ZIKA—

An obstetric perspective

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Objectives

• Determine when to test pregnant women for Zika virus
• Understand how to complete U.S. Zika Pregnancy Registry Maternal Health History forms and submit to the local health department correctly
• Understand the management of pregnant women with lab evidence of Zika
• Coordinate care for testing and follow-up management of infant with the infant’s pediatrician and local health department
• Prevention...
Zika Virus Disease

• A mild viral disease spread primarily through the bite of an infected mosquito

• Many people infected with Zika virus won’t have symptoms or will only have mild symptoms

• The most common symptoms of Zika are:
  • Fever
  • Rash
  • Joint pain
  • Conjunctivitis (red eyes)
  • Muscle pain
  • Headache

Zika Virus Disease

The Good News:

- Symptoms only last for several days to a week.
- People usually don’t get sick enough to go to the hospital, and they very rarely die of Zika.
- Once a person has been infected with Zika, they are likely to be protected from future infections.

The Bad..and Scary..News:

- Late in 2015, Zika disease in pregnant women was linked to fetal malformations, miscarriage and still birth.
- There have also been increased reports of Guillain-Barre syndrome in areas affected by Zika.
The Risks....

• Zika virus infection in pregnant women has been linked with a fetal birth defect called microcephaly

• Other defects linked to Zika infection in pregnant women include:
  • Miscarriage
  • Stillbirth
  • Eye defects
  • Hearing defects
  • Poor fetal growth

Zika Is Linked To Microcephaly, Health Agencies Confirm
March 31, 2016
NPR Morning Edition

• What does this mean for Virginia?
  • Overall risk of wide-spread Zika transmission via infected mosquitos is low
  • Probably reasonable for pregnant women to take measures to decrease risk of bites, but overall risk of contracting Zika currently in Virginia is very, very low.
  • No local transmission yet in Virginia (all cases associated with travel).
When and how should pregnant women with possible sexual transmission or travel exposure to Zika virus be tested?
CDC Recommendations: Who Should be Tested

- Pregnant women with possible exposure to Zika virus and signs or symptoms should be tested for Zika virus infection.
- Pregnant women with possible exposure to Zika virus who do not report symptoms also should be tested.
- Pregnant women with ongoing risk of Zika virus exposure and who do not report symptoms should be tested in the 1st and 2nd trimesters of pregnancy.

[Link to CDC guidelines](http://www.cdc.gov/mmwr/volumes/65/wr/mm6529e1.htm?s_cid=mm6529e1_e)
Search for a place by name or zoom and click on the map to see CDC’s travel recommendations for Zika in that country. Follow the link in the pop-up message to read CDC’s Zika travel health notice for that country.
World Map of Areas with Risk of Zika

Search by location to find out if it's safe to travel.

World Map

Search for a place by name or zoom and click on the map to see CDC's travel recommendations for Zika in that country. Follow the link in the pop-up message to read CDC's Zika travel health notice for that country.

Florida, United States

Zika in Florida

Florida has reported cases of Zika spread by local mosquitoes. Visit CDC's Advice for people living in or traveling to South Florida page to learn more.
Advice for people living in or traveling to South Florida

CDC has issued guidance for people living in or traveling to Miami-Dade County, Florida. CDC designates areas for Zika virus transmission prevention in the continental United States and Hawaii as red or yellow. Miami-Dade County is designated as a Zika cautionary (yellow) area. See CDC’s travel, testing, and pregnancy planning guidance for areas with reported mosquito-borne spread of Zika virus.

Travel

- Pregnant women should consider postponing travel to Miami-Dade County.

Prevention

- Women and men who live in or travel to Miami-Dade County should remain aware of active Zika virus transmission and strictly follow steps to prevent mosquito bites.
- Pregnant women and their partners who live in or travel to Miami-Dade County should consistently and correctly use condoms every time they have sex (including vaginal, anal, and oral sex) to prevent Zika virus infection, or they should not have sex during the pregnancy. For more information, see CDC’s travel, testing, and pregnancy planning guidance for areas with reported mosquito-borne spread of Zika virus.

