



Tick-Borne Diseases

Other Than Lyme Disease in New York City, 2021 and 2022

- Ticks and tick-borne diseases continue to be a concern for New Yorkers.
- 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 seed or sesame seed, making them very hard to see.
- Most people are bitten by ticks during the **spring, summer** and **fall**, but ticks can be active whenever the temperature is above freezing.
- Most NYC residents diagnosed with a tick-borne disease 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 diseases such as **Lyme, anaplasmosis, babesiosis, Powassan virus and Borrelia miyamotoi.**



Lone star ticks can spread **ehrlichiosis.**



American dog ticks can spread **Rocky Mountain spotted fever (RMSF).**



Asian longhorned ticks have not been shown to spread human diseases in the United States (U.S.).

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 that cause Lyme disease and anaplasmosis on Staten Island and in the Bronx, and the parasite that 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 that cause ehrlichiosis.
- **American dog ticks** are found in all five boroughs. Historically, a small number have been found to carry the bacteria that cause RMSF.
- **Asian longhorned ticks** are found on Staten Island and in the North Bronx but have not been found to spread human diseases in the U.S.
- **Gulf Coast ticks** are also found on Staten Island and can transmit *Rickettsia parkeri* rickettsiosis.

Tick-Borne Diseases in NYC, 2021 and 2022

Characteristics of Patients With Tick-Borne Diseases Other Than Lyme Disease, NYC 2021 and 2022

- Excluding Lyme disease, there were 236 identified patients with a tick-borne disease in NYC in 2021 and 123 in 2022 (Figure 1). In 2021 and 2022 combined, anaplasmosis was the most commonly reported disease (170), followed by babesiosis (165) and ehrlichiosis (16).
- Patients were from all five boroughs. The majority of patients were residents of Manhattan (53.2%) and Brooklyn (17.3%) (Figure 2).
- Most patients were male (63.5%) and non-Hispanic White (36.3%).
- Tick-borne diseases were reported among people of all ages, ranging from 3 to 89 years. However, most cases were among people 45 years or older (84.6%), with an average age of 60 years old.
- 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. There were five Staten Island residents in 2021 and one Staten Island resident in 2022 who were diagnosed with babesiosis and had no recent history of travel.
- There were six RMSF cases in 2022, with one NYC resident diagnosed with no recent history of travel. Historically, small numbers of locally acquired cases have been reported.

*Travel histories were obtained from either the patients (64.8%) or their health care providers (35.2%).

Figure 1. NYC Tick-Borne Diseases, 2012 to 2022

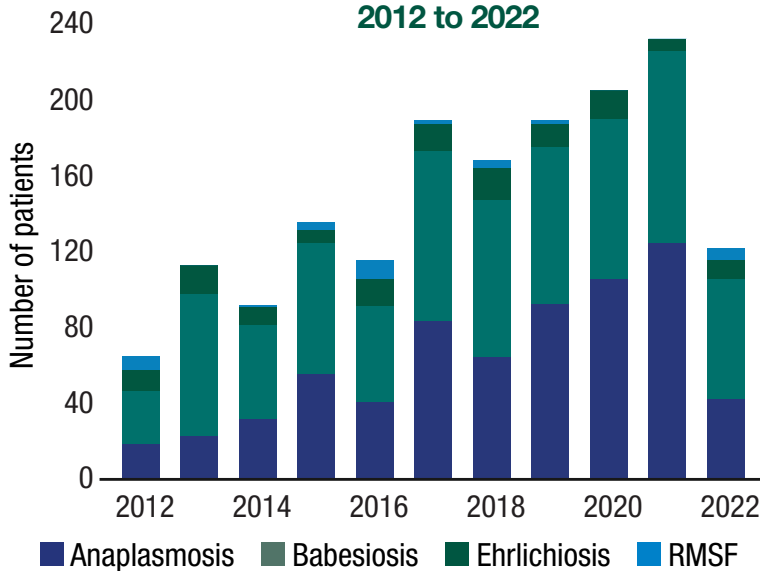
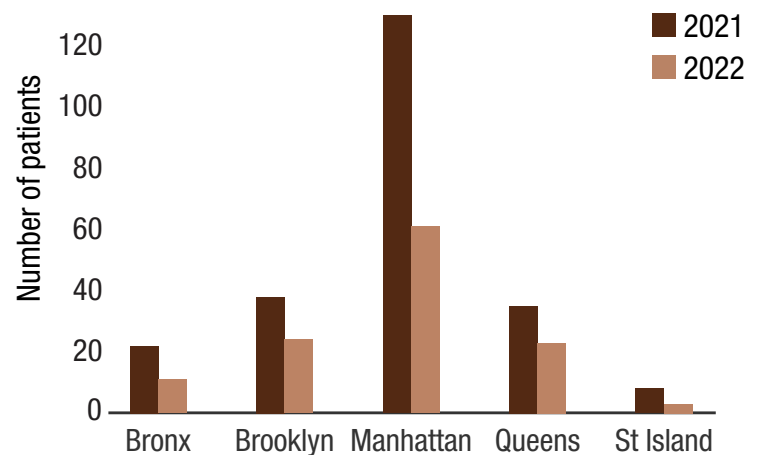


Figure 2. NYC Tick-borne Diseases by Borough, 2021 and 2022



Follow These Tips Below to Prevent Tick-Borne Diseases

Before You Go Outdoors	After You Come Indoors
<ul style="list-style-type: none"> • 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 tick-borne diseases, visit nyc.gov/health and search for **anaplasmosis**, **babesiosis**, **ehrlichiosis** or **RMSF**.