



Tick-borne Diseases

Other Than Lyme Disease in New York City, 2020

- Ticks and tick-borne diseases (TBDs) continue to be a concern in New York City (NYC).
- 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.
- Ticks are very small; some are the size of a poppy or sesame seed, making them very hard to see.
- Ticks mostly bite people during the **spring**, **summer** and **fall** but can be active whenever the temperature is above freezing.
- Most NYC residents diagnosed with a TBD are infected while traveling to an area where infected ticks are widespread, such as upstate New York, Long Island and surrounding states.
- Infections also occur among people who live and spend time outdoors on Staten Island, where blacklegged ticks are widespread.

Ticks and Tick-borne Diseases in NYC



Blacklegged ticks can spread Lyme disease, anaplasmosis, babesiosis and Powassan virus disease.
Image 1. Blacklegged tick, adult female



Lone star ticks can spread ehrlichiosis.
Image 2. Lone star tick, adult female



American dog ticks can spread Rocky Mountain spotted fever (RMSF).
Image 3. American dog tick, adult female



Asian longhorned ticks have not been shown to spread human diseases in the United States.
Image 4. Asian longhorned tick, adult female

For more information on the clinical signs and treatment for each disease, visit nyc.gov/health/ticks.

NYC Tick Populations

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

- **Blacklegged ticks** are found throughout Staten Island and the North Bronx. Blacklegged ticks have been found to carry the bacteria which cause Lyme disease and anaplasmosis on Staten Island and in the Bronx, and the parasite which causes babesiosis on Staten Island. Since 2016, eight ticks from the Bronx have been found to carry Powassan virus.
- **Lone star ticks** are found on Staten Island and in the North Bronx but have not been found to carry the bacteria which cause ehrlichiosis.
- **American dog ticks** are found in all five boroughs. Historically, a small number have been found to carry the bacteria which cause RMSF.
- **Asian longhorned ticks** are also found on Staten Island and in the North Bronx but have not been found to spread human diseases in the U.S.

Tick-borne Diseases in NYC, 2020

Characteristics of Patients With Tick-borne Diseases Other Than Lyme Disease, NYC 2020

- Excluding Lyme disease, there were 206 identified patients with a TBD in NYC in 2020 (Figure 1). Anaplasmosis was the most commonly reported disease (105), followed by babesiosis (86) and ehrlichiosis (15).
- Patients were from all five boroughs, and most were from Manhattan (56%) and Brooklyn (25%) (Figure 2).
- Most patients were male (62%) and non-Hispanic White (76%).
- TBDs were reported among people of all ages, ranging from 6 to 92 years. However, most cases were among people 45 years or older (83%), with an average age of 57 years.
- Most people were infected outside of NYC. The most commonly reported regions were upstate New York, Long Island, Massachusetts, Pennsylvania, Connecticut and New Jersey.*
- Local transmission of babesiosis and anaplasmosis continued to occur on Staten Island, where nine residents with babesiosis and one with anaplasmosis did not travel.
- There were no RMSF cases in 2020, but historically, small numbers of locally acquired cases have been reported in NYC.

* Travel histories were obtained from either the patients (89%) or their health care providers (11%).

Figure 1. NYC Tick-borne Diseases, 2010 to 2020

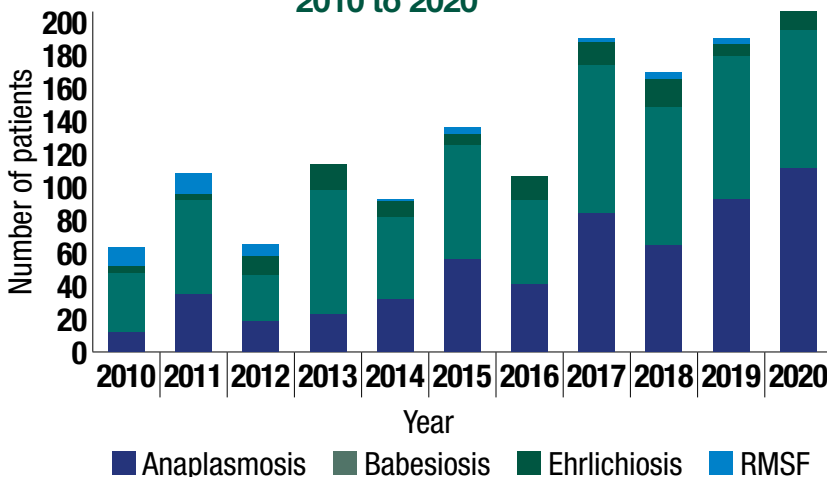
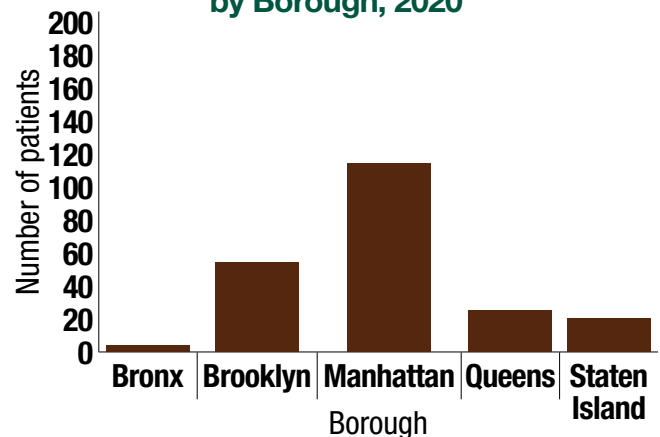


Figure 2. NYC Tick-borne Diseases by Borough, 2020



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**.