

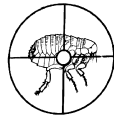
Twin Maples

Veterinary Hospital



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TAKING AIM ON FLEAS



Fleas are a severe problem to our pets. They cause flea allergy in many dogs and cats, a skin disease that causes intense itching, hair loss, and broken skin. Fleas can also carry and transmit tapeworms, most often seen as small rice-like worms.

Fleas are a hardy and prolific insect, and sometimes can seem to be impossible to control, but with knowledge of our enemy and a complete flea control plan, we can very effectively minimize our flea problems.

THE FLEA LIFE CYCLE

Adult fleas emerge from silk cocoons in 1 to 2 weeks. Delayed emergence can take up to 4 months.



Adult Flea

Adults lay 25-40 eggs per day on the pet



Larvae



Eggs fall off the pet and hatch in the environment in 2 to 5 days.

Cat Flea
Life cycle averages 21-28 days
Range: 12-180 days

Larva pupate in the environment in 7 to 14 days.



Fleas have a flexible life cycle that allows them to survive in both good and bad times. Fleas can go from egg to larvae to pupa to adult in as little as two weeks, in favorable conditions. A female flea can lay as many as 40 to 50 eggs a day and over 2,000 eggs during her lifetime. Further, only one of the four life cycle stages, the adult, actually lives on our pets.

The adult stage accounts for only 5% of total fleas in an area, the other 95% live away from the host. So it is clear, in order to control fleas, we must control fleas in the area surrounding our pets (the house and yard) as well as those fleas on our pet. Once adult fleas find a host, they stay with them. They feed, and reproduce on their host. The eggs laid on the host fall off and spread wherever the pet goes, starting the life cycle again.

NEW CONTROL CONCEPTS

A traditional flea control program involves applying topical insecticides to the infested pet and all animals they come in contact with, along with thorough mechanical and chemical environmental control. However, modern insecticide and drug technology has reduced the need for environmental flea control.

Environmental flea control is necessary only in cases of severe flea infestations where pets or their owners are suffering from numerous flea bites and allergic dermatitis. The goals of flea control are to eliminate fleas on pets, eliminate existing environmental infestation, and prevent subsequent reinfestations.

Elimination of fleas on pets

The first step in a flea control program is to kill fleas on the pet to eliminate discomfort. Speed of action is a concern when discussing flea kill on a pet.

A spot insecticide applied topically can take 12 to 36 hours for the compound to spread or reach sufficient concentrations to eliminate existing fleas. If a more rapid kill rate is desired, the flea pill Capstar (nitenpyram), may be given to dogs and cats. Comfortis is a dog only, 30 day residual oral medication. Several spot or spray insecticides provide good flea control on pets. These include topically applied products, such as Vectra3D for dogs, fipronil (Frontline), imidacloprid (Advantage), and selamectin (Revolution), and the orally administered pill nitenpyram (Capstar).

Elimination of existing environmental infestation

Many of the new topical and systemic compounds can eliminate existing flea populations without the need for premise treatments. Existing infestations can be eliminated by administering residual insecticides such as Vectra3D, Frontline Plus, Comfortis, or Revolution once a month to kill adult fleas. Vectra3D, Frontline Plus, and Revolution also prevent flea reproduction. But as previously mentioned, treatment of the premises may still be necessary in cases of massive flea infestations or severe pet or human allergy to fleas.

Preventing subsequent reinfestations

After the initial infestation has been eliminated, pets should be placed on a preventive program. Residual insecticides or insect growth regulators (IGRs) should be administered monthly. If environmental flea control is necessary, a thorough understanding of the biology and habitat of fleas is essential for success. Flea eggs will be deposited anywhere the flea-infested pet has access. Sites where the pet spends most of its time will have the greatest infestation. If you wish to do environmental treatment, it is often best to discuss treatment with a licensed exterminator.

OUR RECOMMENDED PRODUCTS

Comfortis™ (Spinosad)

Comfortis™ is an FDA approved, chewable, beef-flavored tablet that kills fleas and prevents flea infestations on dogs for a full month. Comfortis is palatable, easy to give and starts to kill fleas in 30 minutes. This kills fleas before they can lay eggs and contaminate the environment with eggs and immature forms. Comfortis™ has been demonstrated to be safe for dogs and puppies 14 weeks and older.

With Comfortis™, you can play with your dog immediately after treatment because there is no residual liquid that needs to dry on the pet. Because Comfortis™ is administered orally, there's no risk of application site reactions, stained carpet or upholstery, and it can't be rubbed or shaken or washed off.

