



Tick Paralysis

Ticks are blood-sucking parasites that tend to attach on the dog's head, neck, ears, anal area, shoulder blades and between the toes. These parasites are not really insects, they are instead closely related to spiders and scorpions. Ticks are generally small in size but become visibly larger when they are found engorged with blood. There are various species of ticks, including the brown dog tick, American dog tick, and deer tick.

All are ultimately capable of possibly transmitting tick-borne diseases. The most common tick-borne diseases affecting dogs are Ehrlichia, Rocky Mountain spotted fever and Lyme disease, although ehrlichia and Lyme's are not common in Colorado. While all ticks have the potential to transmit diseases, the good news is that the majority of tick bites are generally disease-free. However, it never hurts to be extra cautious and check the dog upon returning from a walk in places where ticks are commonly found, even if the dog is already on a tick preventative.

A 4 year old spayed female Australian Blue Heeler was presented to the Animal Clinic with signs of rear leg lameness. The patient was examined and blood work was completely normal. No fractures or obvious trauma was found and the patient was prescribed an anti-inflammatory medication. The next day the patient was showing more signs of ataxia, now in all four legs, laying on her side, and not able to lift her head. A large engorged tick was found on her chest and at that time and removed. She was hospitalized for 24 hours and given IV fluids to keep her hydrated and help flush neurotoxins from her system. She gradually improved back to normal within several days.

Toxicity occurs when a female tick injects a neurotoxin through her saliva into the host. The toxin prevents the nerve signals from reaching muscles, resulting in flaccid paresis (hind limb weakness) and eventual paralysis.

Clinical signs are seen 5-9 days after tick attachment, and progress from paresis to quadriplegia within 24-72 hours. Death may occur from respiratory failure (paralysis of respiratory muscles) in 1-5 days if ticks are not removed. With North American tick paralysis, removal of all ticks results in quick improvement within 24 hours and complete recovery within 72 hours.

Early clinical signs may include alteration of voice (laryngeal paralysis) followed by acute hind limb weakness, incoordination, change in respiratory rate, coughing, gagging, or vomiting. As the paralysis progresses, all four legs may be involved. The animal becomes unable to sit, stand, or lift its head. Respiration may initially increase and then becomes slower and labored. Regurgitation, saliva pooling, and gagging may be seen due to esophageal paralysis. Body

temperature may be normal initially followed by hypothermia or hyperthermia. No specific tests are available to diagnose canine tick paralysis. It is diagnosed based on acute sudden onset of progressive hind limb paresis and paralysis in a tick-infested area. The offending tick may not be present by the time clinical signs begin. Blood and chemistry values are usually within the normal range.

Signs of improvement are apparent within 24 hours following removal of ticks. The presence of additional ticks or other causes of paralysis must be considered if the animal does not recover following tick removal. The prognosis in most cases is good.

The Animal Clinic recommends tick and flea prevention.

