

Flea Control and Prevention

Attempting to control fleas on our pets is a multi-step process. Adult fleas spend most of their time on an animal, but the flea eggs, larvae, and pupae are found in abundance in the environment such as in carpeting, rugs, bedding, and grass. For every flea that you see on your pet, there are likely to be hundreds of eggs and larvae in your home and yard. Therefore, a truly effective flea control program always includes treating the environment as well as treating your pet. These are the essential steps for a successful flea control program:

- Remove fleas from the indoor environment.
- Remove fleas from the outdoor environment.
- Remove fleas from pets.
- Keep immature forms of fleas from developing.

Ingredients of flea control products can vary and include adulticides, chemicals that can kill immature forms, insect growth regulators/development inhibitors, or combinations thereof. The choice of products will need to be based on the extent of the flea infestation; the species, breed, health status, and age of the pet; the environment; presence of other pets; and special family needs (e.g., infants, people with asthma).

Flea Control in the Indoor Environment

There is no successful flea control program that does not involve treating the environment.

Indoor flea control involves mechanically removing all stages of the fleas, killing any remaining adults, and preventing immature forms from developing.

1. Start by vacuuming thoroughly, especially below drapes, under furniture edges, and where your pet sleeps. It is estimated that vacuuming can remove up to 50% of flea eggs. Vacuum daily in high traffic areas, weekly in others. Each time, seal your vacuum bag in a plastic bag and discard it immediately. Do NOT place mothballs or flea collars in the vacuum, since toxic fumes could result.
2. Use a product that will kill any remaining adult fleas and also stop the development of eggs and larvae. You will need a product that contains both an adulticide and an insect growth regulator (IGR), such as Nylar (pyriproxyfen) or methoprene. This can be in the form of carpet powders, foggers, or sprays.

Foggers are especially good for large open areas. Surface sprays can reach areas such as baseboards, moldings, cracks, and under furniture where foggers cannot reach. Choose the product(s) you use with care, taking into account the presence of children, fish, birds, persons with asthma, etc. Your veterinarian can help you choose the appropriate products for your situation. In severe infestations, you may need the help of a professional exterminator.

3. Wash your pet's bedding weekly and treat the bed and surrounding area with a product that contains both an adulticide and an insect growth regulator.
4. Do not forget to also clean and treat your automobile, pet carrier, garage, basement, or any other place your pet spends much time.

Flea Control in the Outdoor Environment

Flea control in the outdoor environment generally involves treating the yard and kennel areas where fleas are most likely to occur. Fleas tend to like it where it is moist, warm, shady, and where there is organic debris. They will also tend to be where pets spend more of their outdoor time. So be sure to concentrate on areas such as patios, under porches, dog houses, etc.

Rake away any organic debris such as leaves, straw, grass clippings, etc., to disturb flea habitat and allow any flea and tick product you use outdoors to penetrate.

If you are going to treat your yard, we prefer an environmentally safe spray containing fenvalerate for this purpose. There are also sprays which contain insect growth regulators which can be used.

You may need to treat the yard every 7 to 21 days depending on the product. Regardless of the product used, remember not to spray when or where runoff could go into lakes or rivers. Read the label on all insecticides thoroughly and apply them as directed.

Flea Control on Your Pet

It is perfectly normal to see live fleas on a pet immediately after spraying, shampooing, dipping, etc. It takes time for the flea control products to work.

Now that we've taken care of the fleas in your home and treated the "hot spots" in your yard, it's time to eliminate the fleas that are on your pet. There are a number of flea control products for use on pets, including once-a-month topical products, sprays, dips, shampoos, collars, powders, oral, and injectable products. With any product applied directly to the pet, please remember that you may see some live fleas on your pet for a short time after spraying, shampooing, dipping, etc. In order for the fleas to die, they must come into contact with the insecticide, and absorb it.

Keep in mind that until all of the fleas in your home have died, you will probably still see some fleas, even on a treated pet, since some immature forms may continue to develop. This is especially true if you had a big flea problem to start with. Persistence is the key here. It is essential to keep following an effective flea control program for a long enough time to get rid of all of the fleas, in all life stages. This may take several weeks to 6 months or more, depending on your particular situation.

Frontline & Frontline Plus for Cats Once-a-month Topicals: Once-a-month topical insecticides are applied to a small area on your pet's back, are probably the easiest product to use, and generally last the longest. Some kill fleas and ticks, and others just kill fleas, so check the label carefully. Ingredients generally include permethrin, pyrethrin, or fipronil. Examples include Bio Spot One Step, Advantage, Frontline, Frontline Plus, and Revolution. Since many dog products can be very harmful if used on cats, read the label carefully. Remember: **Do NOT** use products containing **permethrins** on cats.