Testing and Diagnosis

- Pregnant women who lived in, traveled to, or had sex without a condom with someone who lived in or traveled to Miami-Dade County after August 1, 2016, should be tested for Zika virus.

Pregnancy Planning

- Pregnant women should not travel. Yellow shows areas where pregnant women should consider postponing travel.

See Also

- Guidance for Areas with Local Zika Virus Transmission in the US
- Advice for people living in or traveling to Brownsville, Texas
Confirmation of Zika Infection

• Via blood test
  • Not all pregnant women who contract Zika have fetal malformations or abnormalities
  • Ultrasound can help detect some malformations prior to birth

• Who do we test?
  • Pregnant women living in or who have travelled to area with ongoing Zika transmission regardless of symptoms
    • Screening for Zika as a routine part of care in pregnancy in endemic areas
  • Pregnant women who have had sexual intercourse without barrier contraception with someone who has recent travel to area of ongoing Zika transmission
  • Newborns of Zika positive mom’s
    • Breastfeeding okay!!
Testing pregnant women

• Symptomatic:
  - rRT-PCR of serum and urine up to 2 weeks after symptom onset
  - Zika IgM → if positive, rRT-PCR 2-12 weeks after symptoms onset

• Asymptomatic: living in area of ongoing Zika transmission
  - Zika IgM included as part of routine serum screening in both the 1st and 2nd trimesters
    - Reflex rRT-PCR for any woman who is Zika IgM positive

• Asymptomatic: travel to area with ongoing Zika transmission OR sexual intercourse without barrier contraception with someone who has recent travel to area of ongoing Zika transmission:
  - <2 weeks since last date of possible exposure?
    - rRT-PCR, followed by Zika IgM testing 2 weeks later
  - 2-12 weeks after last date of possible exposure?
    - Zika IgM → if positive, rRT-PCR
<table>
<thead>
<tr>
<th>Symptom Status</th>
<th>Timing</th>
<th>Ongoing Exposure</th>
<th>First Test</th>
<th>Follow-On Test</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptomatic</td>
<td>&lt; 2 weeks</td>
<td>No or Yes (Applies to patients with or without ongoing exposure)</td>
<td>Zika RNA NAT (urine, serum, whole blood)</td>
<td>If ZIKV RNA NAT negative, IgM for Zika and dengue</td>
<td>IgM done (preferably same sample as ZIKV RNA NAT or ideally sample drawn at same time as ZIKV RNA NAT)</td>
</tr>
<tr>
<td>Symptomatic</td>
<td>2–12 weeks</td>
<td>No or Yes (Applies to patients with or without ongoing exposure)</td>
<td>IgM for Zika and dengue</td>
<td>If Zika IgM positive or equivocal, Zika RNA NAT (preferably same sample)</td>
<td>If ZIKV RNA NAT negative, do PRNT on same ZIKV RNA NAT sample</td>
</tr>
<tr>
<td>Asymptomatic f</td>
<td>&lt; 2 weeks</td>
<td>No</td>
<td>Zika RNA NAT (urine, serum, whole blood)</td>
<td>If ZIKV RNA NAT negative, IgM for Zika ONLY</td>
<td>IgM done (different sample drawn at a later date, 2 and 12 weeks after exposure)</td>
</tr>
<tr>
<td>Asymptomatic f</td>
<td>2–12 weeks</td>
<td>No</td>
<td>IgM for Zika</td>
<td>If Zika IgM positive or equivocal, Zika RNA NAT (preferably same sample)</td>
<td>If ZIKV RNA NAT PCR negative, do PRNT on same ZIKV RNA NAT sample</td>
</tr>
<tr>
<td>Symptomatic OR asymptomatic f</td>
<td>&gt; 12 weeks</td>
<td>No</td>
<td>Consider IgM</td>
<td>ZIKV RNA NAT (serum and urine) if fetal abnormalities present</td>
<td>Consider serial ultrasound</td>
</tr>
<tr>
<td>Asymptomatic f</td>
<td>Ongoing exposure</td>
<td>Yes</td>
<td>IgM for Zika in 1st trimester; repeat in 2nd trimester</td>
<td>If Zika IgM positive or equivocal, Zika RNA NAT (preferably same sample)</td>
<td>If ZIKV RNA NAT negative, do PRNT on same ZIKV RNA NAT sample</td>
</tr>
</tbody>
</table>
How to order the test?

