of travel, use of mosquito repellent and other precautions, symptoms of Zika virus infection), and personal fertility issues.

An asymptomatic couple that has taken full precautions against mosquito bites while travelling can be reassured that their risk of Zika-related pregnancy complications is extremely low overall, and reduced further if they delay pregnancy for 8 weeks after returning to Australia.

Role of testing

Routine semen testing to assess risk for sexual transmission is not recommended.³ In some circumstances, however, it may be useful to perform serological testing. If a couple are unable to wait for the full recommended period before attempting pregnancy, a negative Zika virus IgG result on a serum sample taken at least **4 weeks** after the last exposure would be reassuring that no prior infection has occurred. It is important to note that **yellow fever and Japanese encephalitis vaccination** or infection with other flaviviruses such as **dengue** will interfere with interpretation of the serology results due to cross reactivity. Specialist advice should be sought prior to performing serological testing in asymptomatic couples. Those couples undergoing assisted reproductive techniques should discuss the local protocols with their fertility specialist.

Useful links

The Australian Government Department of Health: Interim recommendations for reducing the risk of sexual transmission of Zika virus

<http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-zika-sex-transmission.htm>

The Australian Government Department of Health: Information for clinicians and public health practitioners

<http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-zika-health-practitioners.htm>

United States Centers for Disease Control and Prevention. Zika and Sexual Transmission.

<http://www.cdc.gov/zika/transmission/sexual-transmission.html>

References

1. Kleber de Oliveira W, Cortez-Escalante J, De Oliveira WT, et al. Increase in Reported Prevalence of Microcephaly in Infants Born to Women Living in Areas with Confirmed Zika Virus Transmission During the First Trimester of Pregnancy — Brazil, 2015. *MMWR Morb Mortal Wkly Rep* 2016;65:242–247. DOI: <http://dx.doi.org/10.15585/mmwr.mm6509e2>
2. Brasil P, Pereira JP, Gabaglia CR, et al. Zika virus infection in pregnancy women in Rio de Janeiro – preliminary report. *New Engl J Med* Mar 2016. DOI: 10.1056/NEJMoa1602412
3. Hills SL, Russell K, Hennessey M, et al. Transmission of Zika Virus Through Sexual Contact with Travelers to Areas of Ongoing Transmission — Continental United States, 2016. *MMWR Morb Mortal Wkly Rep* 2016;65:215–216. DOI:<http://dx.doi.org/10.15585/mmwr.mm6508e2>
4. D'Ortenzio E, Matheron S, Yazdanpanah Y, et al. Evidence of Sexual Transmission of Zika Virus. *N Engl J Med* 2016; 374:2195-2198
5. Zika virus disease in the United States 2015-2106. CDC [Online] <https://www.cdc.gov/zika/geo/united-states.html>
6. Turmel JM, Abgueguen P, Hubert B, et al. Late sexual transmission of Zika virus related to persistence in the semen. *Lancet*. 2016 Jun 7. doi: 10.1016/S0140-6736(16)30775-9.
7. Atkinson B, Hearn P, Afrough B, et al. Detection of Zika virus in semen[letter]. *Emerg Infect Dis* 2016;22. Epub, February 11, 2016

8. Oster AM, Brooks JT, Stryker JE, et al. Interim Guidelines for Prevention of Sexual Transmission of Zika Virus — United States, 2016. *MMWR Morb Mortal Wkly Rep* 2016;65:120–121. DOI: <http://dx.doi.org/10.15585/mmwr.mm6505e1>.