Sprays: Flea and tick control sprays can come as aerosols or pump bottles. When using a spray, you do not have to soak the pet with the spray, but be sure to spray all parts of the animal. Spray a small amount on a cotton ball to apply the product around the eyes and ears. Do not get any of these products in the eyes. Follow your veterinarian's and the manufacturer's directions on how often to spray, and spray in a well-ventilated area.

Note: Most cats prefer the pump bottles, since the hiss from the aerosols may sound too much like the hiss of another cat. If you are going to use an aerosol spray on a cat, it may be helpful to spray a cloth with the product (away from the cat), and then rub the cat with the cloth.

Dips: Dips and rinses are applied to the entire animal. They generally have some residual activity. They should be applied in a well-ventilated area according to your veterinarian's and the manufacturer's directions. It is helpful to put cotton balls in the pet's ears and ophthalmic ointment in the pet's eyes. **Even with these precautions, be very careful not to get any of the product in the pet's ears or eyes. Dips or rinses for cats contain pyrethrins. Again, read the label carefully - many products for dogs are not safe to use on cats.**

Shampoos: Flea and tick shampoos help to primarily rid the pet of the fleas and ticks he already has on him, although some have residual activity. To properly use a flea & tick shampoo you must be sure to work the shampoo in over the entire body and then leave it on at least 10 minutes before you rinse it off. Again, remember to protect the eyes and ears of the pet. Shampoos often contain pyrethrins.

Collars: Flea & Tick Collars can be effective, but must be applied properly. To get the right degree of snugness, you should just be able to get two fingers between the collar and your pet's neck. Be sure to cut off any excess portion of the collar after you have properly applied it. Otherwise, that animal or other pets may try to chew on the end. Check the package for information on duration of effectiveness since some collars lose ef-

fectiveness when they get wet. Watch carefully for any irritation under the collar. If this occurs, you may need to use a different product.

Do NOT use collars containing Amitraz, permethrin, or organophosphates on cats.

Oral and Injectable Products: Program, a product containing an insect development inhibitor is available as a tablet for dogs and cats and as an injectable for cats. The tablets are given once a month; the injection is given every 6 months. Program does not kill the adult fleas, so if you have fleas, you **MUST** also use something to kill the adults. Capstar, another oral product, is approved for use in dogs and cats. It will kill adult fleas, but only for a period of 24 hours or less. It is useful in situations such as boarding, grooming, and prior to surgery. Because Capstar is out of your pet's system in 24 hours, it should be followed with a longer-lasting product that will work on both adult and immature fleas

Flea Combs: Flea combs are often overlooked as a valuable tool in removing fleas. Your pet will love the extra, hands-on attention he gets as you comb through his coat. Flea combs are absolutely non-toxic and are the best method to use on ill, pregnant, or infant pets. Be sure to choose a comb that has 32 teeth/inch. Comb your pet and then place the fleas you comb off in detergent water, which will kill them. The disadvantage to flea combing is that it takes a considerable amount of time, and will not be effective in pets that have flea bite hypersensitivity.

PREVENTION — PREVENTION — PREVENTION

The best flea control is always flea prevention. Repellents are a cornerstone of prevention. Pyrethrins and permethrins have flea repellent activity. **(NOTE: Permethrins should NOT be used on cats.)** Using products containing these insecticides will help keep fleas away and prevent a flea problem from developing.

Regular use of insect growth regulators/development inhibitors will reduce the risk of fleas becoming established in the indoor and outdoor environment.

Before they are allowed in their house or kennel areas, pets should be given a flea bath after they have been boarded, played with pets from other households, or visited places where other animals have been.

Flea control is complicated by the fact that there are many wild animals which serve as 'reservoirs' for flea populations. Fleas can infest over 50 species of animals worldwide. In the United States, coyotes, fox, raccoons, some rodent species, skunks, opossums, rabbits, and ferrets can all harbor cat fleas. Flea control is also hampered by the evidence that some fleas are developing resistance to some of our flea control products, especially organophosphates. If there is a severe problem in your geographical area (some areas in the southern United States), treating the environment with pyrethroid-containing compounds may be indicated.

Reprinted from Drs. Foster & Smith Veterinary Services Department

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