• Contact your local Health Department
  • Tell them you have a patient who you believe needs to be screened for Zika virus
  • Fax Test approval form to them (please include call back phone number!!)
• Form will be reviewed (quick turnaround times during business hours) and you will get a call approving your patient for screening
• Complete the DCLS “Green Form” from OUR LAB!
• Blood drawn at our lab and sent to state lab for processing
  • Turnaround ~10-15 days
Test Approval Form

Virginia Department of Health Zika Virus Patient Test Approval Form

Instructions: Complete one form for each patient approved for Zika testing. The completed form should be sent with the specimen to DCLS for testing. A copy of the form should be provided to the health department. If emailing the completed form, please encrypt the document with a password and send the password in a separate email.

**Patient Information**

- **Last Name:**
- **First Name:**
- **Middle Initial:**
- **Telephone Numbers:**
- **Cell:**
- **Home:**
- **Work:**

- **Address:**
- **City or County of Residence:**
- **Date of Birth:**
- **State:**
- **Zip Code:**
- **Sex:**
- **Male**
- **Female**
- **Unknown**

- **Pregnant Woman:**
- **Yes**
- **No**

- **If yes, then specify:**
  - Symptomatic sexual partner with (1) Travel to Zika affected area, or (2) Lab-confirmed Zika infection
  - Has had total ultrasound detecting microcephaly or intracranial calcifications in current pregnancy
  - Experienced miscarriage or stillbirth, specific date

- **Check all that apply for suspected exposure to Zika virus:**
  - Residence in or travel to an area with ongoing Zika virus transmission
  - Sexual contact
  - Congenital infection
  - Local vector-borne transmission
  - Other exposures or special situations (circle those that apply or describe): (1) Lab exposure, (2) Blood/blood product recipient, or (3) Developed Guillain-Barre syndrome not associated with another diagnosed illness, or (4) Other, situation described

**Clinical Findings**

- **Yes**
- **No**
- **Date**

- **Invasive Patient Symptomatic?**
- **Yes**
- **No**
- **Date**

- **Onset Date:**
- **Duration of Symptoms (days):**
- **Fever (either subjective or measured):**
- **Malaria (microscopy):**
- **Arthritis (joint pain):**
- **Rash:**
- **Other:**

**Travel History**

**Dates**

**Location**

**Other Specific:**

**Laboratory Findings**

**Specimen Collection Date**

**Specimen Source**

**Test Type**

**Test Result**

**Lab Name:**

**Note:**
• **NOTE:**
  Testing information must include the following:

- **Date of onset of symptoms**
- **Date of specimen collection**
- Any *pertinent travel history* (Travel in the last 12 weeks)
- The **patient’s name** (*REQUIRED* for submitting specimens)
Complete U.S. Zika Pregnancy Registry Maternal Health History forms and submit to LHD correctly and at the appropriate time

- Including supplemental Imaging for 2nd and 3rd trimester ultrasounds
Report Cases

• Zika virus infection and disease are nationally notifiable conditions

• The following cases should be reported to your state health department
  • Symptomatic and asymptomatic cases with laboratory evidence of Zika virus infection
  • Babies born with or without abnormalities consistent with congenital Zika syndrome and laboratory evidence of Zika virus infection
Report Information to US Zika Pregnancy Registry

- **Purpose of registry**
  - To monitor pregnancy and infant outcomes following Zika virus infection during pregnancy and to inform clinical guidance and public health response

- **More information**
  - To contact CDC Registry staff, call the CDC Emergency Operations Center watch desk at 770-488-7100 and ask for the Zika Pregnancy Hotline or email ZIKApregnancy@cdc.gov
  - For non-urgent requests, call 800-CDC-INFO (800-232-4636)

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### Roles of Health Department and Healthcare Providers

Health departments and healthcare providers play a critical role in ensuring the success of the US Zika Pregnancy Registry. Specific roles for health departments and healthcare providers are summarized in the table below.

