

Maine Medical

PARTNERS

Women's Health

A department of Maine Medical Center

Zika Virus Exposure

Zika virus is a mosquito-borne virus that has been associated with congenital microcephaly, severe fetal brain abnormalities, and congenital contractures. Symptoms of Zika virus infection include fever, maculopapular rash, arthralgia, and conjunctivitis, however, **only 1 out of 5** patients will have symptoms.

The CDC maintains an updated list of travel areas where Zika transmission has been identified, with areas located in Mexico, Caribbean, Central and South America, North America, Africa, Asia, and the Pacific Islands (<https://www.cdc.gov/zika/geo/index.html>).

All pregnant patients should be counseled to avoid travel to areas with active Zika virus. If pregnant patients still plan to travel to an affected area, recommend:

- Use of EPA-approved DEET bug spray
- Cover exposed skin with long-sleeved clothing
- Stay in air conditioned or screened-in areas
- Treat clothes with permethrin

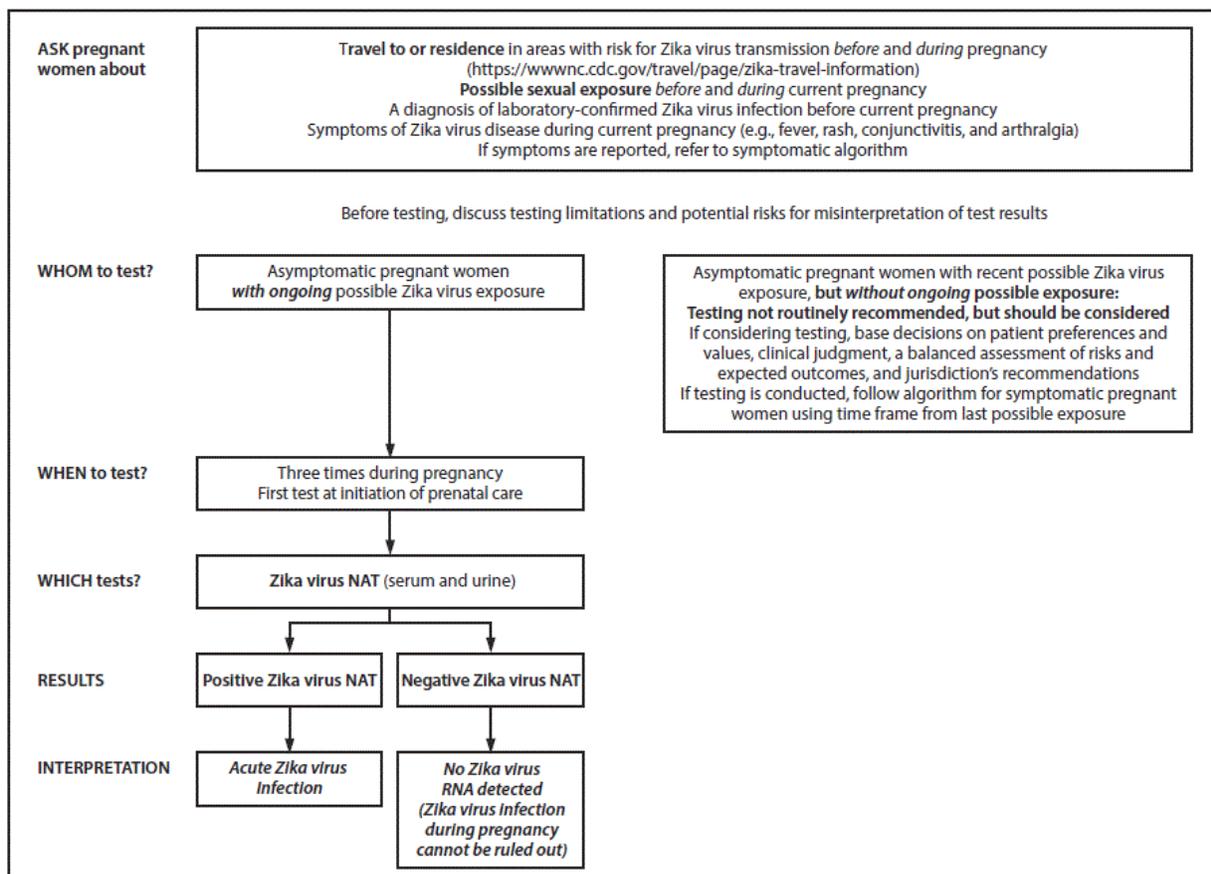
Up to date information is available at: <http://www.cdc.gov/zika/>

