

# New mosquito-borne illness may be headed to United States, experts say

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The next mosquito-borne illness in the United States may be chikungunya (“chicken-GUN-ya”) and despite its odd name the viral disease is no laughing matter, University of Florida experts say.

Though generally not fatal, chikungunya has sickened 1.6 million people in the Indian Ocean region since early 2005 and could be transmitted by two mosquitoes found in the southern United States, said Walter Tabachnick of UF’s Institute of Food and Agricultural Sciences.

“We are at risk,” he said. “Based on the outbreak in the Indian Ocean, I think that pushes chikungunya right to the front as far as mosquito-borne diseases we need to watch out for.”

It’s not possible to predict when a U.S. chikungunya outbreak might occur but experts agree on the likely scenario, said Tabachnick, director of the Florida Medical Entomology Laboratory in Vero Beach.

All it takes is an infected person being bitten by an Asian tiger mosquito or a yellow fever mosquito, he said. From there, the virus could be passed to more people, then other mosquitoes.

The name chikungunya comes from a Makonde word meaning “to become contorted,” Tabachnick said. The name refers to a disease symptom, painful joint inflammation resulting in stooped posture. Others, including fever, headache, vomiting and a rash, usually subside in three to five days, but joint pain can last months or years.

The disease can be fatal to the elderly, young children and people with weak immune systems, he said. An outbreak near Madagascar struck a quarter million and killed nearly 1 percent of those infected.

“Medical professionals should be aware (of the disease),” Tabachnick said. “One of the first things they should be asking people who come in with those symptoms is, have they traveled?”

Chikungunya could be difficult to track because the virus doesn’t infect animals commonly found in the United States, he said. This prevents the use of sentinel animals such as chickens, kept outdoors and tested regularly to monitor for mosquito-borne diseases.

“Since no one is going to routinely test bloods in a surveillance program for the virus, the only way you see it is, first a sick person has to report, then someone’s got to diagnose it,” Tabachnick said.

More than two dozen people in the United States have been diagnosed with chikungunya, but none have passed the disease on to mosquitoes, said Roxanne Connelly, a UF associate professor of entomology.

Researchers are particularly concerned about Florida outbreaks because the state has many international visitors, elderly residents and warm weather conducive to mosquito breeding.

Perhaps the best way to reduce chikungunya risk is to reduce Asian tiger mosquito and yellow fever mosquito populations, Connelly said. Homeowners must play a role because both species can breed in tiny bodies of water, even those the size of a bottle cap.

“Trying to get all the little containers – and there can be hundreds in one yard – is not where a mosquito control agency is going to be very effective,” she said. “So you’re talking about individual homeowner

responsibility there.”

To help educate the public, Connelly and Tabachnick helped write a fact sheet about the disease, published this week on the UF/IFAS Extension Digital Information Source system, found at [edis.ifas.ufl.edu/IN696](https://edis.ifas.ufl.edu/IN696).

Chris Mores, an assistant professor of entomology at the Vero Beach lab, is trying to determine how effectively Florida’s mosquito populations could transmit chikungunya.

Few U.S. universities study chikungunya, partly because funding is scarce, said Stephen Higgs, a pathology professor at the University of Texas Medical Branch in Galveston.

Higgs, who’s studied the disease for several years, said the United States should have been better prepared for the West Nile disease outbreak in 1999.

“There was a tremendous influx of funding for research of vector-borne diseases after the West Nile virus was introduced, but that has diminished,” he said. “We need to maintain expertise in this country.”

Source: University of Florida

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