<table>
<thead>
<tr>
<th>Group</th>
<th>Identify pregnant women and infants who may be eligible for the USZPR</th>
<th>Report to the USZPR</th>
<th>Collect information about pregnancy and infant outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Departments</td>
<td>Yes</td>
<td>Yes, report to CDC</td>
<td>Yes, collaborate with CDC</td>
</tr>
<tr>
<td>Healthcare Providers*</td>
<td>Yes</td>
<td>Yes, report to state, tribal, territorial or local health department</td>
<td>Yes, collaborate with state, tribal, territorial or local health department</td>
</tr>
</tbody>
</table>
## US Zika Pregnancy Registry

**Summary**

To understand more about Zika virus infection, CDC established the US Zika Pregnancy Registry and is collaborating with state, tribal, local, and territorial health departments to collect information about pregnancy and infant outcomes following laboratory evidence of Zika virus infection during pregnancy. The data collected through this registry will be used to update recommendations for clinical care, to plan for services for pregnant women and families affected by Zika virus, and to improve prevention of Zika virus infection during pregnancy.

If you are a healthcare provider or health department and you have questions about the registry, please email or call 770-488-7100 and ask for the Zika Pregnancy Hotline.

## Health Departments: How to Participate

State, tribal, local, and territorial health departments can participate in the US Zika Pregnancy Registry. They can:

- Identify pregnant women and infants eligible for Zika virus testing in accordance with state or CDC guidelines.
- Coordinate testing at a state public health laboratory or CDC for those eligible.
- Report information about pregnant women in the United States with laboratory evidence of Zika virus infection (positive or equivocal test results, regardless of whether they have symptoms) and information about periconceptionally, prenatally or perinatally exposed infants born to these women, including infants with congenital Zika virus infection.
- Collect enhanced surveillance data about pregnant women and their infants who are eligible for the Registry.
- Work with CDC to determine state-specific methods for collecting and sharing data.
Healthcare Providers: How to Participate

CDC and state, tribal, local, and territorial health departments request that healthcare providers participate in the US Zika Pregnancy Registry.

*Obstetric healthcare providers can:*

- Report information about pregnant women with laboratory evidence of Zika virus to their state, tribal, local, or territorial health department.
- Collect pertinent clinical information about pregnant women and their infants on the Pregnancy and Zika Virus Disease Surveillance forms.
- Provide the information to state, tribal, local or territorial health departments or directly to CDC registry staff if asked to do so by local health officials.
- Notify state, tribal, local, or territorial health department staff or CDC registry staff of adverse events (e.g., spontaneous abortion, termination of pregnancy).

*Pediatric healthcare providers can:*

- Identify and report suspected congenital Zika virus exposure to their state, tribal, local, or territorial health department for possible testing.
- Collect pertinent clinical information about infants born to women with laboratory evidence of Zika virus infection or infants with congenital Zika virus infection.
- Provide the information to state, tribal, local or territorial health departments or directly to CDC registry staff if asked to do so by local health officials.
- Notify state, tribal, local, or territorial health department staff or CDC registry staff of adverse events (e.g., perinatal or infant deaths).

