

# Printable Fact Sheet for Physicians about Lyme and Tick-borne Diseases in Vermont

All data is from the Centers for Disease Control and Prevention (CDC) and the Vermont Department of Health



**In 2017, Vermont had the highest incidence of Lyme disease in the U.S.** The CDC has labeled Vermont a "High Incidence State". High Incidence States have an average incidence of at least 10 confirmed cases per 100,000 persons for previous three reporting years.

Vermont's incidence of confirmed cases of Lyme averaged **85.5 per 100,000 from 2014 to 2016**, and the actual incidence of Lyme disease in Vermont is suspected to be significantly higher. Some Southern Vermont counties have incidence rates of 200 cases per 100,000.

## DIAGNOSIS

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**Lyme disease has been shown to occur in Vermont all 12 months of the year.** According to the Vermont Department of Health the risk for contracting Lyme disease is highest May through August. Illness onset occurs January through December in Vermont, with the highest incidence during June and July.

Lyme disease is more than a "Bulls-Eye" rash. **According to the Vermont Department of Health, in 2014 less than 50% of Vermont children with confirmed cases of Lyme disease had an EM rash.**

### 10 Most Commonly Reported Symptoms of Confirmed Lyme Disease Cases in Vermont

2005-2015, Vermont Department of Health

- ▶ EM Rash
- ▶ Joint Swelling
- ▶ Joint Pain
- ▶ Fever/Sweat/Chills
- ▶ Muscle Pain
- ▶ Headache
- ▶ Neck Pain
- ▶ Temporary Facial Paralysis (Bell's Palsy)
- ▶ Other Rash

### Other Symptoms of Lyme Disease:

- ▶ Heart palpitations or an irregular heart beat
- ▶ Episodes of dizziness or shortness of breath
- ▶ Nerve pain
- ▶ Shooting pains, numbness, or tingling in the hands or feet
- ▶ Problems with short-term memory
- ▶ Intermittent pain in tendons, muscles, joints, and bones
- ▶ Depression, Panic Attacks, Mood Disorders

The CDC states, "Different people exhibit different signs and symptoms of Lyme disease. Some people never develop a bull's-eye rash. Some people only develop arthritis, and for others nervous system problems are the only symptom of Lyme disease."

The CDC recommends a Lyme disease diagnosis should be based on "Signs and Symptoms, and a history of possible exposure to infected blacklegged ticks."

## BLOOD TESTS

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According to the CDC, "During the **first few weeks of infection, such as when a patient has an erythema migrans rash, the test is expected to be negative.**"

The CDC also notes, "**Some people who receive antibiotics (e.g., doxycycline) early in disease (within the first few weeks after tick bite) may never develop antibodies or may only develop them at levels too low to be detected by the test.**"

## CO-INFECTIONS

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According to the Vermont Department of Health, black-legged ticks in Vermont can also transmit Powassan virus disease, Borrelia miyamotoi disease, Anaplasmosis and Babesiosis. Some of these, such as Babesiosis which is a parasitic disease, are treated with different medications than Lyme disease.

The CDC notes "The frequency of tickborne coinfections in Lyme disease patients from endemic areas ranges from 4 to 45% (Swanson et al. 2006). From 2 to 12% of patients with early Lyme disease may also have anaplasma infection, and 2 to 40% of patients with early Lyme disease may also have babesia infection, depending on the region (Wormser, 2006)."

## LYME DISEASE AND PREGNANCY

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According to the CDC, "Lyme disease acquired during pregnancy may lead to infection of the placenta and possible stillbirth." When the mother receives appropriate antibiotic treatment for her Lyme disease, the fetus may avoid harm.

## SYMPTOMS AFTER TREATMENT

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Studies show that anywhere from 5% to 20% of patients will experience ongoing symptoms of Lyme disease after standard treatment. The CDC calls this PTLDS, or Post Treatment Lyme Disease Syndrome. **Patients should be made aware that treatment may not resolve all symptoms.** Follow-up appointments should be made to ensure your patient has recovered, or is receiving support for ongoing symptoms related to Lyme disease and possible co-infections.