



[In early 2017 we published a chart](#) showing inconsistencies in information about Lyme disease as reported in Vermont media from 2014-2016. This review showed that even among medical and science professionals there was confusion about the diagnosis and treatment of Lyme disease in Vermont.

Here is an updated chart from a review of articles published in VT from 2017 to early 2019. While some improvement has occurred – many more articles mentioned the impact of other tick-borne diseases in Vermont such as anaplasmosis and babesiosis – there continues to be discrepancies and inaccuracies about Lyme and tick-borne diseases in Vermont’s local media.

One of our goals at VTlyme.com is to ensure Vermonters have accurate information about Lyme and tick-borne diseases. We hope this chart highlights the need for consensus in our medical community and the conveyance of accurate information about the transmission, diagnosis, treatment, and impact of tick-borne diseases on Vermonters.

Links to articles available at [VTLYME.ORG/MISINFORMATION](http://VTLYME.ORG/MISINFORMATION)



## VT Media About Lyme Disease

## Lyme Disease Summary

### 'Bullseye' Rash

- ▶ "It occurs in up to 80 percent of people" – VT Department of Health
- ▶ "About 70 percent of people with Lyme disease report the characteristic bull's-eye rash." – Valley News
- ▶ "Only about 25 percent of people who are diagnosed with Lyme disease get the characteristic "bull's eye" rash." – Southern Vermont Health Care
- ▶ "Most, but not all, people with Lyme disease report a rash." – Milton Independent
- ▶ "One of the earliest signs of Lyme is a "bull's-eye rash" that can occur several days after the bite." – Adirondack Daily Enterprise
- ▶ "The rash itself won't appear for 10 to 14 days" – VT Digger
- ▶ "The most visible sign of Lyme disease is the characteristic rash called erythema migrans (EM) or "bull's eye." This rash usually develops within one month of the tick bite." – Mount Ascutney Hospital
- ▶ "Within the first three days you might have a rash." – Burlington Free Press
- ▶ "The first symptom is usually an expanding rash, which occurs at or near the site of the tick bite, usually in about 7 to 14 days." – UVM Extension
- ▶ "Not all people with Lyme disease report a rash. – Newport Dispatch News
- ▶ This rash occurs 3-30 days after the tick bite and may or may not have a characteristic "bull's-eye" appearance." – Green Mountain Audubon
- ▶ "A tell-tale bullseye rash around the bite accompanies most cases of Lyme disease." – Stowetoday.com

In 2014 VT Department of health surveillance report showed less than half the children in Vermont with Lyme disease had an EM rash (49.5%). The same year's report showed 66.9% in adult cases. Currently the VT Department of Health website states, "About 30% of confirmed cases of Lyme disease reported to the Vermont Department of Health do not have an EM rash at the time of their diagnosis."

The VDH's 2016 Tickborne disease Annual Report notes, "The percentage of confirmed Lyme disease cases with an EM rash has trended downward over the last nine years, while the number of confirmed cases reported has generally increased. Combined, this indicates that more cases of Lyme disease without an EM rash are being diagnosed and reported in Vermont."

### Timing of Lyme Disease Symptoms

- ▶ "Symptoms can begin three days after a tick bite, or as long as 30 days after, but usually appear within one to two weeks." – VT Department of Health
- ▶ "Symptoms of disseminated disease can occur days to months after the initial infection" – VDH
- ▶ "Symptoms may begin as soon as three days after a tick bite, but can appear as long as 30 days afterward." – Valley News
- ▶ "Monitor your health for 30 days following a tick bite." – Milton Independent
- ▶ "If you have any flu-like symptoms in the weeks after having a tick bite you might go to your physician..." – Burlington Free Press
- ▶ "If you were bitten by a tick, watch for symptoms of Lyme disease in the weeks following the bite." – Rutland Herald
- ▶ "A small percentage of untreated people develop chronic nervous system problems months to years after infection." – VT Department of Health
- ▶ "Monitor the site of the bite for the next 30 days for any signs of Lyme disease." – UVM Extension

According to the VT Department of Health, "Symptoms of disseminated disease can occur days to months after the initial infection" and "neurological problems can occur weeks to months after a tick bite." The CDC notes that symptoms of early Lyme disease may appear in the first month, and symptoms of disseminated Lyme disease can occur days to months after a tick bite.

Lyme symptoms can include fatigue, joint pain, episodes of dizziness, shortness of breath, headaches, gastrointestinal problems, and problems with short-term memory. These may occur days, months, or years after infection.

