

It's mosquito, flea and tick season, and people are getting sick

By The Washington Post, adapted by Newsela staff on 05.07.18

Word Count **755**

Level **1050L**



In this January 18, 2016 photo, a female *Aedes aegypti* mosquito, known to be a carrier of the Zika virus, acquires a blood meal on the arm of a researcher at the Biomedical Sciences Institute of Sao Paulo University in Sao Paulo, Brazil. Photo by: Andre Penner/AP Photo

Spring and summer, with their warmer days, mean the start of tick and mosquito season. With these insects come the diseases that they transmit. They carry conditions including Lyme disease, Rocky Mountain spotted fever, West Nile and Zika.

The Centers for Disease Control and Prevention (CDC) issued a new report on the topic. It found that illnesses from mosquito, tick and flea bites more than tripled in the United States from 2004 to 2016.

The report, released Tuesday, May 1, shows that the number of reported cases of these diseases was 27,388 in 2004. It jumped

to more than 96,000 cases in 2016. The data include illnesses reported in the U.S. states and territories. During that period, a total of more than 640,000 cases of these diseases were reported to the CDC.

Number Of Cases Underestimated

Officials say the actual number of people who have become sick is much higher, in part because many infections are not reported or recognized. Some patients may experience mild symptoms and not seek medical attention. Additionally, not all diseases were reported for the full 13-year analysis period or from all states and territories. The data considerably underestimate how often disease occurs, the report said.

For example, recent data from doctors' diagnoses estimate that Lyme disease infects about 300,000 Americans every year. That is eight to 10 times more than the number reported in the CDC study. In 2016, the number of Lyme diseases reported for the United States was 36,429.

Widespread, Resistant To Control

As a group, these diseases in the United States are notable for being widespread and resistant to control. Only one of the diseases, yellow fever, has a vaccine approved by the Food and Drug Administration.

The responsibility for detecting and responding to diseases spread by vectors, or carriers, such as mosquitoes and ticks is almost all funded locally. Efforts to prevent and fight the diseases come from local and state health departments. However, their resources have been greatly reduced over the years.

Overseas Travel, Weather-Related Factors

The increase in disease cases caused by the bite of an infected mosquito, tick or flea in the United States is most likely the result of many factors. Mosquitoes and ticks and the pathogens they spread are increasing in number and moving into new areas. As a result, more people are at risk for infection. Overseas travel and business are also increasingly common. Someone infected with a mosquito-borne disease like Zika in one country can unknowingly transport it home.

Environmental factors, such as rainfall and temperature, also affect the mating and biting habits of these many different species. Most of the causes of disease are transmitted to humans from animals, such as rodents or birds, the report said. This makes them difficult or impossible to stop, it said.

Public Health Threat

Experts warn that climate change can worsen many public health threats. The heating up of Earth's climate might affect humans in several ways. The increased risk includes diseases spread

INSECT-BORNE DISEASES IN THE U.S. 2004-2016

Ticks can carry:



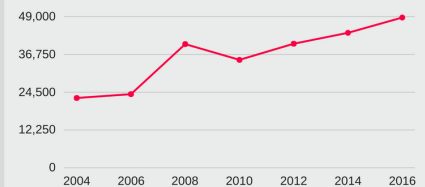
- Lyme disease
- Rocky Mountain spotted fever
- Babesiosis
- Anaplasmosis

Mosquitos can carry:

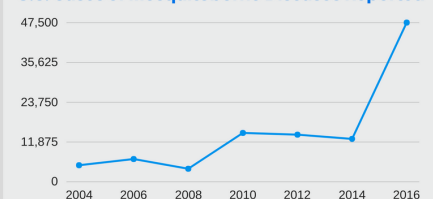


- Malaria
- Dengue
- Yellow fever
- Zika
- West Nile virus

U.S. Cases of Tickborne Diseases Reported



U.S. Cases of Mosquitoborne Diseases Reported



642,602 total number of cases reported to the CDC from 2004 to 2016

16

diseases caused by bacteria, viruses, or parasites transmitted through mosquitoes, ticks or fleas from 2004 to 2016.

9

insect-borne diseases reported in the U.S. for the first time from 2004 to 2016.

Data: Centers for Disease Control and Prevention; Graphic: Newsela staff

by insects and other animals that thrive in warmer conditions.

The report said that carriers have the proven or possible capacity to transmit many kinds of diseases. That leaves the United States at risk of disease outbreaks, it said.

Tick-borne diseases account for more than 75 percent of the reports and occur throughout the continental United States. However, they are mainly in the eastern part of the country and in areas along the Pacific Coast.

Diseases spread by mosquitoes, such as dengue fever, chikungunya and Zika viruses, were almost exclusively transmitted in Puerto Rico, American Samoa and the U.S. Virgin Islands. West Nile virus, also spread by mosquitoes, is widespread across the continental United States. West Nile is the major mosquito-borne disease in the continental United States.

New Germs Discovered

During the time of the study, new germs were found. Nine new germs spread by the bites from infected mosquitoes and ticks were discovered or introduced in the United States, the report said.

The report said that new or unknown carrier-borne illnesses appear to be emerging at a faster pace. These diseases might be new or might just not be recognized at first.

They include two previously unknown, life-threatening tick-borne viruses that were reported in the Midwest. They are known as Heartland and Bourbon. Also included are the chikungunya and Zika viruses transmitted by mosquitoes that were introduced to Puerto Rico in 2014 and 2015. In the United States, there was limited local spread of dengue and Zika viruses in Florida and Texas.