



# FACT SHEET

Department of Animal Science, University of Connecticut

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Effective Horse Management – Horse Health Series

## Lyme Disease in Horses – Reducing the Risk

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First recorded in 1975, near Lyme, Connecticut, Lyme disease can be troublesome. By knowing the signs, treatment and prevention, you can become better educated about how to protect your horse from this disease. The adult (*Ixodes spp.*) ticks feed on deer and horses in the fall and early spring while the nymphal (immature) stages feed on horses and many other species in the summer time.

Lyme disease is caused by a bacterium called *Borrelia burgdorferi* and is carried by *Ixodes* ticks, such as deer ticks, bear ticks or black-legged ticks. The ticks become infected when they feed on rodents such as the white-footed mouse that carry the bacteria. The tick can then pass on this infection when it feeds on another host, such as a horse or deer. The bacteria migrate from the tick to the horse after 12 to 24 hours of attachment.

The best news is that few horses actually develop Lyme disease. In areas where the incidence of disease is high among people, only about 50% of horses are likely to become infected. Of these horses, less than 1 in 10 develops clinical signs of the disease. The remaining horses either have subclinical infection (carry the antibodies against the bacteria but remain clinically healthy) or their immune systems fight off the bacteria (and these horses carry the antibodies to Lyme disease for up to a year). People can also be

infected with Lyme disease, but there is no risk of the disease being transmitted from horses to humans. Symptoms in people include fatigue, chills, fever, joint pain, swollen lymph nodes and a “bull’s eye” rash at the site of the tick’s bite.

Clinical signs appear in less than 10% of horses infected with the bacteria. Signs include:

- lameness (usually of larger joints) that shifts from limb to limb
- generalized stiffness
- soreness in the large joints and back
- low-grade fever (which may or may not be present)
- behavioral changes such as reluctance to work and irritability
- laminitis (occasionally associated with Lyme disease)

Horses do not show a skin rash with Lyme disease. Swelling around a tick bite in a horse is generally due to a reaction to the tick’s saliva, not Lyme disease. **You should call your veterinarian if you suspect that your horse has Lyme disease.** If a positive blood test for the antibodies to the bacteria has been obtained and the veterinary clinical exam suggests a diagnosis of Lyme disease, treatment may be recommended. Typically, antibiotics such as tetracycline or doxycycline are used. There is currently no vaccine available for horses, but there is research in progress.

Since there is no vaccine available, prevention is focused on control of the tick population:

- **Perform a daily tick examination.** Remember that it takes 12 to 24 hours of attachment for bacteria to migrate from the tick to the host. You can use a flea comb to search the longer hairs found on or near the head, mane, throatlatch, belly, tail and dock (areas where the ticks are most likely to bite). Remove implanted ticks with tweezers by grasping their mouthparts just above the horse’s skin and pulling gently.
- **Treat turned out horses with permethrin-based insect repellents during peak adult deer tick seasons: early spring, late summer, and fall.** A long acting pour-on permethrin product is available for horses.
- **Minimize habitat for ticks and their hosts by keeping pastures mowed short and free of brush and woodpiles.** Brush and woodpiles make great nesting sites for mice and other rodents that can carry tick larvae and nymphs (the immature ticks). Also try to keep deer out of your pasture, since they can carry infected adult ticks.

Lyme disease is not a life-threatening disease, but it can cause serious problems to your horse. Prevention by minimizing tick habitat and horses’ exposure is the best method to safeguard against this disease. Make changes to your property to reduce tick habitat today.

#### **Sources:**

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