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### Tick Attachment

- ▶ "With such a high rate of infected ticks in Vermont, experts emphasize the importance of recognizing that the majority of tick bites have the potential to transmit an illness." — Manchester Journal
- ▶ "Even though many ticks carry the Lyme bacteria, very few tick bites — fewer than 5 percent — actually transmit and cause Lyme disease." — VT Digger
- ▶ "It can take 36 hours for a tick to transmit the bacteria that cause Lyme disease to you." — VDH
- ▶ "It typically takes at least 24 hours of being embedded in a person's skin for a tick to transmit the disease." — Valley News
- ▶ "It takes almost 48 hours for the tick to inject the Lyme bacteria." — Rutland Herald
- ▶ "It takes a period of many hours, or even days, for a tick to firmly attach itself to a person and inject the venom that contains the *Borrelia burgdorferi* bacteria." — Brattleboro Memorial Hospital
- ▶ "It's important to remember that the tick has to be on for usually 24-36 hours for it to transmit Lyme disease" — MyChamplainValley.com
- ▶ "Fortunately, Lyme disease is not usually transmitted within the first 36 hours of tick attachment." — Middlebury College Parton Center for Health and Wellness
- ▶ "Remember they need to be attached for 36 hours to transmit disease." — Caledonian Record
- ▶ "In general, the CDC says, ticks need to be attached for 36 to 48 hours before they can transmit the bacteria that cause Lyme disease." — VPR
- ▶ "If the tick is attached to the person for at least 24-48 hours, then the bacteria can be transferred to the person and they can become infected." — UVM Medical Center
- ▶ "Alison Hinckley, a CDC epidemiologist specializing in Lyme disease, said several studies show that a tick "needs to be attached for 48 to 72 hours to even be able to transmit the infection to a person." — VPR
- ▶ "The probability that it [Lyme disease] is transmitted to you ... depends on the length of feeding.... It looks like something on the order of 24 hours is required before transmission occurs." — VPR

According to a 2015 literature review, no minimum attachment time for transmission of infection has ever been established. The CDC says "in most cases the tick must be attached for 36 to 48 hours or more before the Lyme disease bacterium can be transmitted" which does not rule out a shorter timeline.

Other tick-borne pathogens, including *Borellia miyamotoi*, have been shown to be transmitted within 24 hours. Powassan Virus can be transmitted from tick to host in as soon as 15 minutes.

Also, a tick that has already been feeding on a different host, such as a family cat or dog, is able to infect a new host within 24 hours of their re-attachment.

### Treatment for Lyme Disease

- ▶ "Appropriate treatment of Lyme disease with antibiotics almost always results in a full cure." — VT Department of Health
- ▶ "About 10 to 20 percent of people have symptoms that persist after treatment." — Valley News
- ▶ "Prompt treatment with antibiotics.... cures most people." — Valley News
- ▶ "You can have residual effects from having Lyme disease that can go on for a long period of time." — Burlington Free Press
- ▶ "Lyme disease, including Lyme carditis, is treatable." — Colchester Sun
- ▶ "Existing antibiotics can cure Lyme disease... although some of the effects of the disease may linger for months afterward." — VT Digger
- ▶ "Lyme disease responds well to antibiotics and is curable. Most symptoms resolve quickly after the start of antibiotics, however it can occasionally take weeks or months for all symptoms to completely subside." — Mount Ascutney Hospital
- ▶ "A single dose of an antibiotic such as doxycycline given within 72 hours is often effective in preventing Lyme disease." — Green Mountain Audubon
- ▶ "Tompkins said if diagnosed and treated promptly, Lyme disease can be cured and people can go on to lead a normal life." — MyChamplainValley.com
- ▶ "There is a recognized, yet rare (10-20% of patients), syndrome called Post Treatment Lyme Disease Syndrome that causes sustained symptoms for months, or up to a few years." — MyChamplainValley.com
- ▶ "Most patients have an excellent clinical outcome." — VT Digger

The earlier a person is diagnosed with Lyme disease, the more likely standard treatment will work. Most people recover fully from Lyme disease when it is promptly diagnosed and appropriately treated, but those with a delayed diagnosis, or untreated disseminated disease, may have longer recovery times or need additional treatment. Some Vermonters have been disabled by tick-borne diseases. Approximately 10-20% of people treated for Lyme disease have continuing symptoms at least a year after treatment.

In Vermont, other vector-borne diseases such as anaplasmosis, ehrlichiosis, babesiosis and bartonellosis may impact recovery from Lyme disease.

There are questions about the use of single-dose doxycycline as a prophylactic treatment. The study that was the basis of this treatment used the prevention of an EM rash as evidence of prevention of Lyme disease. However, an EM rash is not present in all cases of Lyme disease.