MANAGEMENT:

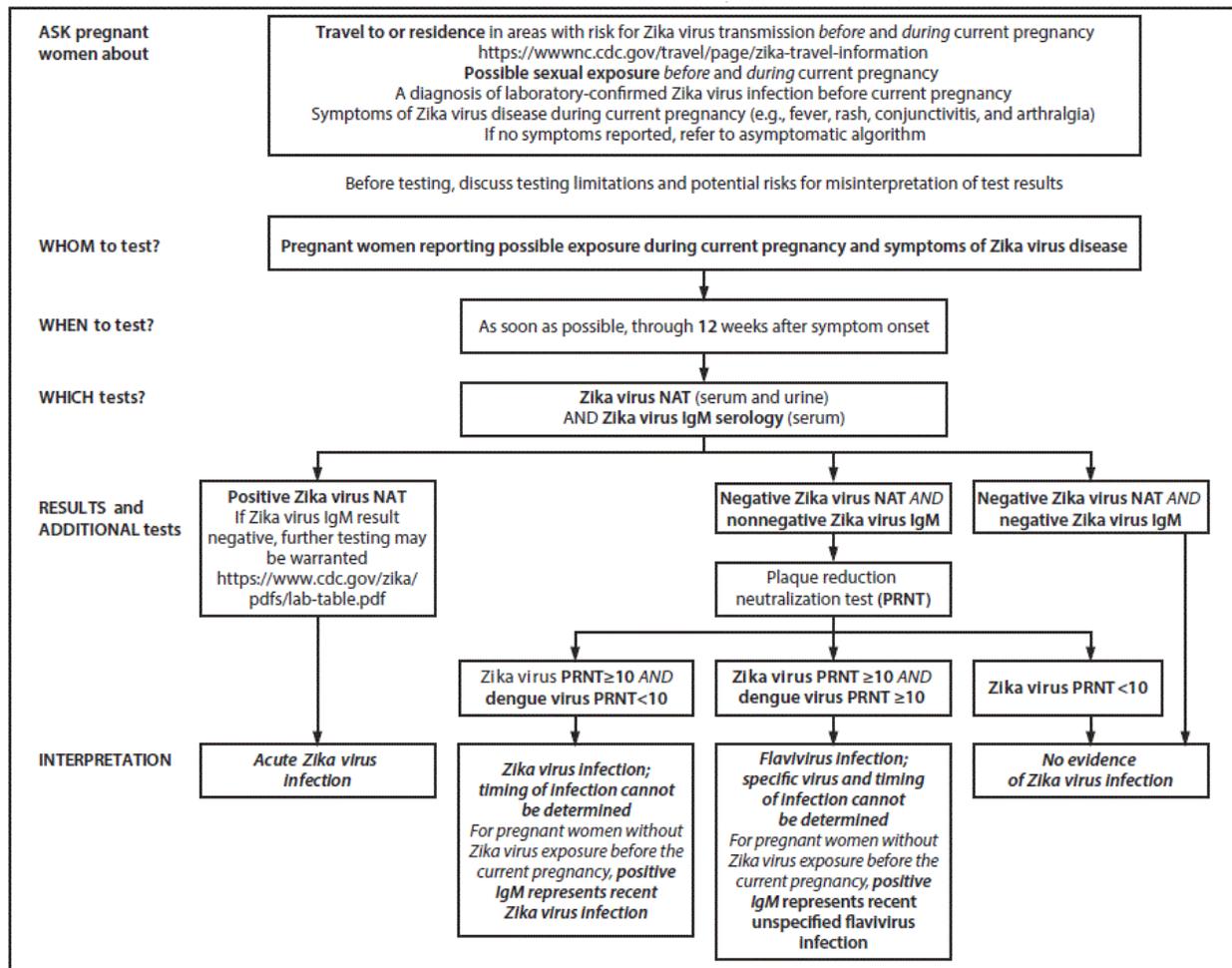
1. Ask all patients about travel to areas with active Zika virus transmission.
2. If pregnant patient is **symptomatic** with possible Zika virus exposure:
 - Perform concurrent IgM and NAT, up to 12 weeks after onset of symptoms (serum Zika IgM, serum and urine Zika NAT)
3. If a pregnant patient is asymptomatic **with** ongoing Zika exposure (e.g., living in an area with Zika transmission or sex with partner who travels to Zika area):
 - Perform serum and urine Zika NAT only (testing should be offered at initiation of prenatal care, then twice more during the pregnancy)
4. If a pregnant patient is asymptomatic **without** ongoing Zika exposure:
 - CDC no longer recommends Zika virus testing, but may be considered based on shared decision making with a pregnant patient
5. If maternal testing does not suggest infection or Zika testing is not indicated, ultrasounds should be performed only as indicated for routine prenatal care.

