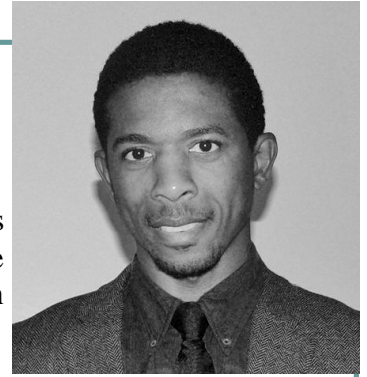


## Lyme Disease – an important tick-borne zoonosis

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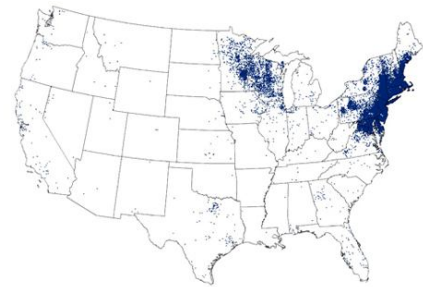
Lyme Disease or borreliosis is a tick-transmitted infection that affects mammalian and avian hosts. It is the most commonly diagnosed tick-borne disease in people in certain parts of the world, but is not known to occur in Jamaica beyond unconfirmed, anecdotal reports.



[https://identify.us.com/\\_Media/deer\\_tick\\_adult\\_female\\_med.jpeg](https://identify.us.com/_Media/deer_tick_adult_female_med.jpeg)

The causative organism, a bacterium called *Borrelia burgdorferi*, cannot survive freely in the environment, so it depends on reservoir hosts such as rodents and birds which can carry it without illness, and its main vector, the deer tick *Ixodes* sp. for transmission to susceptible hosts such as dogs and humans. The risk of infection with Lyme disease is associated with the prevalence of the infected ticks and the likelihood of being bitten by them. For transmission to occur, the tick needs to be attached to the body of a human or animal and feeding for at least two days.

According to the World Health Organization, Lyme is mainly found in parts of North America, Europe and Asia. Dog cases are often detected before and in higher numbers than human cases in areas where the disease occurs. Despite the numerous human and animal exposures to infected ticks, only a few develop clinical disease.



Distribution of cases in the United States  
<http://www.aldf.com/images/2008LymeDiseaseCaseMap.jpg>

The disease in humans begins several days after a tick bite as an expanding rash, forming a fairly characteristic “target” shape, which does cause any itching but progresses to fever with flu-like symptoms. Other effects include arthritis, dermatitis and infection of the brain, kidney and heart.

Similar manifestations occur in dogs and occasionally cats. Other signs in dogs are high fever, lameness and loss of appetite. Since the disease requires the tick vector, infected dogs cannot directly transmit the disease to humans, but could carry infected ticks. This is a rare source of human infection.

It should be noted that although deer ticks can carry and transmit Lyme, deer themselves do not contract or carry the disease.

For treatment, doxycycline is the most commonly used antibiotic. Since transmission requires prolonged tick attachment, measures that reduce or eliminate tick exposure are the best means of prevention.

The in-clinic “Snap” test kits (Idexx Laboratories) used routinely by veterinarians in Jamaica for heartworm and tick fever diagnosis in dogs also include Lyme, so if the disease should occur, it can be detected.