General

• Zika is spread by the bite of an infected *Aedes* (e.g. *aegypti*) species mosquito.¹

• Zika transmission¹:
  ▫ Mosquito bites
  ▫ Through sex
  ▫ Vertically
  ▫ Through blood transfusion (no confirmed cases)
General

- Symptoms include\(^1\):
  - Fever
  - Rash
  - Headache
  - Joint pain
  - Red eyes
  - Muscle pain

- There are increased reports of Guillain-Barre in Zika affected areas.\(^1\)
Birth Defects

• Congenital Zika Syndrome$^1$:  
  ▫ Severe microcephaly (also postnatal cases)  
  ▫ Decreased brain tissue  
  ▫ Retinal damage  
  ▫ Limited ROM in joints  
  ▫ Excess muscle tone

• Also associated with miscarriage, stillbirth$^1$
Patient screening

• Have you traveled during pregnancy?

• Have you lived in any area where mosquitoes are spreading Zika during your pregnancy?

• Has your partner lived in or traveled to any areas where mosquitoes are spreading Zika during your pregnancy?

• Have you had any symptoms of Zika during your pregnancy?
## Travel Guidelines

<table>
<thead>
<tr>
<th>Affected Partner</th>
<th>Timeframe to Prevent Sexual Transmission</th>
</tr>
</thead>
</table>
| If a couple has a male partner and **only he travels** to an area with risk of Zika | The couple should consider using condoms or not having sex for at least **6 months**  
- After the male partner returns, even if he doesn’t have symptoms, or  
- From the start of the male partner’s symptoms or the date he was diagnosed with Zika. |
| If a couple has a female partner and **only she travels** to an area with risk of Zika | The couple should consider using condoms or not having sex for at least **8 weeks**  
- After the female partner returns from to an area with risk of Zika, even if she doesn’t have symptoms, or  
- From the start of the female partner’s symptoms or the date she was diagnosed with Zika. |
| If the couple contains both a male and female partner and **both travel** to an area with risk of Zika | The couple should consider using condoms or not having sex for at least **6 months**  
- After returning from an area with risk of Zika, even if they don’t have symptoms, or  
- From the start of either partner’s symptoms or from the date either were diagnosed with Zika. |

Risk areas

Risk areas

Risk areas-Florida

Risk areas - Texas

<table>
<thead>
<tr>
<th>If your patient...</th>
<th>Testing recommendation</th>
</tr>
</thead>
</table>
| Was exposed to Zika **AND** has *symptoms* of Zika virus infection or a history or symptoms at any time during her pregnancy | **She should be** tested for Zika as soon as possible.  
- Concurrent RNA nucleic acid test (NAT) testing and Zika virus IgM testing is recommended as soon as possible or through 12 weeks after symptom onset. |
| Lives in or frequently travels to an area with risk of Zika **but does not have symptoms** of Zika virus infection. | **She should be** offer testing three times during pregnancy using RNA NAT testing.                                                                 |
| Traveled to or had sex without a condom with a partner who lived in or traveled to an area with risk of Zika **but does not have symptoms** of Zika virus infection | **Testing is not routinely recommended.** Testing should be considered using a shared decision-making model that includes pretest counseling, individualized risk assessment, clinical judgment, patient preferences, and the jurisdiction’s recommendations. |
| Was exposed to Zika **AND** had birth defects potentially associated with Zika detected on a prenatal ultrasound | **Concurrent RNA NAT testing and Zika virus IgM testing is recommended.** If amniocentesis is being done for clinical care, healthcare providers should also test the amniotic fluid for Zika genetic material. Testing of placental and fetal tissues may also be considered if results of maternal Zika virus testing are not definitive. |
Limitations\textsuperscript{1}

- RNA NAT may not demonstrate Zika virus RNA if period of viremia has passed
- Cross-reactivity exists for IgM testing without related flaviviruses (e.g., dengue and yellow fever)
- Zika virus IgM antibodies may remain present for months after infection, making IgM tests difficult to interpret.
**Management**

- No firm data on association between positive testing and degree of transmission to fetus
- False negatives and false positive review
- Management considerations including termination and abortion should be offered
- Serial growth ultrasounds q 3-4 weeks
- Amniocentesis should be offered
Prevention

• Use EPA-registered insect repellents
  ▫ (DEET, Picaridin, IR3535, Oil of lemon eucalyptus, 2-undecanone)

• Wear long-sleeved shirts and pants
  ▫ May treat clothing items with Permethrin

• General mosquito prevention (nets, no standing water, etc)
Insect Repellant

• **DEET-safe for use topically in pregnancy**
  ▫ Safe use includes application of products at a concentration of 30% or less
  ▫ **AVOID** products combined with sunscreen

• **Permethrin-recommended use by CDC**
  ▫ Applies to Permethrin treated clothing, not direct skin pharmaceutical treatment
  ▫ Concern for effects on neurodevelopment is an ongoing area of research
Recommendations

• Screen all women for Zika virus exposure before and during current pregnancies.¹
• Women with recent Zika exposure or Zika symptoms should be tested.¹
• Asymptomatic pregnant women with ONGOING Zika virus exposure should be offered testing three times during pregnancy.¹
• Placental tissue testing NOT recommended without evidence of Zika infection¹
Recommendations

- Zika virus IgM testing as part of preconception counseling to establish baseline IgM results for nonpregnant women with ongoing possible Zika virus exposure is not warranted.¹
- Possible Zika virus exposure MUST be communicated to the Pediatric provider.²
- Breastfeeding-no evidence of transmission through breastfeeding has been reported.²
- Prevention strategies with DEET, Permethrin treated clothing, and mosquito control techniques recommended.³
References

