

# Fact Sheet

## 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 makes flea control much more difficult.

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

### Fleas seem to be rather simple creatures. How complicated can their life cycle be?

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 consider all four stages of the life cycle. Flea eggs are pearly white and about 1/2 mm (1/32 in.) 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 favour rapid hatching.

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

Moisture is essential for the survival of these immature stages of the 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 faeces to be deposited in the environment. In an indoor environment, larvae survive best in the protected

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environment of carpet or in cracks between hardwood floors. They thrive in warm conditions such as the recent summer.

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 months 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 --> larva--> pupa --> adult) can be completed in 7 - 21 days with the proper temperature and humidity conditions. This adds to the problem of flea control.

## 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 body weight in blood. Although the male fleas do not take as much blood, they, too, contribute to significant blood loss from the host animal. This can lead to the dog having an insufficient number of red blood cells, which is known as anaemia. In young or debilitated dogs, the anaemia may be severe enough to cause problems.

Contrary to popular belief, most dogs do not itch too much due to fleas. 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 continuously.

## 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, environmental control is probably more important than what is done to the dog. If your dog remains indoors and you do not have other pets that come in from the outside, environmental control is relatively easy. However, the dog that goes outdoors or stays outdoors presents a significant challenge. It may be impossible to completely rid the environment of fleas under these conditions, though flea control should still be attempted. When the dog is free-roaming or other dogs are allowed access to the dog's garden, the task of flea control becomes even more difficult.

## What can I do for my dog?

Many insecticides that are applied to the dog have limited effectiveness against fleas because they are only effective for a few hours after application. Also, most of these products are effective only against 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 the 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.

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 pet sprays with growth regulators are not recommended for daily use; once weekly application is sufficient. Always read the label when using any new flea product on a dog. Recently many more sophisticated products have become available that not only have a high knock-

down effect i.e. killing adult fleas on the animal, but also have long residual effects. Some require repeat applications only every several weeks. Tablets, spot on and pour on preparations are all available today. Please discuss the problem with us and we will advise. For example some dogs with sensitive skins are irritated by flea collars and these should not be worn.

## **What can I do to minimise fleas in the environment?**

Environmental flea control usually must be directed at the dog's immediate environment, the house and any outbuildings occupied by the dog, etc. Even though fleas may be in your house, they are usually never seen. Fleas greatly prefer dogs and cats to people; they only infest humans when there has not been a dog or cat in the house for several days. (There are exceptions to this.) You may have the house professionally fumigated or use one of the sprays available today that do have a long residual effect. However before purchasing any of these from a supermarket or pet shop it is worthwhile consulting your veterinary surgeon. He will be able to give you advice regarding many of the newer, safer sprays that are available. In situations where there is a very high flea density it may be necessary to repeat environmental control rather more frequently than suggested in the product literature. Again follow the advice of your veterinary surgeon. Some products not only kill the adult fleas but also contain growth regulators that prevent flea maturation. Your veterinary surgeon is able to help you choose the most effective product for your situation. Remember these products will not kill fleas that have not emerged from their cocoon.

## **I have heard that there is a once monthly flea tablet available. Is that true?**

Yes. This product is given once monthly, but it is important to understand what it does and what it does not do. It does not have any effect on adult fleas; to kill them, you must use the other products that have been mentioned. The monthly product causes the female fleas to lay abnormal eggs that do not hatch. This means that you will not see results for 1-4 months, depending on the number of fleas present. Since fleas live all the year round in our warm centrally heated houses, it is important that the product is used regularly. (Control of the entire flea population is then possible especially when combined with one of the environmental products to kill adult fleas. One of the advantages of the product is that it appears to be particularly non-toxic, both to our pets and ourselves.

## **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 faecal 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 1/2 mm (1/32 in) long. If you are in doubt of its identification, put the suspected material on a light coloured 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.

## **I just got my dog home from boarding and it has fleas. Doesn't that mean that they were picked up while boarding ?**

Not necessarily. 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 dogs, cats, 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. Thus do not be too quick to blame the kennels, after all they do not want fleas any more than you do and any reputable boarding kennels will be engaging in rigorous flea control anyway..



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