Medically manage pregnant women with lab evidence of Zika

- Consider serial ultrasounds every 3-4 weeks to assess fetal anatomy and growth
- Decisions regarding amniocentesis should be individualized for each clinical circumstance
Key Points

- In 2016, total of 1297 pregnancies with possible Zika infection reported to U.S. Zika Pregnancy Registry

- ~10% with lab confirmed Zika resulted in fetus/infant with Zika virus-associated birth defect

- Highest proportion of birth defects associated with 1st trimester infection

- Only 25% of infants from pregnancies with possible Zika infection reported post-natal imaging

- Identification and f/u of infants born to mother with lab confirmed Zika infection and infants with congenital Zika virus infection can ensure appropriate intervention services

- Additional information available at:
  - http://www.cdc.vitalsigns/
## Clinical management of a pregnant woman with suspected Zika virus infection

<table>
<thead>
<tr>
<th>Interpretation of Laboratory Results*</th>
<th>Prenatal Management</th>
<th>Postnatal Management</th>
</tr>
</thead>
</table>
| Recent Zika virus infection          | • Consider serial ultrasounds every 3–4 weeks to assess fetal anatomy and growth
• Decisions regarding amniocentesis should be individualized for each clinical circumstance | LIVE BIRTHS:
• Infant serum and infant urine should be tested for Zika virus RNA NAT. Infant serum should be tested for Zika IgM. If CSF is obtained for other reasons, it can also be tested.
• Zika virus Zika RNA NAT and IHC staining of umbilical cord and placenta is recommended. |
| Recent flavivirus infection: specific virus cannot be identified | • Consider serial ultrasounds every 3–4 weeks to assess fetal anatomy and growth
• Amniocentesis might be considered; decision should be individualized for each clinical circumstance | FETAL LOSSES:
• Zika virus Zika RNA NAT and IHC staining of fetal tissues is recommended. |
| Presumptive recent Zika virus infection*** | • Clinical management in accordance with existing guidelines (http://apps.who.int/iris/bitstream/10665/44188/1/9789241547871_eng.pdf). | LIVE BIRTHS:
• Infant serum and Infant urine should be tested for Zika virus Zika RNA NAT. Infant serum should be tested for Zika IgM. If CSF is obtained for other reasons, it can also be tested.
• Zika virus Zika RNA NAT and IHC staining of umbilical cord and placenta should be considered. |
| Presumptive recent flavivirus infection*** | • Prenatal ultrasound to evaluate for fetal abnormalities consistent with congenital Zika virus syndrome.
• Fetal abnormalities present: repeat Zika virus Zika RNA NAT and IgM test; base clinical management on corresponding laboratory results.
• Fetal abnormalities absent: base obstetric care on the ongoing risk of Zika virus exposure to the pregnant woman. | FETAL LOSSES:
• Zika virus Zika RNA NAT and IHC staining of fetal tissues should be considered. |
| Recent dengue virus infection | | |
| No evidence of Zika virus or dengue virus infection | | |

*For interpretation of laboratory results, refer to CDC guidelines. **For prenatal management, refer to existing guidelines. ***For presumptive recent flavivirus infection, specific virus cannot be identified, consult with local health authorities for guidance.
Prenatal Management: Confirmed or Presumptive Recent Zika Virus or Flavivirus Infection

• Consider serial ultrasounds every 3-4 weeks to assess fetal anatomy and growth
• Amniocentesis
  • Individualized for pregnant women with confirmed recent Zika virus or flavivirus infection
  • Can be considered for pregnant women with presumptive recent Zika virus or flavivirus infection

http://www.cdc.gov/mmwr/volumes/65/wr/mm6529e1.htm?s_cid=mm6529e1_e
IMPACT OF ZIKA--MICROCEPHALY
IMPACT OF ZIKA--MICROCEPHALY
Coordinate care for testing and follow-up management of infant with the infant’s pediatrician and local health department:

- **Live births:**
  - Infant serum and urine should be tested for Zika virus by rRT-PCR, and for Zika IgM and dengue virus IgM antibodies
- **Fetal losses:**
  - Zika virus rRT-PCR and IHC staining of fetal tissues are recommended
- **Complete Neonate Assessment form upon delivery of infant**
The following are three key points for your awareness:

