

## *Vector Management Update*

### **Research: West Nile Could Have Unknown Long-term Effects**

By News-Journal.com Staff and Wire Reports  
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New [2012] Texas research into the West Nile virus indicates its effects can stretch far beyond the immediate impact seen in the current outbreak — potentially impacting even those who never are diagnosed with the disease.

A Houston study released this past week suggested the virus routinely can result in serious, lasting kidney damage. And another said many mild cases probably go undiagnosed.

Baylor College of Medicine researchers studying Houstonians in the years after they were infected with the mosquito-borne infection found four in 10 had varying stages of chronic kidney disease related to the virus. The kidney disease is potentially fatal.

”This demonstrates that everybody, not just the elderly and the immune-compromised, needs to take precautions against mosquitoes,” said Kristy Murray, a professor of tropical medicine at Baylor College of Medicine and the study’s senior author. “Healthy people appear to be quite at risk of kidney disease from bites, too.”

Another new paper, which was published Friday in the online edition of the *Journal of the American Medical Association*, suggested many seemingly mild cases go undiagnosed when patients are seeking explanations for simple, unexplained symptoms such as fevers and body aches.

“It might be the West Nile virus,” Dr. Robert Haley, an epidemiologist at UT Southwestern Medical Center, advised in the journal. “The diagnosis of West Nile virus should be suspected for anyone with unexplained fever from late June through September, the season when other causes of fever are less common.”

He also warned about symptoms such as disorientation, stiff neck and neurologic deficits, which can suggest West Nile.

The Baylor professor said she was surprised by the findings that West Nile-related kidney disease is occurring, that it’s common and that it’s even very likely to affect infected people who were never diagnosed with the virus or never displayed

symptoms. She focused on kidney disease after learning about a few study participants’ unexpected development of kidney problems.

Because of the study, published online in the journal *PLoS*, the team is advising doctors to screen patients with any history of West Nile infection for kidney disease and those with unexplained kidney disease for the virus, Murray said.

Only one in 150 infected get severe symptoms from West Nile, which can soon lead to imbalance, coma, paralysis and death. But the conventional wisdom has been that people without symptoms — eight of 10 of those infected — and people who recover from mild cases are then immune from the disease.

In her study of 139 Houston-area people infected with the virus and followed for 10 years, however, Murray found the virus commonly takes residence in the kidney and replicates there, resulting in inflammation and disease as the body tries to fight the infection.

People who survived the disease’s most severe symptoms were most likely to have suffered kidney damage — 60 percent, within seven to nine years after infection — but a significant percentage of disease occurred in all groups. In those who never had symptoms, 39 percent had kidney disease four to six years later.

Chronic kidney disease is divided into five stages. The first two are milder, but stages four and five are usually irreversible and can result in dialysis or transplantation. Conservatively, the estimated 2 million people infected with West Nile nationally could mean an additional 100,000 or more Americans are at some stage of kidney disease.

Though there is no treatment for the West Nile virus, Murray said it is important to catch the kidney disease as early as possible so it can be monitored.

But according to Haley, doctors may be missing it altogether in all but the most severe cases.

Since West Nile was first detected in 1999 in

the United States, Haley and other epidemiologists have been tracking how it moved across the country, flaring up in various areas each summer before going largely dormant in recent years.

“We really wondered if West Nile wasn’t going to become like St. Louis encephalitis, which also was spread by mosquitoes and caused huge outbreaks in the 1960s,” he said Friday. “It eventually died out.

“Unfortunately, West Nile doesn’t look like it’s going to do that. It’s just going to get worse and worse.”

Because of that, Haley, who spent 10 years at the federal Centers for Disease Control and Prevention, suggested local health departments should use a graduated series of control measures to head off an epidemic, including pesticide application and a public information campaign. While such efforts have been underway for months in Dallas County, the nation’s so-called West Nile epicenter this summer, such measures are not being taken in other places, Haley warned.

That means individuals must take personal responsibility for prevention during the season, which can continue until the first hard freeze of the year kills breeding mosquitoes.

There are no medications to treat or vaccines to prevent West Nile virus infection. People over 50 years old and those with compromised immune systems are at a higher risk of becoming seriously ill when they become infected with the virus. But anyone with symptoms that cause them concern should contact their health care provider.

News-Journal.com. Aug. 26, 2012. [http://www.news-journal.com/features/local/research-west-nile-could-have-unknown-long-term-effects/article\\_574d80a3-e52d-5fe1-b797-38e420ca6e5c.html](http://www.news-journal.com/features/local/research-west-nile-could-have-unknown-long-term-effects/article_574d80a3-e52d-5fe1-b797-38e420ca6e5c.html)