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# Lyme Disease Prevention in Western Connecticut

Tyler Oe  
*University of Vermont*

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# Lyme Disease Prevention in Western Connecticut

Tyler Oe

Larner College of Medicine at  
UVM – Family Medicine  
Clerkship

Newtown Primary Care

June 2018

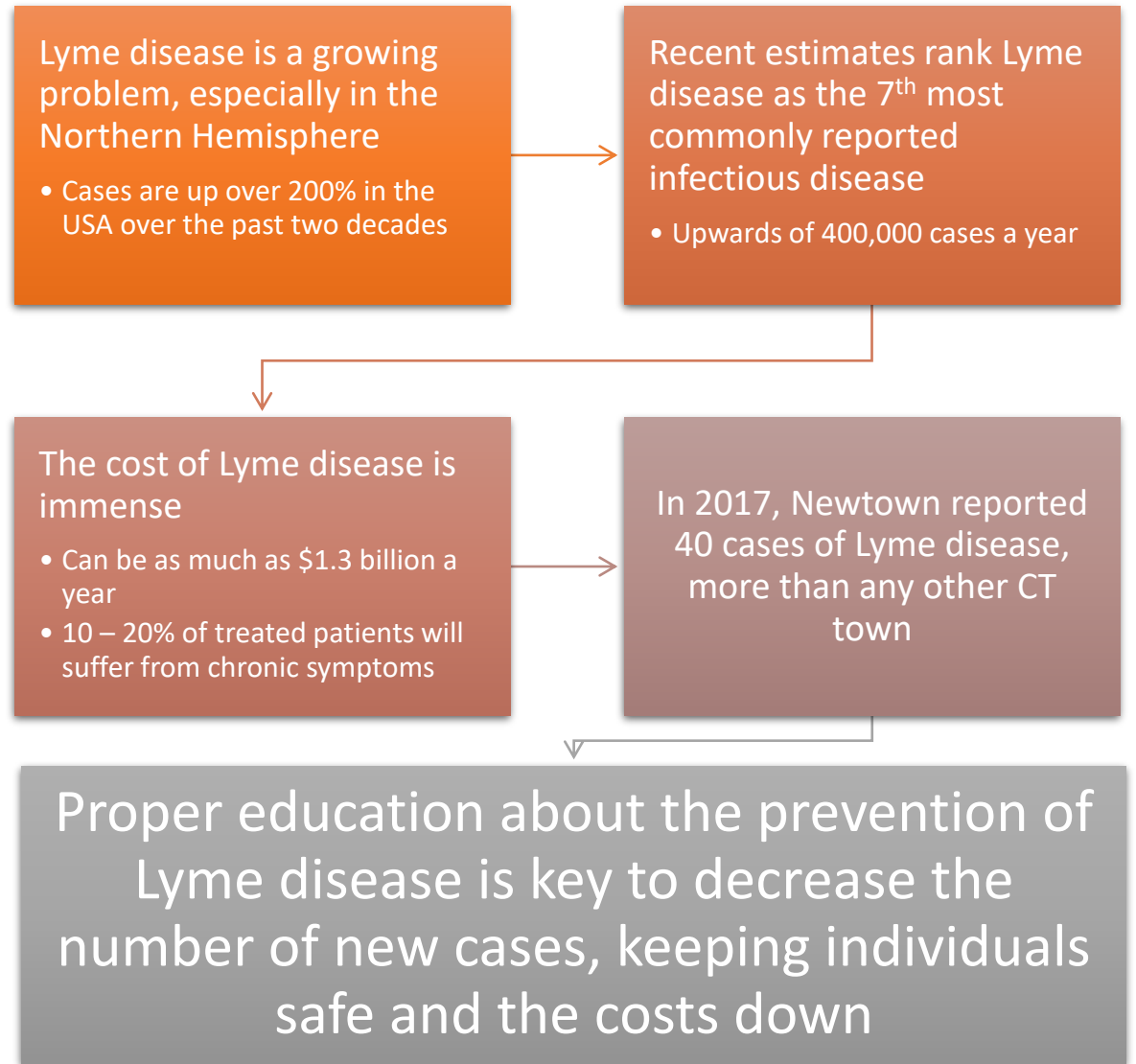
# The problem? Lyme Disease

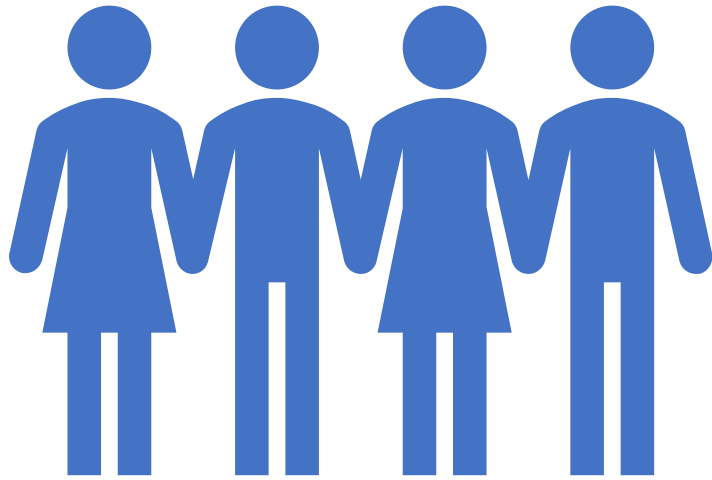
Lyme disease is caused by the bacteria *Borrelia burgdorferi* and is spread by *Ixodes scapularis*, the deer tick

Lyme disease can cause a systemic infection that is mostly responsive to antibiotic therap

The goal is to increase the awareness of Lyme disease and to educate patients on the proper preventative techniques to decrease the chances of being bit by a tick

# Lyme Disease is Costly; proper identification is necessary





# What does the Office Think?

“Lyme can be debilitating. People are constantly struggling to get the right care. Patients can definitely be better educated about Lyme disease. Also, more information on Babesiosis would be beneficial. All of these different tick-borne diseases can be complex.”

*Amy Ricketts, CMA*

“There’s a lot of conflicting information out there about Lyme disease. Sometimes it feels like we are taking shots in the dark when it comes to diagnosing and treating. The understanding of Lyme is still in its infancy.” *Hannah Fishchetto CMA*

## Lyme Disease Cheat Sheet

### What is Lyme Disease?



**QUICK STATS:**

- **Host:** Deer (most with white-tail)
- **Range:** The Northeast
- **Site:** In-ticking
- **Region:** Found primarily in the northeastern United States, southeastern Canada, and parts of the northwestern United States.

Lyme disease is caused by the bacteria *Borrelia burgdorferi* and is spread by the deer tick, *Ixodes scapularis*. Lyme disease was first identified here in Connecticut, making our state a hot spot. Although there are other ticks in Connecticut, the deer tick is responsible for the spread of Lyme disease.

Deer ticks are small, about an 1/8 inch in length with a flat and ovoid body. They are orange-brown, with a darker spot near the head. Their legs are darker, lending to their other name, the blacklegged ticks.

### How to Prevent Lyme Disease

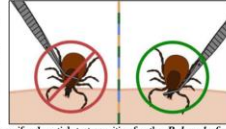
There are many preventative steps we can take to decrease our chances of getting tick bites and Lyme disease. These include:

- Reducing exposure
  - Wear long sleeved shirts and pants instead of t-shirts and shorts to ensure full skin coverage
  - Pick lighter color clothes instead of darker ones to make spotting ticks easier
