

# Lyme Disease

in New York City, 2021 and 2022



- Ticks and tick-borne diseases, primarily **Lyme disease**, continue to be a concern for New Yorkers.

- Ticks are very small; some are the size of a poppy seed or sesame seed, making them very hard to see.

- Ticks avoid heat and direct sunlight and prefer cooler areas where trees, brush, leaf litter and tall grasses provide cover and shade from the sun.



Image 1. Blacklegged ticks: larva, nymph, adult male and adult female from left to right

- Most people are bitten by ticks during the **spring, summer and fall**, but ticks can be active whenever the temperature is above freezing.
- Lyme disease is caused by bacteria that are spread from an infected **blacklegged tick** (Image 1) when it bites humans and some animals, including dogs.



Image 2. Bull's-eye rash (erythema migrans)

- Common symptoms of Lyme disease include a bull's-eye rash (Image 2), headache, fever, tiredness, swollen glands (lymph nodes), and muscle and joint pain. Symptoms usually develop three to 30 days after the tick bite.

- Lyme disease can be treated with prescription antibiotics.

- The blacklegged tick is established in two areas of NYC. It is widespread across **Staten Island** and is present in a small part of the **North Bronx**.

- The main **risk factors** for Lyme disease for NYC residents are **travel to an area where blacklegged ticks are widespread** and **spending time outdoors on Staten Island or in the North Bronx**.

## NYC Tick Populations

Tick populations in NYC are monitored in select parks, most of which are on Staten Island.

Findings show that blacklegged ticks:

- Are not established in Manhattan, Brooklyn or Queens
- Are established across Staten Island and in a small area of the Bronx, which includes Pelham Bay and Hunter Island
- Collected from the Bronx and Staten Island can carry the bacteria that cause Lyme disease

# Lyme Disease in NYC, 2021 and 2022

## Characteristics of Patients With Lyme Disease, NYC 2021 and 2022

- There were 820 identified patients with Lyme disease in NYC in 2021 and 2,018 cases in 2022 (Figure 1). The surge of cases in 2022 can be attributed to a change in the criteria used to define how Lyme disease cases are counted. This change led to more people meeting the national case definition.
- Patients were from all five boroughs, and most were from Brooklyn (39.3%) and Manhattan (37.4%) (Figure 2).
- Most people became infected while traveling outside of NYC. The most commonly reported travel destinations were upstate New York (67.5%), Long Island (31.8%), Pennsylvania (12.1%), New Jersey (9.8%) and Connecticut (7.5%).\*
- Local transmission of Lyme disease continued to occur on Staten Island, where 66.7% of patients did not travel.\*
- Most patients were male (56.2%), and among those with a known race, most were non-Hispanic White (35.2%).
- Patients ranged from less than one year old to 95 years old, with an average age of 42 years old.

\*Among patients from the outer boroughs whose physician reported a bull's-eye rash, 132 patients' travel histories were obtained from either the patients (76.6%) or their health care providers (23.4%).

Figure 1. NYC Lyme Disease, 2013 to 2022

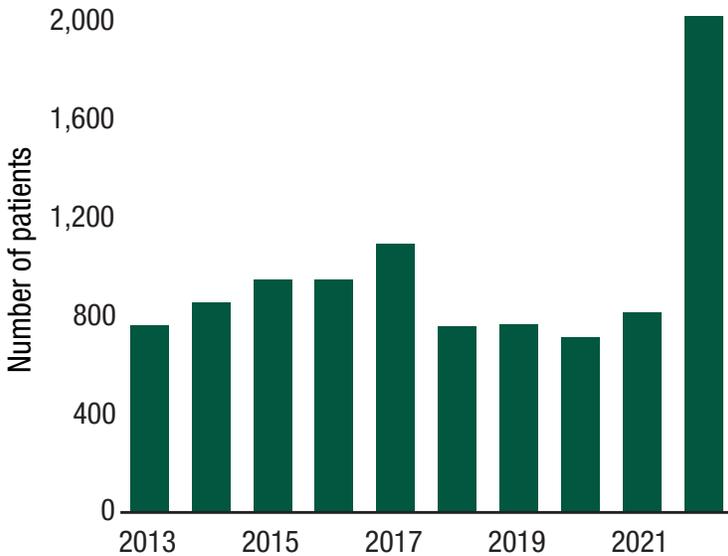
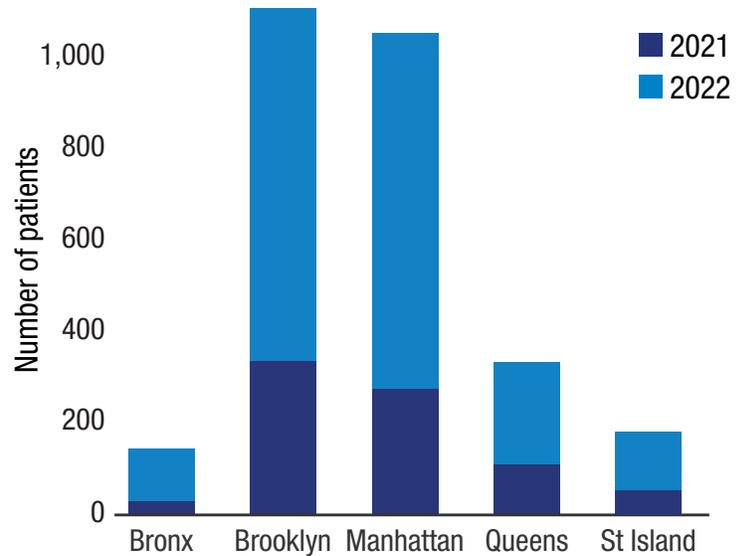


Figure 2. NYC Lyme Disease by Borough, 2021 and 2022



### Follow These Tips Below to Prevent Tick-Borne Diseases

Before You Go Outdoors	After You Come Indoors
<ul style="list-style-type: none"> <li>• Use insect repellent with DEET, picaridin or IR3535.</li> </ul>	<ul style="list-style-type: none"> <li>• Check your clothing for ticks and remove any that are found.</li> </ul>
<ul style="list-style-type: none"> <li>• Treat clothing and gear with products containing 0.5% permethrin.</li> </ul>	<ul style="list-style-type: none"> <li>• Put dry clothes in a dryer on high heat for 10 minutes to kill ticks. Wet or damp clothes will need more time in the dryer.</li> </ul>
<ul style="list-style-type: none"> <li>• Wear long pants, long-sleeved shirts and closed toe shoes, and tuck pant legs into socks.</li> </ul>	<ul style="list-style-type: none"> <li>• Shower as soon as possible after being outdoors.</li> </ul>
<ul style="list-style-type: none"> <li>• Avoid wooded and brushy areas with tall grass or leaf litter and walk in the center of trails.</li> </ul>	<ul style="list-style-type: none"> <li>• Check yourself, children and pets for ticks.</li> </ul>

 Talk to your veterinarian about the best tick prevention products for your pet.