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Arbovirus FAQs

What is an arbovirus?

Arbovirus is short for arthropod-borne virus. Arboviruses are a large group of viruses that are spread by certain invertebrate animals (arthropods), most commonly blood-sucking insects. In the United States, arboviruses are spread mainly by mosquitoes. Birds are often the source of infection for mosquitoes, which can then transmit the infection to horses, other animals, and people. People are not an essential part of the life cycle for most arboviruses that are commonly transmitted in the United States.

Where are arboviruses found?

Arboviruses are found throughout the world. The presence of an arbovirus in a particular area depends on the availability of specific types of mosquitoes that can carry it and specific birds or animals that can be infected.

What are some important arbovirus infections?

More than 100 arboviruses cause disease in humans. Most of these are classified into groups, or families. Among the best known are: alphaviruses, flaviviruses, bunyaviruses, and reoviruses. Each causes specific types of illness. These are some examples:

Alphaviruses

- Eastern Equine encephalitis
- Western Equine encephalitis
- Venezuelan equine encephalitis
- Chikungunya fever

Flaviviruses

- West Nile virus illness
- St. Louis encephalitis
- Japanese encephalitis
- Yellow fever
- Dengue fever
- Zika fever

Bunyaviruses

- LaCrosse encephalitis
- Heartland virus

Reoviruses

- Colorado tick fever

What are the common signs and symptoms of arbovirus infections?

Most people infected with an arbovirus have no symptoms. When symptoms occur, they usually start suddenly, with fever, chills, headache, muscle aches, and tiredness. In rare cases, infection can lead to encephalitis (inflammation of the brain). Symptoms of encephalitis are drowsiness, stiff neck, confusion, convulsions, tremors, and coma. Symptoms of hemorrhagic fever include signs of internal bleeding, which can lead to shock and sometimes death.

Arboviruses can cause four types of clinical illness:

- Illnesses of the central nervous system, ranging in seriousness from mild viral meningitis to encephalitis (inflammation of the brain), which can result in coma, paralysis, and death
- Mild fever illnesses with or without rash
- Hemorrhagic fevers that can be serious and life-threatening
- Arthritis and rash, with or without fever

How soon after exposure do symptoms appear?

The time between exposure and symptoms can vary from two to 14 days.

What complications can result from arbovirus infections?

Complications of encephalitis can be serious, and include coma, permanent brain damage, and death.

How common are arbovirus infections?

Because people are not important in the life cycle of most arboviruses, arbovirus infections are generally rare in humans. When people are part of the natural cycle and are necessary for transmitting infection, such as for chikungunya, dengue, and urban yellow fever viruses, then infection in people is more common. Most cases of arboviral encephalitis occur from June through September, when biting insects are most active. In mild parts of the country, cases can occur into the winter months.

Are arbovirus infections emerging infectious diseases?

Yes, many are increasing as people move into previously undeveloped areas where the viruses and their hosts live.

How can arbovirus infections be prevented?

The easiest and best way to avoid arbovirus infection is to prevent mosquito bites. The best preventive measures are to **Drain** standing water to prevent mosquito breeding around your home or business, **Cover** doors and windows to keep mosquitoes outside of homes and **Cover** skin with clothing or mosquito repellent to prevent mosquito bites.

DRAIN standing water:

- Drain water from garbage cans, buckets, pool covers, coolers, toys, flower pots or any other containers where sprinkler or rain water has collected.
- Discarded old tires, drums, bottles, cans, pots and pans, broken appliances and other items that aren't being used.
- Empty and clean birdbaths and pet's water bowls at least once or twice a week.
- Protect boats and vehicles from rain with tarps that don't accumulate water.
- Maintain swimming pools in good condition and appropriately chlorinated. Empty plastic swimming pools when not in use.

To protect yourself from mosquito bites and from the diseases mosquitoes carry:

COVER your skin with:

- **CLOTHING** - If you must be outside when mosquitoes are active, cover up. Wear shoes, socks, long pants and long sleeves.
- **REPELLENT** - Apply mosquito repellent to bare skin and clothing.

Always use repellents according to the label. Repellents with DEET, picaridin, oil of lemon eucalyptus, para-menthane-diol, and IR3535 are effective.

Use mosquito netting to protect children younger than 2 months old.

COVER doors and windows with screens:

- Keep mosquitoes out of your house. Repair broken screening on windows, doors, porches, and patios.

Vaccines are available for yellow fever and Japanese encephalitis.

For more information please visit the following:

Florida Department of Health, www.floridahealth.gov/diseases-and-conditions/mosquito-borne-diseases/index.html.

Department of Agriculture and Consumer Services, www.freshfromflorida.com/Consumer-Resources/Animals/Animal-Disease-Information.

The Centers for Disease Control and Prevention, www.cdc.gov/westnile/index.html.