  - Sneakers and other closed-toed shoes offer further protection over flip flops and sandals
  - Try to avoid brushing against tall grasses and other vegetation by walking in the middle of paths or trails
- Using insect repellent
  - Use repellent to reduce the chance of a tick bite
  - Deet containing repellents are regarded as most
  - Always follow the directions of the specific repellent you choose
- Inspecting clothes and yourself
  - Perform full body checks when spending time outdoors, especially when in wooded areas and tall brush
  - Don't forget to check the pets too

### How to Remove a Tick

Ticks are small and tough, so proper removal is key. **Always try to grab the tick right next to where it attaches to the skin.**

- Use tweezers or another fine grasping tool for tick removal
- Grab the head as close to the skin as possible
- Pull up and away from the skin until the tick lets go
- Clean the site with rubbing alcohol and soap and water



If you find a tick, you can submit it to the Connecticut Department of Health by calling (860) 369-7660. **Even if a deer tick tests positive for the *B. burgdorferi* bacteria, it is possible for a bitten individual to not get Lyme.** Look out for signs and symptoms listed below.

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### Signs and Symptoms of Lyme Disease

A deer tick must be attached for at least 24 hours to allow for the transmission of the causal bacteria. Lyme disease can progress through stages in an individual, which opens a wide range of associated symptoms. **Early disease** occurs within the first month following a tick bite and includes symptoms like:

- Flu symptoms: fever, fatigue, muscle and joint aches, swollen lymph nodes
- **Bull's eye rash** that is larger than a quarter



Some individuals will not experience these early symptoms, including the bull's eye rash, but may display other **disseminated symptoms** like:

- Painful and swollen joints
- Dizziness
- Facial or Bell's palsy
- Meningitis
- Heart palpitations

Lyme can also cause long term neurological issues, including numbness, tingling, and shooting pains. **If you are experiencing symptoms and possibly have been bitten by a tick, call your doctor.**

### Diagnosis and Treatment of Lyme Disease

Your physician can diagnose Lyme based on:

- Positive signs and symptoms
- Positive history of exposure to deer ticks

Laboratory tests do exist; however, they are **not recommended for individuals who do not have symptoms of Lyme**. The CDC currently recommends a two-step diagnostic testing process to test for antibodies against the causal bacteria. A **positive test is not necessary to make the diagnosis of Lyme**. More information on this can be found on the CDC's website (see References).

