TICKS

the vet lounge

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What tick is this?

Is this a paralysis tick? Throughout the year in our area of Australia we will find paralysis ticks on our animals. We can also find other ticks – commonly known as cattle ticks, scrub ticks and brown dog ticks. It is very important to identify the type of tick you find because the paralysis tick can kill your pet within 3-4 days!

Paralysis Tick

The Paralysis Tick (Ixodes holocyclus) can range from the size of a pin head to a thumbnail. These ticks are usually a;

- blue grey colour
- have all of their legs concentrated around the head area. T
- the legs are variable in colour (unlike others where the legs are all the same colour).

The larval and nymph stages are brown in colour and have a triangular type shape, again with the legs toward the head end. These killers are the most common poisonous tick, seen wherever native wildlife have been. They can be transported around by bandicoots, kangaroos, possums, koalas, even birds.

Mountainous areas, scrubby flats along the river, bush areas and parks at the edge of the newly established housing estates, and acreage properties are common areas of infestation.

The Brown dog tick (Rhipicephus sanguineus) is occasionally found in other areas but are most common in North Queensland, they are

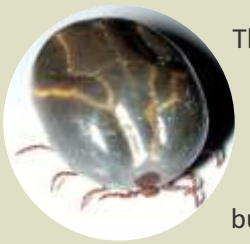
- generally only very small
- have legs positioned around two thirds of its circumference

This tick can often be found inside houses on walls in great numbers. They do not cause paralysis.

The Cattle Tick (Boophilus microplus) is mostly found along the northern rivers area of New South Wales. As the name would suggest, cattle are its main host. They are

- a larger brown coloured tick
- have legs extending down either side of its body.

This tick will suck blood and as such can cause anaemia when present in large numbers but does not cause paralysis in our pets.



The Bush or Scrub tick (Haemaphysalis longicornis) is commonly found in our area. It is

- a small black/brown round tick
- oval in shape
- dark, red brown legs

This tick will suck blood and as such can cause anaemia when present in large numbers but does not cause paralysis in our pets.

“The Paralysis Tick can kill your pet within 3 days”

Paralysis ticks

> *The most common time to find ticks about is from July through to January.*

The Paralysis Tick undergoes a lifecycle that takes about a year to complete and involves feeding on a blood meal from a host – be it a domestic pet or wildlife as a nymph, then larvae then adult. The female needs a blood meal to produce her eggs. The male takes his blood meal direct from the female. Once the adult female has latched onto a host, she engorges with blood and at the same time she injects a neurotoxin.

The Paralysis tick then drops off onto the ground to lay her eggs. These will hatch with the right climatic conditions to form the larva then nymph stages. The nymph and larvae will inject a toxin also, though the amount is too minimal to cause paralysis. The nymph and larvae will then wait on tips of grass or on trees to climb onto the next warm blooded animal passing through. Ticks do not jump and cannot fly!

The most common time to find ticks about is from July through to January. The tick prefers this Spring into Summer period though Winter is milder in the top of Queensland and is often more prominent after a period of rainy weather. The tick does not seem to be able to handle the extreme heat of Summer in the January/February period and after March numbers reduce as we head into Autumn. In some areas of the country they can be found year round due to the cooler, more wet rainforest areas.

Once aboard a host, the tick will climb around looking for a suitable place to attach. The Paralysis Tick seems to be more attracted to the head and neck area of an animal – this is probably due to the attraction of the carbon dioxide in the breath of the animal and vibration. The tick will then adhere by inserting its mouth parts through the skin into a blood capillary. The tick does not actually bury itself under the skin – rather only the mouthparts. So when examining for a tick you can definitely see the tick's body and even the legs around the mouthparts.

> Even if your pet has no clinical signs of the paralysis, it can still develop the symptoms up to 2 days later!

What if I find a tick?