6. If maternal testing suggests Zika infection, recommend referral to Maternal-Fetal Medicine for ultrasound to evaluate for signs of congenital Zika infection.
7. If maternal testing is positive **and/or** ultrasound findings are present, offer amniocentesis for Zika virus testing. Of note, negative amniotic fluid testing cannot definitively rule out congenital Zika infection.
8. No antiviral treatment is available.
9. Sexual transmission of Zika virus infection has been reported:
 - Women who may have been exposed or had symptoms of Zika virus should wait at least 8 weeks before trying to conceive.
 - Men who may have been exposed or had symptoms of Zika virus should wait at least 6 months before trying to conceive.
 - If a male partner travels to an affected area, recommend use of condoms or abstinence for the duration of the pregnancy.

CDC Updated Interim Testing Recommendations and Interpretation of Results for **Asymptomatic** Pregnant Women with Possible Zika Virus Exposure



CDC Updated Interim Testing Recommendations and Interpretation of Results for Symptomatic Pregnant Women with Possible Zika Virus Exposure



LABORATORY TESTING:

Zika laboratory testing should be submitted to Maine’s Health and Environmental Testing Laboratory (HETL) for processing and submission to the CDC.

All laboratory samples must include two forms:

- HETL requisition form (specify Zika virus testing in ‘Additional Information’ box)
- Human arbovirus specimen submission form

Maine Health and Environmental Testing Laboratory

221 State Street, SHS 12
Augusta, Maine 04333-0012
Phone: 207-287-2727 Fax: 207-287-1727

This form and others available for download or printing from our website: www.mainepublichealth.gov/lab

Maine Center for Disease Control and Prevention
An Office of the Maine Department of Health & Human Services

(*REQUIRED FIELDS)

* Submitter Name/Address Submitter Phone Submitter Fax#	Hospital/Lab ID#	Physician Fax
	Physician Name (First/Last)	Physician Practice/Affiliation
	Physician Address and Phone	Physician NPI#
* Patient Name (*Last, *First, MI) Is patient hospitalized? <input type="checkbox"/> Yes <input type="checkbox"/> No	*Gender <input type="checkbox"/> M <input type="checkbox"/> F	*Specimen source: <input type="checkbox"/> Anal <input type="checkbox"/> Bronch wash <input type="checkbox"/> Buccal <input type="checkbox"/> CSF <input type="checkbox"/> Nasal Wash <input type="checkbox"/> Nasopharyngeal <input type="checkbox"/> Throat <input type="checkbox"/> Sputum <input type="checkbox"/> Stool <input type="checkbox"/> Cervical <input type="checkbox"/> Endocervical <input type="checkbox"/> Labial <input type="checkbox"/> Penile <input type="checkbox"/> Urethral <input type="checkbox"/> Urine <input type="checkbox"/> Vaginal <input type="checkbox"/> Whole blood <input type="checkbox"/> Serum <input type="checkbox"/> Plasma <input type="checkbox"/> Other:
	*Date of Birth (mm/dd/yyyy)	*Date of Collection (mm/dd/yyyy)
	Symptom Onset Date	