Typical treatment is a 10 - 21 day course of **doxycycline**. Individuals treated at the early stages of the disease typically recover quickly and fully.

### References

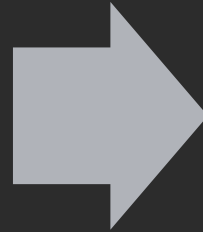
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# Intervention and Methodology

# Results

The handout was given to the office as an additional resource on Lyme



Patients interested in more information will be referred to the handout to exercise preventative measures

# Evaluation of a Lyme Disease Handout

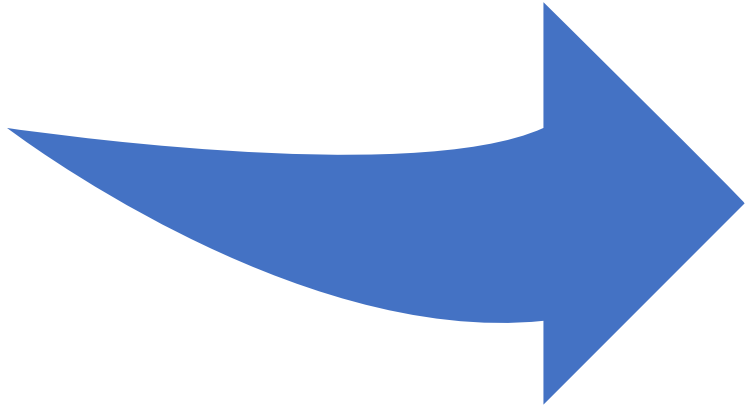
We can establish the effectiveness of prevention techniques by cross referencing the amount of Lyme cases reported from one year to the next

A questionnaire could have been employed before the handout to pre-assess the patients' understanding of Lyme disease and the steps they can take to protect themselves

Patients can self report to their provider if they found the handout beneficial in their understanding of Lyme disease

Limitations: short time frame, abridged information on Lyme, undiagnosed cases of Lyme





# Recommendations

- All patients with a significant environmental exposure should be made aware of the dangers of Lyme and should be directed to the handout for further information
- Integration into the patient portal will allow for more streamlined dissemination of the handout
- The handout should also be hung up in the exam rooms during the months of peak Lyme to provide even further exposure to the ways a patient can protect themselves

# References

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# Consent

Amy Kicketts

**Written Project:**

Students are required to submit a 10-slide PowerPoint summarizing their community project at the end of their clerkship. The first nine slides should summarize the community project and should be uploaded to ScholarWorks separately from page 10. Slide 10 will state the following: **Thank you for agreeing to be interviewed. This project is a requirement for the Family Medicine clerkship. It will be stored on the Dana Library ScholarWorks website. Your name will be attached to your interview and you may be cited directly or indirectly in subsequent unpublished or published work. The interviewer affirms that he/she has explained the nature and purpose of this project. The interviewee affirms that he/she has consented to this interview.**

Yes  / No

If not consenting as above: please add the interviewee names here for the department of Family Medicine information only.  
Name: \_\_\_\_\_

If you received informed consent, please upload page 10 as a separate document entitled: "Name of Project/Interview Consent Form". If an informed consent was not received, please do not upload the consent page to ScholarWorks. However, you should include the consent page when submitting your PowerPoint to the Family Medicine Department.

These projects must be submitted electronically to the Clerkship Coordinator, Luke Hebert, at [Luke.Hebert@med.uvm.edu](mailto:Luke.Hebert@med.uvm.edu) no later than the morning of the final day, prior to sitting for the exam. Late projects receive an automatic 5 point deduction prior to faculty scoring.

Hannah Fiscetto

**Written Project:**

Students are required to submit a 10-slide PowerPoint summarizing their community project at the end of their clerkship. The first nine slides should summarize the community project and should be uploaded to ScholarWorks separately from page 10. Slide 10 will state the following: **Thank you for agreeing to be interviewed. This project is a requirement for the Family Medicine clerkship. It will be stored on the Dana Library ScholarWorks website. Your name will be attached to your interview and you may be cited directly or indirectly in subsequent unpublished or published work. The interviewer affirms that he/she has explained the nature and purpose of this project. The interviewee affirms that he/she has consented to this interview.**

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