

Lyme Disease

in New York City, 2020



- Ticks and tick-borne diseases, primarily **Lyme disease**, continue to be a concern in New York City (NYC).

- Ticks are about the size of a poppy or sesame seed, often making them difficult 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.

- Common symptoms of Lyme disease include a bullseye 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**.



Image 2. Bullseye rash (erythema migrans)

NYC Tick Populations

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

Findings show that blacklegged ticks:

- Are not established in Manhattan, Brooklyn and Queens.
- Are established across Staten Island and in Pelham Bay Park in the Bronx.
- Collected from the Bronx and Staten Island can carry the bacteria that cause Lyme disease.

Lyme Disease in NYC, 2020

Characteristics of Patients With Lyme Disease, NYC 2020

- There were 712 identified patients with Lyme disease in NYC in 2020, slightly less than in 2019 (Figure 1).
- Patients were from all five boroughs, and most were from Brooklyn (40%) and Manhattan (34%) (Figure 2).
- Most people became infected while traveling outside of NYC. The most commonly reported travel destinations were upstate New York (60%), Long Island (12%), Pennsylvania (12%), New Jersey (9%) and Connecticut (3%).*
- Local transmission of Lyme disease continued to occur on Staten Island, where 88% of patients did not travel.*
- Most patients were male (57%) and among those with a known race, most were non-Hispanic White (75%).
- Patients range from less than one year to 97 years, with an average age of 41 years old.

*Among patients from the outer boroughs whose physician reported a bullseye rash, 70 patients' travel histories were obtained from either the patients (51%) or their health care providers (49%).

Figure 1. NYC Lyme Disease, 2010 to 2020

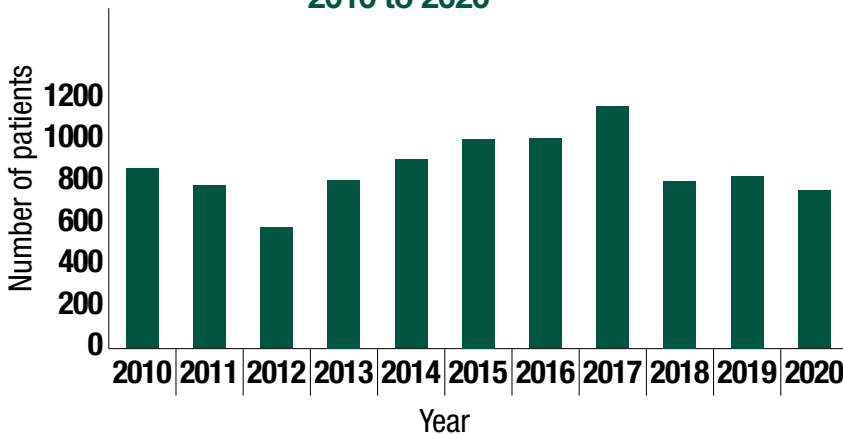
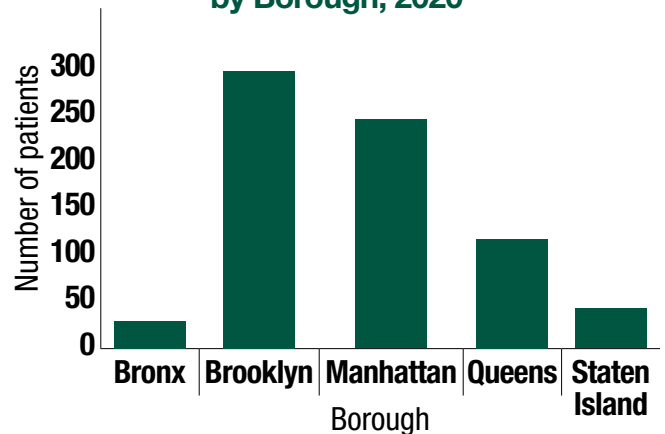


Figure 2. NYC Lyme Disease by Borough, 2020



Follow These Tips Below to Prevent Tick-borne Diseases

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

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

For more information on ticks, including how to safely remove them, visit nyc.gov/health/ticks.
For information on Lyme disease, visit nyc.gov/health and search for **lyme disease**.