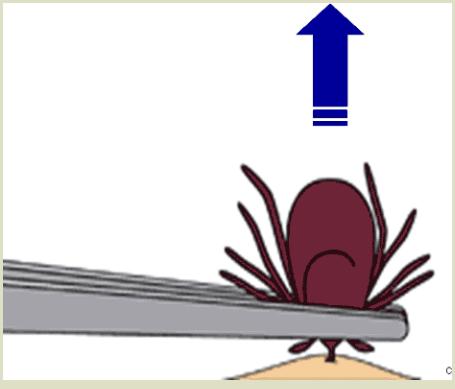
When a tick is found on an animal it should be removed or killed to prevent more toxin being injected in. Over the years we have found that it is better to remove the tick than to try and kill it with a chemical. If the tick has had a chemical applied there is no knowing whether it is definitely going to shrivel up and die then drop off.

It is a lot better to know that you have removed the source of the toxin. Ideally, the whole tick needs to be removed including the mouthparts. A tick removal tool, a pair of foreceps or even just your finger tips will do. There is no truth in the stories of twisting the tick clockwise or leaving behind the head for the tick to regrow its body. So it is best off to just ensure we have removed the tick so that no more toxin is being injected. Once removed it is a good idea to keep the tick to bring in to the veterinary clinic for identification.

After removal of a tick you will need to decide whether to bring the pet into the surgery for treatment. The way the envenomation works is like a lag effect. **Even if your pet has no clinical signs of the paralysis, it can still develop the symptoms up to 2 days later!**

So the most important thing to remember is that after removal of the tick, please keep your pet quiet and watch for potential signs for the next 2 days. If you notice **any signs** developing (next page), contact us immediately for advice.

Tick tweezers
(available at the clinic)



Tweezers

Bring in the tick for identification

What are the signs?

Signs of Tick Paralysis are variable between animals and does depend on the length of time the tick has been injecting venom. As discussed, the lag effect means that for a pet to show signs of paralysis, the tick must have been on the pet for at least 2 days, usually longer. **Animals will die typically after 3-4 days of envenomation**. Any or all of the following symptoms may be seen in a pet that has been affected:

- Unwilling to jump up, or unco-ordination when trying to jump up
- Ataxia or wobbly hind legs
- Weakness in hind legs
- Weakness in forelegs
- Unable to walk or dragging hind legs
- Change in the bark or meow
- Vomiting
- Not hungry and cannot swallow properly
- Breathing Distress, open mouth panting or gasping
- Mucous from the mouth or nose

In most cases as the poison is a neurotoxin, it affects the hind legs initially then moves to the forelegs and chest, though all tick paralysis cases are different and each symptom can occur at a different stage. Death from tick paralysis occurs due to the paralysis of the chest muscles, aspiration pneumonia, and cardiac arrest.

If you think your pet may have tick paralysis, please don't delay. Contact the practice as quickly as possible. Delaying treatment could mean death for your pet.

What is the treatment?

> *Early treatment, together with one of our experienced veterinarians will give your pet the best chance of survival.*

If not already done, the tick is removed and thorough tick searches will continue daily while the pet is in hospital. In some animals, only a tick crater may be found. In others we will need to clip their coat off to allow us to find any more ticks – the coat will usually regrow with no problems so don't let that worry you – it is more important that your pet survives.

This procedure is very important and the way an animal is treated will be the difference between life and death. Tick cases are normally rated with regard to their degree of paralysis and degree of respiratory problems. Stages run from 1a through to 4d. The higher the stage, the less chance the pet has of making a full recovery.

Because of the lag phase with respect to the neurotoxin, an animal presenting as a stage 1a will quickly become a 2c even with treatment. For this reason, we tend to treat all animals with the antivenom that show ANY signs of tick paralysis.

The main treatment for tick paralysis is administration of the antivenom – this is normally done intravenously. The antivenom is actually made by placing ticks onto dogs and then removing them in a controlled environment for increasingly longer periods of time. The dogs then have some blood taken periodically. The blood is then separated and has impurities removed to leave a serum that is rich in antibodies to the tick venom.

This antivenom is purified to be used in other animals. Being that the antivenom is made from the blood of dogs, other animals do have a greater chance of a reaction when this is administered. Even in dogs as blood types do vary, the antivenom can still cause an anaphylactic reaction. For this reason, other medications are often used at the time of administration.

