



## Nurture Pediatrics September 2016 Newsletter

### What's Going Around?

#### Zika Virus Facts

##### ➤ History of the Virus

- Zika Virus was first isolated during attempts to study yellow fever in Uganda. It was isolated from a sick monkey in the Zika Forest of Uganda in 1947.
- Zika outbreaks in humans have occurred in Africa and Asia (2013), Chile and Easter Island (2014), Brazil (2015) and now in Florida, USA (2016).
- It is a flavivirus (RNA virus) that is carried by the Aedes mosquito also known as the "Asian Tiger Mosquito." Other viruses in the flavivirus family include Dengue Virus, Yellow Fever Virus and West Nile Virus.

##### ➤ Transmission Methods of the Zika Virus

- Mosquito Bites (infected Aedes mosquitos).
- From infected pregnant woman to her developing baby.
- Sexual transmission from an infected person.
- Blood products contaminated with the virus.

##### ➤ Clinical Manifestions and Symptoms of Infection

- Fever
- Itchy rash that tends to move from head down through body.
- Headache (complaints of pain behind the eyes)
- General body aches and sore muscles
- Redness of the eyes (conjunctivitis)
- Sometimes swelling of the hands and feet
- Occasionally mild diarrhea.
- Swollen lymph nodes of the neck area.

See pictures below.

##### ➤ Laboratory Abnormalities

- Abnormal CBC (complete blood count) with low platelets and low total WBC count.



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- Elevated (high) liver enzymes.



➤ How do infants infected with Zika virus appear?

- If infection occurs very late in pregnancy (last few weeks before delivery), the infant may have no symptoms or may have the classic symptoms as noted above, but the risk of neurologic problems is much lower than the risk when infection occurs before the third trimester.
- Neurologic manifestations may include microcephaly (see picture below), hydrocephalus (accumulation of fluid in the brain), smooth or flattened gyri (folds) of the brain, small or poorly developed eyes (micro-ophthalmia, retinal scarring), calcifications of the brain.
- The infants may also be growth restricted (smaller than expected).



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- How is Zika Virus infection diagnosed?
  - ⊖ During the first week of illness, RT PCR (an RNA test) can be done on blood.
  - ⊖ Up to 2-3 weeks after infection, urine tests may show positive results.
  - ⊖ Spinal fluid can be tested.
  - ⊖ Antibody tests on the blood can be used to differentiate Dengue fever from Zika virus as there is cross over on the results of the previously mentioned tests.
- Management of Infection
  - ⊖ Rest
  - ⊖ Drink plenty of fluids
  - ⊖ Acetaminophen (Tylenol) is fine to use, but it is best to avoid ibuprofen and aspirin. Since the symptoms of Dengue fever and Zika Virus can be similar and tests can be positive for both, it is best to avoid medications that can make bleeding worse in the case that the patient may have Dengue (hemorrhagic) fever.
- What can be done for infants infected with Zika Virus prenatally?
  - ⊖ Close hearing exams with ABER (more than the usual newborn hearing screen)
  - ⊖ Close evaluation and continuing follow-up with ophthalmologist.
  - ⊖ Well child care with thorough physical exams to monitor head growth and development.
  - ⊖ Referral to developmental specialists for ongoing monitoring.
  - ⊖ Cranial ultrasound to evaluate for hydrocephalus or calcifications.
- Prevention
  - ⊖ There is no current anti-viral medication or vaccination against Zika Virus.
  - ⊖ It is best to avoid mosquito bites by using DEET containing products (up to 30% DEET can be used in children over 2 months of age).

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- ≡ Permethrin treated clothing can be worn.
- ≡ Avoid standing water to cut down on mosquito risks in your neighborhood.
- ≡ Avoid travel to known areas of transmission if you are pregnant.
- ≡ Men who are infected should avoid unprotected sex for up to 6 months following the initial infection symptoms.

**Keep informed about developing information about Zika Virus at this website:**

[www.cdc.gov/zika](http://www.cdc.gov/zika)

*Thank you for reading our first "What's going around?" newsletter!*

– J. Pate, MD