

CANINE FLEA CONTROL

What should I do to kill the fleas on my dog?

This is a simple question with a rather complex answer. Successful flea control has two aspects. Fleas must be controlled on your dog, and fleas must be controlled in your dog's environment. Since dogs and cats share the same fleas, the presence of a cat in your dog's environment can make flea control more difficult.

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

The Flea Life Cycle

Learn it, know it, live it. There are four life stages of the flea and it is important to know how to break this life cycle in more than one place. This two-step approach provides the most rapid control and the least resistance to flea control agents in future flea generations.

The Egg

At any given time about one third of the flea population in someone's home is in the egg stage. The adult female flea lays up to 40 eggs daily. The eggs are laid on the host where they fall off to hatch in the environment. Eggs incubate best in high humidity and temperatures of 65 to 80 degrees Fahrenheit. (18.3-26.6 Celsius).

The Larvae

At any given time about 57% of the fleas in someone's home are in the larval stage. Larvae are like little caterpillars crawling around grazing on the flea dirt that is generally in their vicinity. Flea eggs and flea dirt both fall off the host. When the eggs hatch, there is a bounty of food prepared lovingly by all the host's fleas waiting for the hatchlings. This is the stage that picks up tapeworm eggs, which are likely to be in the vicinity, as they graze.

As they get to a certain age and size, a molt occurs. The first larval stage is called the first instar. After the first molt, the larva becomes the second instar. After the third molt, the larva is called a third instar larva and is capable of spinning a cocoon and pupating.

The time between hatching and pupating (i.e., the time spent in the larval stage) depends on environmental conditions. It can be as short as 9 days.

Note: Larvae are killed at 95 degrees. This means that they must live in some area where they are protected from summer heat. This means the shade of the yard or indoors.

The Pupae

By this life stage most young fleas have been killed off by an assortment of environmental factors. Only 8% make it to the pupal stage but once they have spun cocoons they are nearly invincible. The cocoon is sticky and readily picks up dust and dirt. Inside the developing cocoon, the pupa is turning into the flea that we are familiar with. They are especially protected under carpet, which is why carpet has developed such a reputation as a shelter for fleas.

The pupa can remain dormant in its cocoon for many months, maybe even up to a year as it waits for the right time to emerge.

The Unfed Adult Flea

After the pupa develops, it does not automatically emerge from its cocoon. Instead, it is able to remain in the cocoon until it detects a nearby host. The mature pupa is able to detect the vibrations of an approaching host, carbon dioxide gradients, and sound and light patterns. When the mature pupa feels the time is right, he emerges from the cocoon, hungry and eager to find a host.

A common scenario occurs when a dog is boarded during the owner's vacation. The owner picks up the dog from the boarding kennel and returns home. The mature pupae have been waiting for a host and when the dog enters the home, a huge number of adult fleas emerge at once and attack the dog creating a sudden, heavy infestation. Often the boarding kennel is blamed for giving the dog fleas. What really happened was that the pupae waited to emerge while there was no host present and then they all emerged suddenly when the host arrived.

An unfed flea is able to live for months without a blood meal but during that time it is aggressively using all its powers to locate a host. Once it finds a host, it will never purposely leave the host.

The Fed Flea

After the adult flea finds a host and takes its first blood meal, metabolic changes occur that alter the flea forever. The flea is now called a fed flea and, if separated from its host, will die in only a few weeks without a blood meal. The female flea begins to produce eggs within 24 to 48 hours of her first blood meal and will lay eggs continually until she dies.

The average life span of the adult flea is 4 to 6 weeks, depending on the grooming abilities of the host.

I have not seen fleas on my dog. Does that mean that none are present?

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 fecal matter from the flea that contains digested blood. 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 in doubt of its identification, put the suspected material on a light colored table top 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 method 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.

What can these fleas do to my dog?

If untreated, the female flea will continue to take blood for several weeks. During that time, she will consume about 15 times her bodyweight 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 flea bites. 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.

What can I do to rid my dog of fleas?

Successful flea control must rid the dog of fleas and it must rid the dog's environment of fleas. In fact, because the majority of fleas reside not on the dog but in the environment in various stages of development, environmental control is more important.

Previously flea control for dogs required a variety of dips, powders, sprays and collars that all had very limited efficacy. These products were often effective only for adult fleas, and only for short periods.

Since 1995 many new types of flea control products have been developed. Unlike previous treatments these medications last much longer on the dog, and often contain a combination of ingredients targeted to both adult and immature fleas.

Treating for Adult Fleas

Two major types of medication are currently available to kill adult fleas on dogs: Topical and Oral.

Topical medications include Frontline, Advantage/Advantix, Revolution and Vectra. The active ingredients in these medications differ, but all are applied directly to the dog's skin. From there the medication is either absorbed into the body, or stored in the oil glands in the skin and slowly released over the course of a month.

Oral medications include Capstar and Comfortis. These medications come in a pill formulation. Once given the medication is absorbed into the blood stream and will kill fleas that are feeding on the dog within 30 minutes. Capstar is a very short acting medication which is useful and eliminating a current infection to prevent spread to other pets, but will not prevent re-infection. Comfortis last approximately 1 month and can prevent re-infestation.

Treating for Immature Fleas

Because at any given time approximately 90% of the fleas within an environment are in an immature stage, treating these stages is very important for good flea control. There are several different steps that can be taken to eliminate immature fleas in the environment.

Within the home thorough cleaning is an important aspect of flea control. Because many stages of the flea are temperature sensitive, all bedding should be washed in the hottest water possible. Rugs, furniture and floors should be vacuumed well to remove as many loose eggs as possible.

Insect growth regulators are chemicals that disrupt the normal growth of flea eggs or larvae and render them unable to hatch or develop. These chemicals are non toxic to humans or other pets and are very

effective for controlling fleas in the environment. In addition to household and professional sprays, many topical products contain these treatments.

Treating the yard or outdoor environment may also be effective for preventing exposure to dogs. Treatment may be done by a professional exterminator or a variety of sprays are available for home use. Care should be taken when choosing a product to ensure safety for both the pets and family.