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Flea Control for Dogs

Successful flea control has two aspects. Fleas must be controlled on your dog, and fleas must be controlled in your dog's environment. Since cats and dogs share the same fleas, the presence of a cat in your dog's environment can make flea control much more difficult.

Diagnosis of Flea Infestation

When a dog is heavily infested with fleas, it is easy to find them. If the numbers are small, it is best to quickly turn your dog over and look on its belly. If you do not find them there, look on the back just in front of the tail. Be sure to part the hair and look at the level of the skin. When the numbers are very small, look for "flea dirt." Flea dirt is digested blood left behind by the fleas. Flea dirt is actually fecal matter from the flea. Finding flea dirt is a sure indication that fleas are present or have been present recently.

Flea dirt looks like pepper. It varies from tiny black dots to tubular structures about 1/32" (1/2 mm) long. If you are not sure it is flea dirt, put the suspected material on a light colored tabletop or counter top. Add one or two drops of water, and wait about 30 seconds. If it is flea dirt, the water will turn reddish brown as the blood residue goes into solution. Another trick is to put some of the material on a white paper towel and then wet the paper towel with water. A red stain will become apparent if you gently wipe the material across the surface of the paper towel.

Many people find tiny drops of blood in a dog's bedding or where the dog sleeps. This is usually flea dirt that was moistened, then dried. It leaves a reddish stain on the bedding material and is another sign that fleas are present.

Life Cycle of the Flea

To appreciate the complex issue of flea control, you must understand something about the flea's life cycle.

Although you are only able to see the adult flea, there are actually 4 stages of the life cycle. The adult flea constitutes only about 5% of the entire flea population if you take into account all four stages of the life cycle. Flea eggs are pearly white and about 1/32" (1/2 mm) in length. They are too small to see without magnification. Fleas lay their eggs on the dog, but the eggs do not stick to the dog's hair. Instead, they fall off into the dog's environment. The eggs make up 50% of the flea population. They hatch into larvae in 1 to 10 days, depending on temperature and humidity. High humidity and temperature favor rapid hatching.

Flea larvae are slender and about 1/8-1/4" (2 to 5 mm) in length. They feed on organic debris found in their environment and on adult flea feces, which is essential for successful development. They avoid direct sunlight and actively move deep into carpet fibers or under organic debris (grass, branches, leaves, or soil.) They live for 5 to 11 days before becoming pupae.

Moisture is essential for their survival; flea larvae are killed by drying. Therefore, it is unlikely that they survive outdoors in shade-free areas. Outdoor larval development occurs only where the ground is shaded and moist and

where flea-infested pets spend a significant amount of time. This allows flea feces to be deposited in the environment. In an indoor environment, larvae survive best in the protected environment of carpet or in cracks between hardwood floors. They also thrive in humid climates.

Following complete development, the mature larvae produce a silk-like cocoon in which the next step of development, the pupa, resides. The cocoon is sticky, so it quickly becomes coated with debris from the environment. This serves to camouflage it. In warm, humid conditions, pupae become adult fleas in 5-10 days. However, the adults do not emerge from the cocoon unless stimulated by physical pressure, carbon dioxide, or heat.

Pre-emerged adult fleas can survive up to 140 days within the cocoon. During this time, they are resistant to insecticides applied to their environment. Because of this, adult fleas may continue to emerge into the environment for up to 3 weeks following insecticide application.

When the adult flea emerges from its cocoon, it immediately seeks a host because it must have a blood meal within a few days to survive. It is attracted to people and pets by body heat, movement, and exhaled carbon dioxide. It seeks light, which means that it migrates to the surface of the carpet so that it can encounter a passing host. Following the first blood meal, female fleas begin egg production within 36 to 48 hours. Egg production can continue for as long as 100 days, which means that a single flea can produce thousands of eggs.

This entire life cycle (adult flea >>> egg >>> larvae >>> pupa >>> adult) can be completed in 14-21 days with the proper temperature and humidity conditions. This adds to the problem of flea control.

If untreated, the female flea will continue to take blood for several weeks. During that time, she will consume about 15 times her body weight in blood. Although the male fleas do not take as much blood, they, too, contribute to significant blood loss. This can lead to the dog having an insufficient number of red blood cells, which is known as anemia. In young or debilitated dogs, the anemia may be severe enough to cause death.

