

Lyme Disease in West Virginia

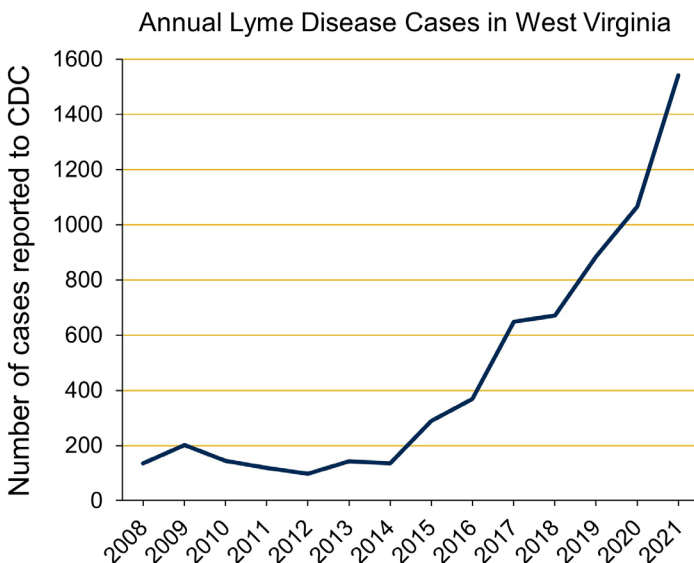
Addressing worsening Lyme disease in West Virginia

Lyme disease cases are on the rise in West Virginia

Tick-borne diseases, particularly Lyme disease, have been a problem of increasing magnitude in West Virginia over the past decade. Lyme disease is passed to humans through a bite from a blacklegged, or deer, tick. Symptoms vary, but often include a “bull’s-eye” rash at the bite site and a fever. If not detected and treated early, life-long symptoms such as arthritis can persist.

- The number of [reported cases](#) of Lyme disease in West Virginia increased from 297 in 2016 to 1,542 reports in 2021.
- [Most counties](#) in West Virginia had confirmed or probable cases of Lyme disease between 2000-2014.

Greater future precipitation in West Virginia is expected to increase the number of Lyme disease cases and tick encounters.



Above: Recent increases in annual cases of Lyme disease reported to the CDC in West Virginia. Source: [Lyme Disease Data Tables: Historical Data](#)



Photo credit: [WV Department of Tourism](#)

Research Highlights

- Lyme disease cases in West Virginia have dramatically increased in the past decade and are expected to continue increasing.
- West Virginia lacks the information needed to make wise decisions about addressing Lyme disease.
- West Virginia University researchers are addressing Lyme disease.

What are the costs of Lyme disease in the US?

Lyme disease presents a significant economic burden to society. CDC research estimated:

- The total annual cost of Lyme disease to the [US in 2016 was between \\$345-968 million](#).
- Average treatment cost to patients were \$1,200
- Average societal cost per case was \$2,000.
- Early detection and treatment could [reduce costs by at least half](#).

Thus, prevention and early detection can be key to reducing the overall costs created by Lyme disease. However, current testing is often unreliable until a few weeks after the infection starts.

State actions to protect against Lyme disease and tick-borne illness

- **West Virginia** passed [legislation](#) requiring health insurance coverage for Lyme disease treatment in 2018.
- **Maine** has a [deer tick and Lyme disease data tracking portal](#), to help residents with early prevention and treatment solutions.
- **New York, Michigan, and Wisconsin** all [passed legislation](#) requiring warning signage in state parks to inform hikers of the risk ticks pose and prevention.
- **16 states**, not including West Virginia, are currently participating [in CDC's BRACE \(Building Resilience Against Climate Effects\)](#) effort. States receive funding and expert guidance on planning for expected future changes in public health.

WVU research on tick-borne disease

Several initiatives at West Virginia University are advancing prevention, detection, reporting, and treatment of tick-borne diseases.

- To improve early detection of Lyme disease, and two other tick-borne diseases, [WVU researcher, Dr. Srivastava](#), is developing a new technology to detect the disease at an early stage.
- [Dr. Driscoll](#) is working to understand why some tick-borne Rickettsioses (a group of diseases including Rocky mountain spotted fever) are deadly while others are not.
- A team of WVU researchers are collaborating to [develop a vaccine for Lyme disease](#). Dr. Barbier, Dr. Driscoll, and Dr. Damron hope to prevent cases of Lyme disease with a first-of-its-kind vaccine.

Beyond West Virginia, others, such as [Pfizer and Moderna](#), are working to develop a human Lyme disease vaccine.

Preventing tick bites

[According to the CDC](#), tick exposure can occur any time of the year, but is most common during warmer months. To prevent tick bites, you can take these simple actions:

- Do your research: ticks live in grassy, brushy, or wooded areas. Be aware if you are entering a place that might house ticks.
- Use EPA-registered insect repellent: for those 3 and over, apply repellent before going into areas where you might encounter ticks. You can also treat your clothes and gear.
- Stay on the trail. Avoid especially brushy or leafy areas.
- Check well for ticks: when returning indoors, check all clothing, pets, and your body for ticks.
- Showering soon after returning indoors can help reduce tick bites by washing off unattached ticks.
- Remove ticks immediately if found on body or pet, using tweezers to grasp tick behind the head and gently and slowly pull off.
- See [Maine Center for Disease Control & Prevention](#) for additional tips.



Above: Black legged tick or deer tick, a species of tick that carries and transmits Lyme disease to humans. This species is common to the state of West Virginia. Image Source: [University of Rhode Island](#)