Spinosad is the active ingredient in Comfortis chewable tablets. Spinosad is environmentally friendly.

The most common adverse reaction recorded during clinical trials was vomiting. Other adverse reactions were decreased appetite, lethargy or decreased activity, diarrhea, cough, increased thirst, vocalization, increased appetite, redness of the skin, hyperactivity and excessive salivation.

Vectra 3D® (Dinotefuran, Permethrin, Pyriproxyfen)

Vectra 3D® is a topical flea control product **for dogs** applied on the back. Its active ingredients are:

Dinotefuran: quick-kill contact neonicotinoid that causes continuous nervous stimulation of the insect resulting in tremors and death.

Permethrin: adulticide and repellent causes loss of nervous system control; "hot foot" activity repels vectors.

Pyriproxyfen: potent insect growth regulator (IGR) prevents development of all immature flea stages (eggs, larvae and pharate pupae); stable in sunlight.

Vectra3D's repellent action helps reduce the risk of vector-borne disease transmission. It kills on contact; vectors do not have to bite to die. Vectra3D



has a quick onset of action. It begins adult flea killing activity within 2 hours and reduces tick numbers within 24 hours. It prevents development of all immature flea stages: eggs, larvae and pupae.

Repellency dramatically reduces mosquito feeding: up to 100% for 30 days¹.

Vectra3D protects canine patients for 1 month, remains effective after bathing and swimming . Vectra3D can be used for puppies as young as 7 weeks of age.

Frontline® Frontline Plus®(Fipronil, Fipronil plus (S)-methoprene)

Frontline and Frontline Plus are insecticide products that offer good flea and tick control for cats and dogs. It comes in two forms; a spray and a drop on formulation. The active ingredient in Frontline is fipronil. Fipronil, is stored under your pet's skin, in the oil glands, so FRONTLINE continuously reapplies to the skin and hair through the hair follicles making it waterproof.

Frontline Plus contains an extra ingredient, (S)-methoprene. Frontline Plus not only kills adult fleas, but also breaks the flea life cycle by killing their eggs and larvae, preventing re-infestation

Both forms give long term control, and do not easily wash off the pet. Frontline Plus is applied between the shoulder blades. All forms of Frontline should be reapplied monthly.

When properly applied, Frontline kills 96% of fleas on the pet within 24 hours, and keeps fleas and ticks off the pet for at least one month. Fleas do not need to bite the pet to be killed and thus this product is a good choice for pets with allergies to fleas. Fleas are killed before they can feed and reproduce, halting the life cycle.

Frontline has a wide safety margin, and can used be on dogs, cats, puppies, and kittens. Frontline is effective as a preventative or as treatment for an existing infestation.

Revolution® (selamectin)

Revolution enters the bloodstream through the skin. Concentrations of Revolution in the blood and tissues prevent heartworm disease and prevent and treat roundworm and hookworm infections. Revolution selectively redistributes from the blood to the skin and other tissues, where it provides protection against fleas, flea eggs, and ear mites. Revolution is especially effective for cats and kittens.

What about over the counter products?

There are many other products on the market for control of fleas. Unfortunately over the counter products tend to be less effective than the products listed above. Some can be quite dangerous to your pet. Many permethrin based products can cause neurologic toxicities. Over the counter products labeled for dogs can cause severe illness or death in cats. Please call Twin Maples for any questions you may have regarding flea and tick control products before using on your pet.

MULTIPLE PET HOUSEHOLDS

Regardless of the methods you use to fight fleas, if you have more than one pet, you must treat all pets for fleas, or your pets will be quickly reinfested. Even if one pet does not appear to be infested, it is very important to treat all pets.

If you are treating both cats and dogs, please be certain that you are using products safe for both dogs and cats. Some products are very dangerous or fatal to our feline friends.

WHAT ARE FLEA ALLERGIES?

Many pets develop a true allergy to the fleas' saliva, which is deposited under the pet's skin when the flea bites. This is why some pets itch and scratch so much more than others when infested with fleas. These pets often lick and scratch so aggressively that they pull out hair and create raw, infected sores, especially over the rear end and rear leg areas. Flea allergies must be treated with appropriate medication by your pet's doctor. Topical medications are generally not effective alone.

IN SUMMARY

As you have probably already surmised, preventing or treating fleas in your home involves developing a proper plan most suited to your individual situation.

There are many excellent new products available that are very effective in controlling fleas when used properly.

The doctors and staff at Twin Maples Veterinary Hospital will be happy to help you formulate a prevention or treatment plan that will be most effective for your pet. Please don't hesitate to ask for our help.

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