Title: Ticks: Arthropod Parasites

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Address (URL): //www.VeterinaryPartner.com/Content.plx?P=A&A=2311 Ticks are skin parasites that feed on the blood of their hosts.  Ticks like motion, warm temperatures from body heat, and the carbon dioxide exhaled by mammals, which is why they are attracted to such hosts as dogs, cats, rodents, rabbits, cattle, small mammals, etc.  The bite itself is not usually painful, but the parasite can transmit diseases and cause tick paralysis, which is why tick control is so important. (Removing the ticks leads to rapid improvement of the paralysis.)

It takes several hours for an attached tick to transmit disease, so owners can usually prevent disease transmission to their pets by following a regular schedule to look for and remove ticks.

Tick Life Cycle

Most types of ticks require three hosts during a two-year lifespan.  Each tick stage requires a blood meal before it can reach the next stage.  Hard ticks have four life stages: egg, larva, nymph, and adult.  Larvae and nymphs must feed before they detach and molt.  Adult female ticks can engorge, increasing their weight by more than 100 fold. After detaching, an adult female tick can lay approximately 3,000 eggs.

During the egg-laying stage, ticks lay eggs in secluded areas with dense vegetation.  The eggs hatch within two weeks.  Some species of ticks lay 100 eggs at a time, others lay 3,000 to 6,000 per batch.  Once the eggs hatch, the ticks are in the larval stage, during which time the larvae move into grass and search for their first blood meal.  At this stage, they will attach themselves for several days to their first host, usually a bird or rodent, and then fall onto the ground.  The nymph stage begins after the first blood meal is completed.  Nymphs remain inactive during winter and start moving again in spring.  Nymphs find a host, usually a rodent, pet, or human.  Nymphs are generally about the size of a freckle. After this blood meal, ticks fall off the host and move into the adult stage. Throughout the autumn, male and female adults find a host, which is again usually a rodent, pet, or human.  The adult female feeds for 8 to 12 days.  The female mates while still attached to her host.  Both ticks fall off, and the males die.  The female remains inactive through the winter and in the spring lays her eggs in a secluded place.  If adults cannot find a host animal in the fall, they can survive in leaf litter until the spring.

What are the best ways to deal with these blood-sucking parasites?

Environmental Control

Treating the yard and outdoor kennel area, if any, is an important tool in the arsenal against ticks. There are productsm containing fenvalerate, that can be used to spray the outdoor area. Fenvalerate is not harmful to the environment. During prime tick months in the summer, spraying may be necessary every 1 to 2 weeks.

If ticks are indoors, flea and tick foggers, sprays, or powders can be used. Inside, ticks typically crawl (they don't jump) up and may be in cracks around windows and doors. A one-foot barrier of insecticide, where the carpeting and wall meet, can help with tick control.

Prevent Ticks from Attaching

If your pet goes outside regularly, you can use some type of residual insecticide. Frontline (fipronil) is a liquid applied to the skin between a dog’s shoulders that discourages ticks from staying or implanting.  Revolution (selamectin) is labeled for one kind of tick.  A permethrin spray can be used on dogs (but not in cats, for whom it can be fatal) as a tick repellent and killer.

If you use a liquid spray treatment, cats and skittish dogs typically prefer a pump bottle because of the noise from aerosol cans. Avoid topical powders if your pet has a respiratory condition. Powders are fairly easy to apply, but they can make a real mess, and they often contain permethrin. Shampoos are useful only for ticks that are already on your pet. An amitraz collar, such as PreventicÒ, has some efectiveness against ticks.  Like Frontline, amitraz cannot keep all ticks off your pet, but it discourages ticks from implanting or staying on.  The collar might be somewhat more water resistant than a residual insecticide, so if your dog likes to swim, the collar might be a better choice.  Flea combs can be used to help remove ticks. Wash your pet’s bed frequently.

Some people use a topical spray, but don’t realize they should not use more than one insecticide or repellent.  Doubling the amount of anti-tick product, or using two at once, may cause toxicity problems.  DEET, found in many over-the-counter insecticides, is toxic to pets.  Any spray insecticide labeled for use on clothing should not be sprayed directly on pets.

Find and Remove the Ticks

The best way to find ticks on your pet is to run your hands over the whole body.  Check for ticks every time your pet comes back from an area you know is inhabited by ticks.  Ticks attach most frequently around the pet's head, ears, neck, and feet, but are by no means restricted to those areas.

The safest way to remove a tick is to use rubbing alcohol and a pair of tweezers.  Dab rubbing alcohol on the tick, and then use the tweezers to take hold of the tick as close to the dog’s skin as you can; pull slowly and steadily.  Try not to leave the tick’s head embedded in the dog’s skin.  Don’t squeeze the tick because it might inject some disease-causing organisms, such as bacteria, viruses, protozoa, or other agents, into the animal during the process.  Risk of disease transmission to you, while removing ticks, is low but you should wear gloves if you wish to be perfectly safe. Do not apply hot matches, petroleum jelly, turpentine, nail polish, or just rubbing alcohol alone (the tick must be pulled out after application of alcohol) because these methods do not remove the ticks and they are not safe for your pet.

Once you have removed a live tick, don’t dispose of it until you have killed it.  Put the tick in alcohol or insecticide to kill it.

Watch for Infection and Diseases

After you pull a tick off, there will be a local area of inflammation that could look red, crusty, or scabby. The tick’s attachment causes irritation.  The site can get infected; if the pet is scratching at it, it is more apt to get infected.  A mild antibiotic, such as over-the-counter triple antibiotic ointment can help, but usually is not necessary. The inflammation should go down within a week. If it stays crusty and inflamed longer than a week, it might have become infected.

Ticks can transmit diseases to pets and humans that the ticks contract from a previous host.  Ticks can parasitize many different mammal species, birds, and reptiles.  Lyme disease is one that most people have heard about, but ehrlichiosis is a possibility; it is a rickettsial disease, and its progression from an acute to a chronic stage can be prevented by early treatment.  Babesiosis causes red blood cell destruction and anemia.  Rocky Mountain spotted fever is the most prevalent rickettsial disease in humans.

Although ticks can transmit diseases, they are usually nothing more than a nuisance.  The best approach is to prevent them from embedding, and once embedded, to remove them quickly.  As long as you stay on top of the situation, your pets should cruise right through the tick season with no problems.

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