



## Please No Fleas (or Ticks)

Spring is here, I swear it is, I always believed it would stop snowing someday, or at least that is how I maintained my sanity through this winter. And while that was a welcome transition for all that live and work in our area, it will be equally inviting for a couple of pests that you might not be looking forward to seeing again. Fleas and Ticks.

Ticks will be first on the scene, so let's talk about them first. There are many myths surrounding these vile creatures which need to be laid to rest. First and foremost, they do NOT burrow under the skin and remain there . . . ever. What they do is bury their mouth parts under the skin, and then enjoy a hearty meal of their victim's blood. As they continue to drink, their extremely distensible body engorges with blood until near bursting. At this point, they disconnect, hop off, and do whatever it is that ticks do in their spare time, some of which is to make more ticks.

While it is a rare host, as the victim is called, that suffers from the loss of significant amounts of blood, the problem with ticks relates more to the spread of some diseases that are anything from unpleasant to lethal. Most everyone has heard of Lyme disease, and I have covered it pretty extensively in another article, so I will only briefly touch on it in this one. But lesser known diseases carried by these nasty little arthropods include Rocky Mountain Spotted Fever, Ehrlichiosis, and tick-bite paralysis. Tick borne illnesses are almost never seen in cats, with the exception of a rare case of Lyme disease; while natural resistance is a possibility, it is more likely that their fastidious grooming habits remove ticks before they transmit the diseases.

Lyme disease is caused by a corkscrew-shaped bacterium called a spirochete. The disease in dogs has two forms, acute and chronic. Acute Lyme disease most often causes lameness, with one or more joints swollen and quite painful. This phase is fairly easy to recognize nowadays, and treatment with antibiotics is usually quite successful and rapid. The chronic phase can cause kidney or heart disease, the former almost invariably fatal.

Rocky Mountain Spotted Fever is caused by a microscopic organism called a rickettsia, as is Ehrlichiosis, though these rickettsia are only distantly related. The former causes extreme fever, swelling of various parts of the body, lameness, bleeding disorders and in some cases neurologic disease. There are several different Ehrlichia organisms, and each one is slightly different in its regional distribution, the severity of the disease that it causes, and its duration, but they are all pretty nasty when it comes down to it. They also cause fever, depression, hemorrhage, swollen limbs and enlarged organs. Both of these diseases are also treatable with antibiotics, though prolonged hospitalization and supportive care may be necessary. And while RMSF is rarely fatal, Ehrlichiosis can be.

A quick note on tick-bite paralysis. It is extremely rare in our area, though sporadic cases are seen. Depending on the tick, paralysis may be easily reversible by its removal, or progress all the way to death. It is caused by toxins that affect nerve transmission contained in the saliva of the tick.

It should be obvious by now that ticks are just not our friends. In fact, humans can and do contract the same diseases, though tick bite paralysis is more of a problem in Australia than the US for people. Equally unpleasant, however, are the little hopping insects called fleas. While disease from flea bites is not a major concern here, with the possible exception of Bubonic Plague which nearly wiped out the entire population of Europe, the bites of fleas represent more than a minor annoyance.

The most obvious problem in both people and pets is how absolutely, incredibly itchy the bites of fleas are. They make mosquitoes look like small-time street thugs compared to their hardened criminal itch. This is because of the concentration of histamine-like substances in flea saliva that lead to both immediate and delayed hypersensitivity type reactions, in other words, severe allergic responses. I have seen people bring in pets crawling with these devils, the poor dogs and cats besides themselves, while the people proudly display the bleeding welts on their legs and arms.

One thing that doesn't get a lot of air time, though, is how voracious these tiny little hopping things are. In my years of practice, I have seen 3 dogs die, and almost lost another 3 pets, 2 dogs and a cat, to the severe anemia caused by chronic, massive blood loss. The unfortunate ones came in too late even for a transfusion to help, the only treatment that can rapidly restore the incredible amount of lost blood. It is this fact alone that had me train my staff to never consider fleas just a benign annoyance.

Fleas are dark brown to black, and very small. Seen magnified, they have huge hind legs like a kangaroo, which is why they could jump the approximate height of a skyscraper if they were human. They are also incredibly fast, which makes spotting them on a pet somewhat difficult at times. There is the presence, though, of "flea dirt," actually the excrement of fleas, which appears as hundreds (or thousands) of little specks of what appears to be ground pepper. If you moisten these little specks, however, they turn the reddish-brown reminder of what they once were: the blood of your favorite pooch or kitty. And just to put things in perspective, a female flea produces 22 trillion offspring in 9 months, so don't expect them to go away easily!

Fortunately, there are some remarkable things that can be done to avoid the unpleasantness, let alone the deadliness, of fleas and ticks. There are several products available both as topical spot-ons, oral pills or liquid, and even long-acting injections that can help prevent or control a problem with these tenacious parasites. While not all products are appropriate for all pets, and some are toxic to cats (read the labels carefully), the number of safe, effective flea and tick controls is large. Remember, though, that these are insecticides with inherent risks, and it would be both valuable and wise to discuss the selection of products with a veterinarian before purchasing and applying them onto your favorite pet.