

## RIDDING YOUR HOME OF FLEAS

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Ridding a home of fleas can be a frustrating and costly endeavor. Unlike some pests encountered around the home, fleas cause discomfort and irritation to both pets and people. Fleas account for more than half of all dermatological conditions requiring veterinary assistance, and even a single flea bite to a hypersensitive animal or person may cause intense itching and irritation.

For successful flea control, the home, pet and oftentimes, the yard must be treated. Yet the manner in which these treatments are performed can greatly influence the results. The following information will help frustrated pet owners effectively rid their homes and pets of fleas.

### Essential Facts About Fleas

- Adult fleas (the biting stage seen by pet owners) spend most of their time on the animal, not in the carpet. This is why treatment of the pet in conjunction with the pet's environment is an essential step in ridding a home of fleas.
- Adult fleas lay all of their eggs (up to 50 per day) on the pet. However, the eggs soon fall off the animal into carpeting, beneath the cushions of furniture, and wherever else the pet rests, sleeps or spends most of its time. This is where homeowners should focus control measures.
- After hatching, flea eggs develop into tiny, worm-like larvae. Larvae remain hidden deep in carpet fibers, beneath furniture cushions and in other protected areas. The larvae feed mainly on adult flea feces (dried blood) which accumulates, along with the eggs, in pet resting and activity areas.
- Before becoming adult fleas, the larvae transform into pupae within a silk-like cocoon. Pupae remain inside the cocoon for 2 to 4 weeks, sometimes longer. The cocoon is resistant to insecticides and this is why some adult fleas are seen for an extended period, even after the home and pet are treated.

### Treatment of Premises

If you neglect to treat the pet's environment (the premises), you will miss more than 90% of the

developing flea population -- the eggs, larvae and pupae. If the pet spends time indoors, the interior of the home should also be treated. Before treatment, the pet owner should:

1. Remove all toys, clothing, and stored items from floors, under beds, and in closets. This step is essential so that all areas will be accessible for treatment.
2. Remove pet food and water dishes, cover fish tanks, and disconnect their aerators.
3. Wash, dry-clean or destroy all pet bedding.
4. VACUUM! -- vacuuming removes many of the eggs, larvae and pupae developing within the home. Vacuuming also stimulates pre-adult fleas to emerge sooner from their insecticide-resistant cocoons, thus hastening their contact with insecticide residues in the carpet. By raising the nap of the carpet, vacuuming improves the insecticide's penetration down to the base of the carpet fibers where the developing fleas live. Vacuum thoroughly, especially in areas where pets rest or sleep. Don't forget to vacuum along edges of rooms and beneath furniture, cushions, beds, and throw rugs. After vacuuming, seal the vacuum bag in a garbage bag and discard it in an outdoor trash container.

**Insecticide Application** – Once fleas become established in a home, insecticides are almost always needed to control them. Always read and follow label directions on the insecticide container. Other than the person performing the application, people and pets should be out of the house during treatment. People and pets should also remain off treated surfaces until the spray has dried. This may take several hours, depending on carpet type, ventilation and method of application. Opening windows and running the fan or air conditioner after treatment will enhance drying and minimize odor. Many different products are available for home treatment. The most effective formulations contain both an adulticide (e.g., permethrin) effective against the biting adult stage, and an insect growth regulator (methoprene or pyriproxyfen), necessary to provide long-term suppression of the eggs, larvae and pupae. Pet owners will need to carefully read the “active

ingredients" panel on the product label to determine if these ingredients are present. Examples include Raid Flea Killer Plus®, Siphotrol Plus®, Bio Flea Halt™, and Fleatrol®. Most homeowners will find aerosol formulations easier to apply than liquids. Moreover, aerosol products which can be dispensed by hand -- and thus directed under and behind beds, furniture, etc. -- tend to be more effective than "foggers" or "bug bombs" which are indiscriminately set off in the center of a room. It is essential that the application be thorough and include all likely areas of flea development. Carpets, throw rugs, under and behind beds and furniture, and beneath cushions on which pets sleep should all be treated. Pay particular attention to areas where pets spend time or sleep, as these will be the areas where most flea eggs, larvae and pupae will be concentrated. For example, if the family cat sleeps within a closet, or hides under the bed, these areas must be treated or the problem will continue. Hardwood and tile floors generally do not require treatment, but should be thoroughly vacuumed.

Expect to see some fleas for 2 weeks or longer following treatment. Provided all infested areas were treated initially, these "survivors" are probably newly emerged adults which have not yet succumbed to the insecticide. Instead of retreating the premises immediately, continue to vacuum. As noted earlier, vacuuming stimulates the insecticide-resistant pupae to hatch, bringing the newly emerged adults into contact with the insecticide sooner. Flea traps, such as those utilizing a light and glue board to attract and capture adult fleas, can be helpful but will not eliminate a flea infestation unless used in combination with other methods. If adult fleas continue to be seen beyond 2-4 weeks, retreatment of the premises (and pet) may be necessary.

#### Treatment of Pet

It is important that the pet be treated in conjunction with the premises, preferably on the same day. Adult fleas spend virtually their entire life on the animal -- not in the carpet. Untreated pets will continue to be bothered by fleas. They may also transport fleas in from outdoors, eventually overcoming the effectiveness of the insecticide applied inside the home.

Pets can be treated either by a veterinarian or the pet owner. A variety of on-animal formulations are available that may be prescribed by veterinarians. Many provide only short-term relief against biting adults (a few hours to a few weeks); however, two new veterinarian-supplied products, Advantage and Frontline, control adult fleas on pets for 1 and 3 months, respectively. Some products also contain an insect growth regulator (IGR) to prevent eggs from hatching as they are laid on the animal (e.g., Raid Flea Killer Plus, Ovitrol Plus®, Bio Spot™). Convenient, long-term prevention of egg hatch can be accomplished either with

the Ovitrol(R) Flea Egg Collar, or Program(R), administered orally to pets as a tablet. (See ENTFACT 628 - *A Smarter Approach To Flea Control*). Both of these products are available through veterinarians.

Pet owners should always read the product label. Certain products can be used only on dogs, and some list specific treatment procedures for puppies and kittens. Do not treat pets with the same products used to treat carpeting or the yard. As previously mentioned, it is important that pets be kept off treated carpets and surfaces until the spray has completely dried.

To re-cap, "de-fleaing" the pet is an essential step in ridding a home of fleas. However, pet owners must also treat the pet's environment, the home. *Having your pet dipped will not, in itself, eliminate fleas in an infested home.*

#### Treatment of Yard

Most flea problems in Kentucky can be eliminated by treating the pet and the interior of the home. In cases where pets spend most of their time outdoors, it may also be necessary to treat the yard. One way to determine if the yard is infested is to walk around the property wearing white athletic socks, pulled to the knee. If fleas are present, they will be seen against the white background of the socks.

Outdoor flea treatment should focus on areas where pets rest, sleep, and run, such as doghouse and kennel areas, under decks, along fences and next to the foundation. It is seldom necessary to treat the entire yard or open areas exposed to full sun. Insecticide formulations containing chlorpyrifos (Dursban) or permethrin are somewhat effective for outdoor flea treatment. These can be applied with a hose-end or pump-up sprayer. Long term suppression of fleas infesting kennels or outdoor areas can be enhanced with formulations containing an IGR such as methoprene or pyriproxyfen.

Fleas can be successfully controlled by diligently following the steps outlined above. Homeowners who lack the time to control fleas themselves or who are uncomfortable applying pesticides may wish to enlist the services of a professional pest control firm.

Where trade names are used, no endorsement is intended, nor criticism implied of similar products not named.