- VDH recommends that labor and delivery care teams develop protocols to identify mothers potentially infected with Zika virus during pregnancy, and ensure that relevant clinical information is passed on to all team members, including your pediatric providers.
- For infants born to mothers with Zika positive or inconclusive lab results, we request that the labor and delivery nursing team and clinicians work together to ensure that Zika Virus rRT-PCR and IgM serology testing is performed on serum specimens collected within two days of birth from the umbilical cord or directly from the infant.
- Infants diagnosed with a birth defect, such as those associated with Zika virus exposure, are eligible to receive care coordination and child development services through the VDH's Children and Youth with Special Health Care Needs (CYSHCN) programs.
### U.S. Zika Pregnancy Registry and Birth Defects Surveillance — Integrated

**Neonate Assessment Form**

These data are considered confidential and will be stored in a secure database at the Centers for Disease Control and Prevention and the Virginia Department of Health.

Healthcare Provider: Please return completed form to the local health department by secure fax 703-653-1347 or encrypted email (password protected) hcdc@fairfaxcounty.gov

<table>
<thead>
<tr>
<th>NAD.1. Infant’s State/Territory ID</th>
<th>NAD.2. Mother’s State/Territory ID</th>
<th>NAD.3. DOB:</th>
<th>NAD.4. Sex:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0 Live birth</td>
<td>□ Male □ Female □ Ambiguous/undetermined</td>
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<td></td>
<td></td>
<td>0 Stillbirth ≥ 20 weeks</td>
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<table>
<thead>
<tr>
<th>NAD.5. Gestational age at delivery:</th>
</tr>
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<tbody>
<tr>
<td>weeks: ____ days: ____</td>
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<thead>
<tr>
<th>NAD.6. Based on: (check all that apply)</th>
</tr>
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<tbody>
<tr>
<td>□ LMP Date: ____ 1st trimester ultrasound</td>
</tr>
<tr>
<td>□ 2nd trimester ultrasound _______ 3rd trimester ultrasound</td>
</tr>
</tbody>
</table>

| NAD.7. Maternal age at delivery: ____ years |

<table>
<thead>
<tr>
<th>NAD.8. State/Territory reporting:</th>
<th>NAD.9. County reporting:</th>
</tr>
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<tbody>
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<table>
<thead>
<tr>
<th>NAD.10. Delivery type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Vaginal □ Caesarean section</td>
</tr>
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</table>

<table>
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<tr>
<th>NAD.11. Delivery complication:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ No □ Yes</td>
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<tr>
<th>NAD.12. If yes, please describe:</th>
</tr>
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<tr>
<th>NAD.13. Arterial cord blood pH (if performed):</th>
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<tr>
<th>NAD.14. Venous cord blood pH (if performed):</th>
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<tr>
<th>NAD.15. Placental exam (based on path report):</th>
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<tbody>
<tr>
<td>□ No □ Yes</td>
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<thead>
<tr>
<th>NAD.16. If yes, □ Normal □ Abruptio □ Inflammation □ Other abnormality (please describe)</th>
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<table>
<thead>
<tr>
<th>NAD.17. Apgar score:</th>
</tr>
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<tbody>
<tr>
<td>1 min _____ / 5 min _____</td>
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<table>
<thead>
<tr>
<th>NAD.18. Infant temp (if abnormal): _____ °F or _____ °C</th>
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</table>