Contrary to popular belief, most dogs have rather limited itching due to fleabites. However, many dogs become allergic to the saliva in the flea's mouth. When these dogs are bitten, intense itching occurs, causing the dog to scratch and chew on its skin.

Flea Control

Successful flea control must rid the dog of fleas and it must rid the dog's environment of fleas. In fact, environmental control is as important as treatment of the dog. If your dog remains primarily indoors and you do not have other pets that come in from the outside, environmental control is relatively easy, especially with the advent of the new topical products (see below). However, the dog that goes outdoors frequently or stays outdoors presents a somewhat greater challenge and a few fleas may occasionally be seen indoors.

Many of the older insecticides (which have been the mainstay of flea control for years) have limited effectiveness against fleas because they are only effective for a few hours after application on the dog. Also, these are primarily geared to kill adult fleas. Flea powders, sprays, and shampoos will kill the fleas present on your dog at the time of application. However, most of these products have little or no residual effects, so the fleas that return to your dog from his environment are not affected. Thus, your dog may be covered with fleas within a day after having a flea bath or being sprayed or powdered.

However, there are some newer, more effective sprays that can be a valuable part of the overall treatment plan. They kill adult fleas rapidly and are safe enough to use daily, if necessary. Flea sprays containing insect growth regulators are helpful in managing the overall problem because they help to break the flea life cycle. Some of the newer sprays with growth regulators are not recommended for daily use; once weekly application is recommended. Always read the label when first using any new product on a dog. In general, flea sprays, collars, powders and dips have become less popular since the introduction of the newer products.

Newer Products

Four relatively new products have come onto the market in the last couple of years. The “flea pill” is an oral medication that is given to the dog once a month. This product, Program™, does not kill adult fleas but is helpful in breaking the life cycle of the flea. When the female flea produces eggs, they are essentially “sterile” eggs and do

not hatch. In effect, this product acts like a birth control product for the flea. Three new topical treatments are applied to the nape of the neck. They are Advantage™, Frontline Top Spot™, and Revolution™. All are safe and very effective.

Environmental Control

The newer topical products do not require the aggressive environmental control that is necessary if only dips, sprays, or collars are used. This is one reason that they have become so popular with pet owners. Many people try the newest products for 1-2 weeks to see if they are adequate. Please consult with us about the requirements for your specific situation.

When environmental flea control is indicated, it must be directed at your house and your yard.

House. Even though fleas may be in your house, most people never see them. Fleas greatly prefer cats and dogs to people; they only infest humans when there has not been a cat or dog in the house for several days. (There are exceptions to this.) A professional exterminator may be called to treat your house or you may use a house fogger or a long-lasting spray. These foggers and sprays are very effective for adult fleas, but they will not kill adults that are still in their cocoon. You should purchase a fogger or a spray that kills the adult fleas and inhibits development of the eggs and larvae. In climates with extended warm temperatures and high humidity, it may be necessary to treat two or three times with a 30-day residual product before all stages of the fleas are removed from the house. The second treatment is most effective if it is done 2 weeks after the first.

There is at least one company that will treat your carpet with a flea-killing powder. The powder is non-toxic to people. It is worked deeply into the carpet to prevent it from being removed by vacuuming. This treatment has proven very successful, even in the face of heavy flea infestations. However, the treatment does not address fleas in your yard. The same chemical, a form of boric acid, is also available for application by the homeowner. However, the self-application kits do not offer the year guarantee.

Yard. Yard control may also be done by professional exterminator or with various insecticides you may use yourself. Be sure that any insecticide that you use has a 30-day residual. This keeps you from having to spray every week. In climates with extended warm temperatures and high humidity, it will often be necessary to treat monthly during the warm months of the year. You should use a 30-day residual product each time. Your veterinarian is able to help you choose the most effective product for your situation.

Re-emergence of Fleas

If you recall, pre-emerged adult fleas can survive up to 140 days within the cocoon. This is significant when your pets are gone from home for extended periods of time. During the time that the house is quiet and empty, pre-emerged adults remain in their cocoon. Even if the house was treated with an insecticide, their cocoon protects them. When people and pets return to the house, adults emerge from their cocoons and immediately begin to seek a blood meal. They jump on cats, dogs, and even people. Although it may appear that a dog just returned from boarding brought fleas to your home, it is also very possible that a sudden emergence of adult fleas may account for the fleas present. If large numbers of fleas are seen, they are almost certainly newly hatched fleas and have not been brought home with the pet.