

Major Heads-Up – Please Don't Ignore This Odd Vocal Change

Can quickly lead to death if you don't get help promptly. It's a true medical emergency and time is of the essence. It's especially important in these areas, where 10,000 cases a year surface. If you live there, protect your dog and cat at once.

Reviewed by [Dr. Becker](#)

STORY AT-A-GLANCE

- Tick paralysis, also called tick bite paralysis, is a life-threatening reaction to a tick bite that occurs in some pets
- One of the first symptoms of tick paralysis many dog parents notice is a change in the sound of their pet's bark
- Left untreated, the tick toxin causes widespread paralysis; when the respiratory system is involved, it becomes a life-threatening medical emergency
- Pets with severe disease must be hospitalized for intense supportive care, including supplemental oxygen to treat respiratory muscle paralysis
- The best way to prevent this condition is to check your pet carefully for ticks each time he's had potential exposure; any ticks you find should be removed immediately to prevent the transfer of toxins to your pet

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Tick paralysis, or more descriptively, tick bite paralysis, is a reaction to a tick bite that occurs in some but not all pets, most often dogs. Cats in North America appear to have a resistance to the toxin that triggers the condition, or they're such efficient groomers that ticks don't stay attached long enough to transmit the toxin.

However, in Australia where this disease is more prevalent, both dogs and cats are affected. In fact, tick paralysis is one of the most common preventable causes of death in dogs and cats along the east coast of Australia, with some 10,000 dogs being affected each year, 5% of them fatally.

The condition occurs due to a potent toxin contained in the saliva of several species of female ticks. The toxin enters the bloodstream as the tick feeds on its host and prevents the release of acetylcholine, a neurotransmitter that communicates with the muscles of the body. The ticks most often associated with the condition in North America are the Rocky Mountain wood tick and the American dog tick. Most cases of tick paralysis in the U.S. occur from April to June.

Symptoms of Tick Paralysis

Ticks carrying the toxin must be attached for about four days, and symptoms of tick bite paralysis begin to occur within five to seven days after attachment. In many cases there are multiple tick bites, but paralysis can occur with the bite of just one tick.

One of the first signs many pet parents notice is a change in the sound of their dog's bark. There may also be regurgitation of food as the muscles of the throat and esophagus weaken. As the level of toxin in the bloodstream rises, it causes loss of voluntary movement as it attacks the nerves that connect the spinal cord and muscles. The back legs go weak and wobbly, and then develop flaccid or floppy paralysis. Other symptoms can include:

- Vomiting
- Loss of muscle tone
- Unsteadiness
- Difficulty eating
- High blood pressure
- Excessive drooling
- Elevated heart rate
- Dilated pupils
- Poor reflexes progressing to complete loss of reflex
- Megaesophagus (enlarged esophagus)

Left unchecked, the paralysis moves from the hind legs throughout the entire body, including the front limbs and, ultimately, the respiratory system. Death can occur within a few hours when the respiratory system is affected, because the muscles of the chest become paralyzed. It's obviously extremely important to seek help for a pet who becomes lethargic and has difficulty moving around.

Diagnosing Tick Paralysis

Your veterinarian will take a thorough history of your pet's health and will need to know of any recent visits you've made with your dog to wooded areas or other tick-infested environments. Your vet will also perform a complete physical examination, and most importantly, will check your pet's body very carefully and thoroughly for evidence of ticks. If a tick is found, it will be removed and sent to the laboratory to determine the species, if necessary.

A complete blood count, biochemistry profile and urinalysis are usually recommended, however, the results of these tests are often normal in pets with tick paralysis. In animals with respiratory symptoms, blood gases will be taken to determine the extent of the problem.

If respiratory muscle paralysis is occurring, low oxygen and high levels of carbon dioxide will be present in the blood. A chest X-ray may reveal an enlarged esophagus, which is a secondary symptom that often occurs due to the extra effort the animal is making to breathe.

Treatment Options

Pets with severe disease will need to be hospitalized. Respiratory muscle paralysis is a medical emergency requiring immediate veterinary intervention.

Locating and removing the tick is the first step your veterinarian will take to prevent further release of toxins into your pet's body. In some cases, this is the only treatment required and your dog will begin recovering. However, in patients with respiratory problems, oxygen supplementation or some other form of artificial ventilation will be required to keep the pet breathing until the toxin is eliminated from the body.

Supportive care is given as necessary to treat dehydration. There is also an antitoxin hyperimmune serum that can be given in severe cases. Since the tick bite toxin is temperature sensitive, pets recovering from paralysis should be housed in a quiet, cool environment. Physical activity should be kept to a minimum to avoid increasing body temperature and blood circulation. To prevent aspiration pneumonia, food and water will be withheld from paralyzed animals until they're mobile and haven't vomited for 24 hours.

Prevention Tips

- **The best way to prevent tick bite paralysis is to check for ticks daily** — And make sure not to overlook the areas of your pet's body where ticks tend to hide, such as between the toes, the underside of the toes, the earflaps and crevices, the armpits and around the tail base.

Daily tick checks — or even better if you live in a high-tick area — tick checks each time your dog has been outside and exposed, and removing ticks immediately are very important steps in reducing your dog's risk.

- **Use natural tick deterrents** — There are dozens on the market, and though none are 100% effective 100% of the time, they do make your dog less appealing to ticks.
- **Focus on improving your dog's overall immunologic health** — Ticks and other parasites prefer weaker hosts. Creating a strong and resilient immune system in your dog through a nutritionally balanced, fresh food diet, **titering** and minimizing chemical exposure will make her less attractive to ticks.
- **If you find a tick, remove it immediately and the right way** — Don't use your bare hands. Instead, use tweezers or even better, a tick stick or tick-removing tool. Grasp the tick very close to your pet's skin, and carefully pull it away from the skin, making sure to get the head.

Once it's off, flush it down the toilet. Then disinfect your dog's skin with soapy water or diluted povidone-iodine (Betadine). You can also apply a drop of lavender oil to the bite. Many homeopathic vets also use Ledum with pets who start having strange symptoms after tick exposure. Monitor your pet for several days after the bite. If you notice any signs of tick bite paralysis, contact your veterinarian immediately.