### Physical Examination (record earliest measurements taken)

<table>
<thead>
<tr>
<th>NAD.19. Birth head circumference:</th>
</tr>
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<tbody>
<tr>
<td>cm _____ in _____</td>
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<table>
<thead>
<tr>
<th>NAD.20. Molding present</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
</tr>
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<table>
<thead>
<tr>
<th>NAD.21. Physician report: □ Normal □ Abnormal</th>
</tr>
</thead>
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<table>
<thead>
<tr>
<th>NAD.22. HC percentile:</th>
</tr>
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<tbody>
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<table>
<thead>
<tr>
<th>NAD.23. Birth weight:</th>
</tr>
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<tbody>
<tr>
<td>grams _____ lbs/oz _____</td>
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<table>
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<tr>
<th>NAD.24. Birth weight percentile:</th>
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<thead>
<tr>
<th>NAD.25. Birth length:</th>
</tr>
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<tbody>
<tr>
<td>cm _____ in _____</td>
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<thead>
<tr>
<th>NAD.27. Repeat head circumference:</th>
</tr>
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<tbody>
<tr>
<td>cm _____ in _____</td>
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<table>
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<tr>
<th>NAD.28. Date performed: _____ or Age _____ day(s)</th>
</tr>
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<table>
<thead>
<tr>
<th>NAD.26. Birth length percentile:</th>
</tr>
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<tr>
<td>_____</td>
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<table>
<thead>
<tr>
<th>NAD.31. Admitted to Neonatal Intensive Care Unit:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ No □ Yes if yes, reason:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NAD.32. Neonatal death:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ No □ Yes</td>
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<table>
<thead>
<tr>
<th>NAD.33. Rettersonne current birth date: __________</th>
</tr>
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<tr>
<td></td>
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</tbody>
</table>
Newborns....

• Testing should be done when mother is Zika positive– communication with pediatrics is key!

• ..... Also, breastfeeding okay. CDC encouraging Zika positive moms to breastfeed at this time.
Prevention
Recommendations for Pregnant Women

• Don’t travel to areas with ongoing Zika transmission.

• If travelling, take measures to avoid bites.

• If the partner of a pregnant woman has travelled to an area with ongoing Zika transmission, the couple should use condoms for the duration of the pregnancy.

• Check CDC website for updates!
Search for a place by name or zoom and click on the map to see CDC’s travel recommendations for Zika in that country. Follow the link in the pop-up message to read CDC’s Zika travel health notice for that country.

Interactive map of areas with Zika allowing users to pan, zoom, and click on the map to display specific Zika classification.
• A woman is considering pregnancy but is not yet pregnant
  • Asymptomatic women with possible exposure who do not reside in areas with ongoing transmission: Wait 8 weeks after possible exposure to try to conceive (condoms in interim).

• Known positive Zika infection
  • Women wait 8 weeks after symptoms to become pregnant
  • Men wait 6 months after symptoms (condom use in the interim)

• You aren’t pregnant, aren’t thinking of becoming pregnant but travelled to an area where Zika transmission is ongoing.
  • Even if you do not feel sick, you should take steps to prevent mosquito bites for 3 weeks so you do not spread Zika to uninfected mosquitoes.
Prevention of Mosquito Bites—

*All residents in areas with Zika should take these steps*

Cover exposed skin by wearing long-sleeved shirts and long pants.

Use insect repellents that are registered with the EPA and contain DEET, picaridin, IR3535, oil of lemon eucalyptus or permethane-diol, or 2-undecanone (methyl nonyl ketone). Always use as directed.

Pregnant and breastfeeding women can use all EPA-registered insect repellents, including DEET, according to the product label.

Most repellents, including DEET, can be used on children older than 2 months of age (OLE and PMD should not be used on children younger than 3 years). Adults should spray insect repellent onto their hands and then apply to a child’s face.

Use [permethrin-treated clothing and gear](#) (boots, pants, socks, tents).* You can buy pre-treated items or treat them yourself.

Stay and sleep in screened-in or air-conditioned rooms.

Sleep under a mosquito bed net if air conditioned or screened rooms are not available or if sleeping outdoors.

Mosquito netting can be used to cover babies younger than 2 months old in carriers, strollers, or cribs to protect them from mosquito bites.
Interventions

• Treatment: none at this time
• Vaccine: coming...?
• Prevention:
  • Prevent Mosquito Bites
    • Use Insect Repellent
    • Protect Your Child
    • Wear long-sleeve shirts and pants
    • Take steps to control mosquitoes outside your home
• Protected Sex
• Contraception....