Information below required for Blood Lead, Reportable Diseases or MaineCare Primary Insurance

Patient Street Address	Age#	City/Town	State	Zip Code
Race <input type="checkbox"/> White <input type="checkbox"/> American Indian or Alaskan Native <input type="checkbox"/> Asian <input type="checkbox"/> Black or African American <input type="checkbox"/> Native Hawaiian/Pacific Islander <input type="checkbox"/> Some other race <input type="checkbox"/> Two or more races	Ethnicity <input type="checkbox"/> Hispanic or Latino <input type="checkbox"/> Non-Hispanic/Non-Latino	MaineCare# (if primary) Please include copy of MaineCare Card		Blood Lead Parent/Guardian Name
Blood Lead - ONLY <input type="checkbox"/> Check only if patient has No Private Insurance Coverage AND No MaineCare Coverage			Blood Lead Parent/Guardian Phone:	

BACTERIOLOGY

- Chlamydia/Gonorrhea screen (Amplified Probe)
- Trichomonas (Amplified Probe)
- Bordetella species - PCR
- Campylobacter Identification
- Carbapenem resistance (CRE) PCR-Isolate
- Clostridium difficile PCR
- C. difficile PFGE Subtyping
- Cryptosporidium PCR
- E. coli Identification/serotyping
- E. coli Shiga Toxin by PCR
- Enteric Pathogen Screen (Salmonella, E. coli, Shigella, Campylobacter)
- Human Papillomavirus (HPV)
- MRSA - Isolate only
- Neisseria gonorrhoea culture
- Neisseria meningitidis grouping
- Neisseria meningitidis PCR - CSF only
- Salmonella Identification
- Shigella Identification/serotyping
- Vancomycin resistance (VRE) PCR-Isolate
- Vibrio Identification
- Yersinia Identification
- Reference Culture Identification; Organism Suspected:

Additional Information:

MECDC Outbreak Investigation ID#:

Investigator:

SEROLOGY

- Arbovirus IgM Panel (West Nile, SLE, EEE) **
- Anaplasma/Ehrlichia RT-PCR**
- Babesia PCR**
- Chikungunya RT-PCR**
- Deer Tick/Powassan RT-PCR**
- ** (Requires Arboviral Submission Form)
- Hepatitis C IgG Antibody screen
- HIV-1/HIV-2 Antibody/Antigen screen
- HIV-1/2 Screen and Confirmation
- Mumps IgG Antibody screen
- Mumps IgM Antibody screen
- Quantiferon®-TB Gold /IGRA - Serology
- Rubella (Measles) IgG Antibody screen
- Rubella (Measles) IgM Antibody screen
- RPR, Syphilis screen
- Syphilis serum confirmation
- Syphilis VDRL, Spinal Fluid Only
- Varicella zoster IgG Antibody screen

MYCOBACTERIOLOGY

- Acid fast (AFB) smear
- Acid fast culture
- M. tuberculosis complex PCR
- Reference Culture Identification

BLOOD LEAD

- Blood Lead, venous
- Blood Lead, capillary
- Check if Symptomatic or Repeat Test

VIROLOGY

- Adenovirus RT-PCR
- Enterovirus RT-PCR
- Herpes simplex (HSV1/2) PCR
- Influenza A/B RT-PCR (includes pdmH1N1)
- Mumps RT-PCR
- Norovirus RT-PCR
- Rhinovirus RT-PCR
- Respiratory Enterovirus RT-PCR
- RSV RT-PCR
- Rubella (Measles) RT-PCR
- Varicella/Herpes Zoster RT-PCR ("chicken pox"/"shingles")
- Reflex to Viral Culture if PCR Test Selected is Negative
- Viral Culture, Routine, (10 days)

