Background

Lyme disease is caused by the bacterium *Borrelia burgdorferi* and is transmitted to humans through the bite of infected blacklegged ticks. Typical symptoms include high fever, headache, fatigue, and a characteristic skin rash called erythema migrans.

The Lyme disease bacterium, *Borrelia burgdorferi*, is spread through the bite of infected ticks. On the Pacific Coast, the western blacklegged tick *(Ixodes pacificus)* may carry Lyme disease. In the northeastern, mid-Atlantic, and north-central United States, the blacklegged tick (or deer tick, *Ixodes scapularis*) may carry Lyme disease.

Ticks can attach to any part of the human body, but are often found in hard-to-see areas such as the groin, armpits, and scalp. In most cases, the tick must be attached for at least 24 to 36 hours before the Lyme disease bacterium is transmitted.

Most humans are infected through the bites of immature ticks called nymphs. Nymphs are tiny (less than 2 mm) and difficult to see; they feed during the spring and summer months. Adult ticks can also transmit Lyme disease bacteria, but they are much larger and are more likely to be discovered and removed before they have had time to transmit the bacteria. Adult *Ixodes pacificus* ticks are most active during the cooler months of the year.

Steps to prevent Lyme disease include using insect repellent, removing ticks promptly, applying pesticides, and reducing tick habitat. The ticks that transmit Lyme disease can occasionally transmit other tickborne diseases as well.

Ticks not known to transmit Lyme disease include the American dog tick (*Dermacentor variabilis*), the Rocky Mountain wood tick *(Dermacentor andersoni*), the brown dog tick (*Rhipicephalus sanguineus*) and the Lone star tick (*Amblyomma americanum*).

1. Adult female, Ixodes species tick (can transmit Lyme disease).

2. Adult male, Dermacentor species tick.

Information on laboratories that offer testing services for other tick-borne pathogens
(The NSYMPHL does not endorse any other laboratory or testing services)
1. https://acvcsd.org/programs-services/ticks/instructions-for-disease-testing/
2. https://www.bayarealyme.org/lyme-disease-prevention/tick-testing/

For additional information please refer to:
1. https://www.cdc.gov/lyme/faq/index.html
2. https://www.cdc.gov/lyme/index.html