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Frequently Asked Questions on Chikungunya

What is chikungunya?

Chikungunya (pronunciation: \chik-en-gun-ye) is a virus is transmitted to people by mosquitoes. At this time, there have not been any cases of the disease known to have been acquired in North Carolina.

Chikungunya virus has caused outbreaks in Africa, Asia and the islands in the Indian Ocean and the Western Pacific. Recently, it has been imported to the Caribbean and has spread rapidly through multiple islands, including Haiti and the Dominican Republic. Travelers to these countries could carry the virus back to the United States and infect local mosquito populations. The southeastern portion of the United States, including North Carolina, is home to a mosquito population that could potentially become infected with the virus and transmit it to residents.

What are the symptoms of chikungunya?

Most people infected with chikungunya virus will develop some symptoms. The most common symptoms of chikungunya virus infection are fever and joint pain. Other symptoms may include headache, muscle pain, joint swelling, or rash. Chikungunya does not often result in death, but the symptoms can be severe and disabling. Most patients feel better within a week. In some people, the joint pain may persist for months. Once a person has been infected, he or she is likely to be protected from future infections.

Where does it occur now?

Outbreaks have occurred in countries in Africa, Asia, Europe, and the Indian and Pacific Oceans. In late 2013, chikungunya virus was found for the first time in the islands in the Caribbean, and has since spread in the region. As of June 6, 2014, the Pan American Health Organization reports over 130,000 cases in the Caribbean islands.

How does the disease spread to mosquitoes?

Mosquitoes become infected when they feed on a person already infected with the virus. Infected mosquitoes can then spread the virus to other people through bites. A person can potentially transmit the virus to a mosquito when the virus is present in their blood, from approximately 2 days before becoming ill and for up to 5 days after they become ill. Any returning traveler who suspects that they may be sick with chikungunya should contact a physician and avoid mosquito contact through this period.

Has anyone in North Carolina been diagnosed with chikungunya?

Yes. North Carolina's first case of chikungunya was confirmed in a resident who recently travelled to the Caribbean in June 2014, though it has been determined that there is a low risk of transmission of chikungunya to the local mosquito population. A probable case had been reported in 2013 after returning from India. Currently, there are sixteen travel-related chikungunya cases in North Carolina.

Has anyone from North Carolina been bitten by a mosquito in North Carolina and come down with chikungunya?

No. There is currently no evidence that any mosquitoes in North Carolina carry the chikungunya virus. There is also no current evidence that any mosquito carrying chikungunya virus is present in the continental United States.

How long does it take for the disease to develop?

Symptoms usually begin 3–7 days after being bitten by an infected mosquito. All travelers returning from countries known to have chikungunya should see their doctor if they start to feel ill within 2 weeks after returning home.

Is there a vaccine for chikungunya?

There is no vaccine to prevent chikungunya.

What is the treatment for chikungunya?

While there is no medicine to specifically treat chikungunya, your physician may suggest the following to decrease the symptoms:

- Take medicines, such as ibuprofen, naproxen, acetaminophen, or paracetamol, to relieve fever and pain.
- Get plenty of rest.
- Drink fluids to prevent dehydration.

What mosquito species carries the chikungunya virus?

Chikungunya virus is most often spread to people by *Aedes aegypti* and *Aedes albopictus* mosquitoes. *Aedes albopictus*, commonly known as the Asian Tiger mosquito, is common in North Carolina and can spread Chikungunya virus. This type of mosquito prefers to lay their eggs in containers that hold small amounts of stagnant water, such as bird baths, buckets and tires. They do not typically breed in running water such as creeks or large ponds. The Asian Tiger mosquito mostly bites during the day time hours, especially in the mornings and before sunset. *Aedes aegypti* has been present in North Carolina in the past but entomologists (insect specialists) report it has become much less common in the past two decades.

Will mosquito truck spraying kill this mosquito?

Mosquito truck spraying is not the most efficient or effective way to kill this mosquito, especially since it is most active and bites during the daytime. This mosquito will hide in vegetation during the hours when mosquito spraying is typically done, usually before dawn and after dusk. Mosquito truck spraying is only used as a last resort against the Asian Tiger mosquito and can be used to help control a large population of adult mosquitoes.

How can we prevent chikungunya?

The elimination and control of *Aedes aegypti* and *Aedes albopictus* mosquitoes breeding sites reduces the likelihood of the chikungunya virus becoming established in the state.

To reduce mosquito breeding areas around your home, practice frequent “Tip & Toss” activities:

- Remove any containers that can hold water — especially old tires;
- Repair leaky outdoor faucets and change the water in bird baths and pet bowls at least twice a week;
- Cover rain barrels with tight-fitting screens or lids;
- Keep gutters clean and in good repair;
- Inspect tarps on things such as woodpiles and drain any standing water;
- If water cannot be drained, such as in ornamental ponds, stock the pond with fish that will eat mosquito larvae or treat the water with products that will kill mosquito larvae, available at your local hardware store. Follow the label directions carefully; and
- Use screened windows and doors and make sure screens are not torn fit and tightly.

Travelers to areas where chikungunya is present should take precautions. Travelers can protect themselves by preventing mosquito bites. When traveling to countries with chikungunya virus, use insect repellent, wear long sleeves and pants, and stay in places with air conditioning or that use window and door screens.

How does one avoid mosquito bites?

To protect yourself and your family against mosquito bites:

- Stay indoors when mosquitoes are most active. The Aedes mosquito is an aggressive daytime biter, especially in the morning and early evening hours.
- If you need to go outdoors when mosquitoes are active, wear long pants and long-sleeved shirts.
- Apply DEET or other EPA-approved mosquito repellents to exposed skin areas, following manufacturer’s instructions.
- Reduce the potential breeding sites around your property by practicing frequent inspections and “Tip & Toss” to all items that can collect water.

What role can the community play in preventing chikungunya?

Eliminating breeding sites for mosquitoes needs to be a community effort to make sure that all breeding sites in the neighborhood are eliminated. Communities can work together to make sure that all items that can be drained of standing water are and that those items that cannot be emptied are treated to prevent mosquitoes from breeding. Community organizations can sponsor ‘clean-up’ days, collecting items that can be recycled and disposed of, especially tires, bottles, cans, etc. Groups can be organized to help neighbors clean out gutters and to repair window and door screens to keep mosquitoes outside. Community organizations can help by spreading the word about preventing mosquito bites through the use of repellents.