CSF Panel

Enterovirus, HSV1/2, VZV and Neisseria meningitidis PCR with reflex to Arbovirus IgM Panel if PCR tests are negative. (Reflex to Arbovirus Panel requires completed Arbovirus Submission Form)

Rash Panel RT-PCR

(includes HSV1, HSV2, and VZV)

Respiratory Panel

Adenovirus, Influenza A/B, Respiratory Syncytial Virus (RSV), Rhinovirus and Respiratory Enterovirus screen

Rev. December 2015



Maine Center for Disease Control and Prevention Human Arbovirus Specimen Submission Form

Rev. 2/2016

*In order to submit a sample for Arbovirus testing, the health care provider needs to complete this form.
The lab also needs to complete and submit a HETL virology requisition form.*

Patient Name: _____ DOB: _____

Address: _____

Gender: _____ Race/Ethnicity: _____ Pregnant: Yes No

Health Care Provider: _____ Phone Number: _____

Hospitalized? Yes No Hospital: _____

Admitted: ___/___/___ Discharged: ___/___/___

Travel out of **state** within last 30 Days Where: _____

Travel Dates: From _____ to _____

International travel within last **90** Days Where: _____

Travel Dates: From _____ to _____

Clinical Information

Symptom Onset Date: _____

Acute Flaccid Paralysis Altered Mental Status Aseptic Meningitis

Conjunctivitis CNS involvement Encephalitis

Fever: Highest reading: _____ Duration, in days: _____ Headache

Myalgias Rash – Where? _____

Other _____

<p>Information on specimens being submitted:</p> <p><input type="checkbox"/> Acute Blood: Collection Date: _____</p> <p><input type="checkbox"/> Convalescent Blood: Collection Date: _____</p> <p><input type="checkbox"/> CSF: Collection Date: _____</p> <p><input type="checkbox"/> Saliva (1-3mL) for Zika only Collection Date: _____</p> <p><input type="checkbox"/> Urine (3-5mL) for Zika only Collection Date: _____</p>	<p>Other testing done (CSF):</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;"></td> <td style="width: 10%; text-align: center;">Y</td> <td style="width: 10%; text-align: center;">N</td> <td style="width: 10%;"></td> </tr> <tr> <td>Enterovirus</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> </tr> <tr> <td>HSV 1&2</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> </tr> <tr> <td>VZV</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> </tr> </table>		Y	N		Enterovirus	<input type="checkbox"/>	<input type="checkbox"/>		HSV 1&2	<input type="checkbox"/>	<input type="checkbox"/>		VZV	<input type="checkbox"/>	<input type="checkbox"/>	
	Y	N															
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VZV	<input type="checkbox"/>	<input type="checkbox"/>															

For questions about a disease outbreak or notifiable conditions, please call

Maine CDC- Disease Reporting

HOW TO REPORT:

TELEPHONE: **OR** **FAX:**
1-800-821-5821 **1-800-293-7534**
(24 hours a day) **(24 hours a day)**

Influenza A/H5 or Novel Influenza Testing

Consult with Infectious Disease Epidemiology – Maine CDC
1-800-821-5821

As soon as a suspect/possible case has been identified

- For direction on whether a patient should be tested
- For infection control measures
- For information on current sampling guidelines and specimen transport
- For immediate coordination with laboratory

For a full test catalog, specific specimen collection instructions, test kit order forms, arboviral surveillance forms and an electronic version of this requisition form, please visit:
www.maine.publichealth.gov/lab

Reportable Diseases Requiring Submission to HETL:

Organisms/Conditions in **BOLD** are possible indicators of bioterrorism

Any Outbreak of unusual disease or illness

Bacillus anthracis
Brucella species
Bordetella pertussis
Clostridium botulinum
Clostridium tetani
Corynebacterium diphtheria
Coxiella spp
Escherichia coli 0157:H7
Escherichia coli – shiga toxin producing – all serotypes
Francisella species
Gram positive rod septicemia or meningitis, growth within 72 hours
Haemophilus influenzae, invasive
Listeria species
Measles virus (Rubeola)
Mumps virus

Mycobacterium species (TB complex only)
Neisseria meningitidis
Novel Influenza virus(untypeable)
Rabies virus
RICIN poisoning
Rubella virus
Salmonella species
SARS (Coronavirus)
Shigella species
Smallpox virus
Staphylococcal enterotoxin B
pulmonary poisoning
Toxoplasma gondii
Venezuelan equine encephalitis
Vibrio species
Yersinia pestis

For a full list of **Notifiable Conditions**, please visit:

<http://www.maine.gov/dhhs/bo/ddc/epi/disease-reporting/index.shtml>

Specimen types, storage and shipping conditions:

- General test kits are available from HETL for PCR/Viral Culture, Serology and Mycobacteriology.
- Specific test kits are available for Blood Lead, *B. pertussis* PCR, Chlamydia/Gonorrhea, Trichomonas and HPV screen amplified probe testing, and
- Quantiferon®-TB Gold (IGRA) in-tube test.
- Specific instructions for specimen collection available at www.maine.publichealth.gov/lab
- Test kits include sampling materials and instructions as well as packing materials and shipping containers for couriers or US Mail.
- To order test kits please call 207-287-2727 or fax order to 207-287-8925

ARBOVIRUS TESTING

All specimens submitted for Arboviral testing must be accompanied by the Arboviral Submission Form before testing will be performed.

PCR/VIRAL CULTURE

- Collect specimens promptly (ideally within 1-3 days of onset)
- Use polyester/Dacron swabs and viral transport medium
- Urine or stool specimens should be sent in sterile, leak proof containers. Small amount of stool (pea sized) can also be added to viral transport medium
- **Store specimens at refrigerator temp. and ship on frozen gel packs**
- **Do not freeze specimens. Do not ship on dry ice**
- Viral Culture Reflex Test for PCR: if selected PCR test is negative, routine culture will be ordered to detect other viruses
- Minimum of 1.0mL of spinal fluid is required to perform PCR and viral culture

SEROLOGY

Blood should be collected without anticoagulants or preservatives

- 5ml for an adult or 3ml for pediatric patients is sufficient volume
- Do not freeze blood specimens
- It is best to physically separate serum from the blood clot within 24 hours
- **HIV-1/HIV-2 Multispot confirmation is automatically ordered for HIV+ screen and will be billed accordingly**

MYCOBACTERIOLOGY

- 5ml is the recommended minimum sample volume for AFB recovery
- Respiratory specimens and other body fluids - collect in sterile container
- Bone marrow and blood - collect in heparin (green top) tube
- Tissue biopsy and bone - collect in sterile container with 1-2ml distilled H₂O or saline
- Urine – collect first morning in sterile container shipped on ice
- Use **only HETL kits** to collect specimens for Quantiferon®-TB Gold (IGRA) in-tube test

BACTERIOLOGY

- Chlamydia/Gonorrhea amplified probe test: urine and swab specimens from both male and female patients are acceptable. GenProbe collection tubes are **REQUIRED** for this test (available from HETL – call 207-287-2727)
- Shiga toxin positive broths should be sent for confirmation and serotyping
- Isolates sent for identification should include prior lab results

BLOOD LEAD

- Minimum of 300uL whole blood
- Heparin (green top) or EDTA (purple top) tubes are acceptable
- Sodium Citrate (light blue top) is **NOT** acceptable
- Capillary specimens with high levels will require venous confirmation
- Check **No Insurance box** ONLY if patient does **not** have insurance to cover blood lead testing

CSF PANEL

- **Minimum of 1.5mL of spinal fluid is required to perform CSF Panel and reflex to Arbovirus Panel if all PCR tests are negative.**