Treatment

It is important to keep the patient calm and not stressed or excited during the treatment period, so we may not allow visitors during your pets stay (we will advise). A strong sedative is given for this purpose, then an intravenous catheter is placed in the front leg.

During this administration it is very important to keep track of the vitals such as heart rate, oxygen saturation of the blood and body temperature. This is done by use of a portable Pulse Oximeter, and by skilled observation by the vet and nurse. Other medications may need to be given depending on the stage of the patient. These can include intravenous fluids.

Antibiotics, further sedatives, diuretics to remove fluid from the lungs, medications to dry up secretions in the mouth or nose, and additional oxygen can also be part of your pet's treatment.

Oxygen therapy plays a major role in tick treatment. When the paralysis has advanced to the chest, the patient has a lot of difficulty breathing to keep their oxygen saturation at normal levels. We sedate them to reduce stress and administer oxygen. Oxygen can be given using an oxygen cage or a direct nasal oxygen line which is the most effective. It delivers humidified oxygen direct to the airways.

Without doubt, monitoring of the patient is the most important factor – this way we can know when to institute further treatment. A trained nurse is always present, and the patients can be positioned in the intensive care cages for best monitoring while the nurse goes about their normal routines.

Patients are not returned home until they are able to drink and eat properly. The tick toxin causes loss of the gag reflex and so trying food and water too early can cause them to aspirate the food or water down onto the lungs and get pneumonia. There tends to be no ongoing paralysis of the legs, but a few animals will have chronic airway thickening if they have had respiratory symptoms.

How do you prevent ticks?

Prevention of Tick Paralysis is very important – if we can ensure a tick does not deliver the toxin, our pets will not have to undergo treatment. The best prevention is actually examining your pet at least every 2nd day (remember the 2 day lag effect) and remove any ticks you find. If your pet is showing any of the signs outlined earlier, bring them down to the practice immediately so they can be assessed. They may not need treatment but it's better to have them checked than to 'sit on it' as the longer you wait for treatment the less chance of survival should the antivenom be required.

Manual checks

Don't forget to check inside the ears and mouth!

Don't forget to check in between the toes.

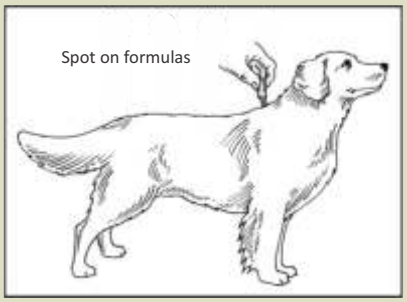
Around 80% of ticks are found between the shoulders forward toward your dog or cats nose, so check this area thoroughly every day. While we find 80% of ticks forward of the shoulders, ticks can be anywhere and have even been found inside the anus (bottom).

Run your fingers along your entire pet checking for lumps (the ticks will feel like a wart). Don't forget to check in between toes, under the tail, armpit and groin areas, inside the mouth/lips and inside the ears.

Tick collars (dogs only)

A PREVENTIC or KILTIX tick collar can be used to prevent paralysis in dogs as long as the collar is applied as directed and changed when it expires. Preventic collars last 8 weeks and Kiltix last 6 weeks. The Kiltix collar does claim to be waterproof which can be an advantage in some areas. Once applied the collar does take 24hrs to distribute its avtive ingredient over the whole of the coat of the dog.
Note: These collars contain chemicals TOXIC to CATS.

Spot on formulas



Various companies manufacture a spot on type product that can assist in preventing tick paralysis. Advantix and Frontline Plus are the best available at this stage.

Please note that while Advantix is safe to use on dogs, it is toxic to cats, so never apply this product to your cat! Advantix and Frontline are applied every 2 weeks to the area between the shoulder blades onto the skin. The product must be allowed to dry on the skin, so do not bath for 24 hrs. Frontline is also available in a spray format which is very effective but not as easy to use as the spot on formula.

The only registered product for use on cats for the control on ticks is Frontline Spray. It should be sprayed onto your cats coat every 3 weeks.

Pop into the practice and we'll discuss with you the best preventative for your pet and teach you how to apply it correctly.

If at any time you are worried about your pet, please don't hesitate to contact us. Our qualified nurses can give you advice over the phone.

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