Pregnancies by Intention Status
Nearly half of U.S. pregnancies are unintended.

Modern Contraception Works
The two-thirds of U.S. women at risk of unintended pregnancy who practice contraception consistently and correctly account for only 5% of unintended pregnancies.

www.guttmacher.org
# Your Body. Your Birth Control.

Use this chart to review all available methods and understand which one best meets your priorities & preferences.

<table>
<thead>
<tr>
<th>Method Options</th>
<th>IUD (Non-hormonal)</th>
<th>IUD (Hormonal)</th>
<th>Implant</th>
<th>Shot</th>
<th>Vaginal Ring</th>
<th>Patch</th>
<th>Pill</th>
<th>Condom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Use Effectiveness</td>
<td>99% effective</td>
<td>99% effective</td>
<td>99% effective</td>
<td>94% effective</td>
<td>91% effective</td>
<td>91% effective</td>
<td>91% effective</td>
<td>82% effective</td>
</tr>
<tr>
<td>How Long Does it Last</td>
<td>Up to 10 years</td>
<td>Up to 3 or 5 years</td>
<td>Up to 3 years</td>
<td>Up to 3 months</td>
<td>Up to 1 month</td>
<td>Up to 1 week</td>
<td>For 1 day</td>
<td>For 1 sex act</td>
</tr>
<tr>
<td>How Do You Get Started</td>
<td>Inserted by your provider</td>
<td>Inserted by your provider</td>
<td>Inserted by your provider</td>
<td>Shot given by your provider</td>
<td>Prescription from provider</td>
<td>Prescription from provider</td>
<td>Prescription from provider</td>
<td>Buy over the counter</td>
</tr>
<tr>
<td>What Do You Need to Do</td>
<td>No action required</td>
<td>No action required</td>
<td>No action required</td>
<td>Get shot of provider every 3 months</td>
<td>You insert ring into vagina and replace every month</td>
<td>You place patch on body and replace every week</td>
<td>You take pill every day</td>
<td>You use condom for each sex act</td>
</tr>
<tr>
<td>Possible Bleeding Changes</td>
<td>Heavier periods that may return to normal after 3-6 months</td>
<td>Irregular, lighter, or no period at all</td>
<td>Infrequent, irregular, prolonged, or no period</td>
<td>Irregular or no period</td>
<td>Shorter, lighter, more predictable periods</td>
<td>Shorter, lighter, more predictable periods</td>
<td>Shorter, lighter, more predictable periods</td>
<td>None</td>
</tr>
<tr>
<td>Possible Side Effects</td>
<td>Cramping, that usually improves after 3-6 months</td>
<td>Cramping, during and after insertion, spotting</td>
<td>Insertion site pain</td>
<td>Weight changes</td>
<td>Nausea or breast tenderness</td>
<td>Nausea, breast tenderness, application site reaction</td>
<td>Nausea or breast tenderness</td>
<td>Allergic reaction to latex</td>
</tr>
<tr>
<td>If Stopped When Can you Get Pregnant</td>
<td>Immediately, schedule removal with provider</td>
<td>Immediately, schedule removal with provider</td>
<td>Immediately, schedule removal with provider</td>
<td>Immediately, but may have 6-12 month delay. No action required</td>
<td>Immediately, must remove ring from body</td>
<td>Immediately, must remove patch from body</td>
<td>Immediately, stop taking pills</td>
<td>Immediately, no action required</td>
</tr>
</tbody>
</table>

Only the condom protects against STIs and HIV. Talk with your provider about the best method for you.
Contraceptive Options

- Oral Contraceptive Pills
- Ortho Evra Patch
- NuvaRing
- Depo-Provera
- Nexplanon
- Mirena IUD
More Information about Zika

More information on caring for pregnant women, infants, or children with Zika virus infection is available at [CDC's Zika website](http://www.cdc.gov/zika).
ZIKA VIRUS

You can prevent the spread of the Zika virus. Find out what simple steps you can take to protect yourself and your family this summer.