



FLEAS

The flea most commonly found in and around the home is the cat flea, *Ctenocephalides felis*. Despite its name, the cat flea finds dogs and humans quite tasty too. Flea bites cause irritation, but also serious allergies in some animals and humans.

Detection

Adult fleas spend almost all of their time on an animal's body. Immature fleas (larvae) are small, white, and worm-like. Look for them on the floor, in rugs, in cracks and crevices, and anywhere pets rest or sleep. Larvae feed on dried blood excreted by adults.

In order to know when to begin and end your flea-control efforts, use a specially manufactured flea comb on your pet to keep track of the flea population.

What You Can Do

Inside Your Home

- **Comb your pet** with a metal flea comb, available at pet stores. Focus around the neck and base of the tail. Keep a container of soapy water nearby to drown captured fleas.
- **Bathe dogs** to drown fleas. Use dog shampoo and increase effectiveness by using a flea comb while the pet is lathered. It is not necessary to use shampoo with insecticide.
- **Vacuum carpets, floors, and upholstered furniture frequently** throughout the year. Vacuuming picks up adult and egg-stage fleas, but is less effective at removing larvae. Clean cracks and crevices and seal permanently with caulk. Gently vacuum your animal's coat to remove adult fleas.

- **Use diatomaceous earth (DE)** to treat carpets, upholstered furniture, and pet bedding, or blow it into cracks and crevices. Use a hand duster to apply a fine layer of DE. Wear a dust mask, gloves, and goggles and avoid getting dust in your pet's eyes. DE has little toxicity to humans and pets, but kills fleas by absorbing the waxy coating on their bodies, causing dehydration and death.
- **Use Borate-based carpet treatments.** Borates have a low toxicity to humans and pets. Fleanix® carpet treatment can control fleas in carpeting for up to a year. Mix powder with the water in a rug shampooing machine, with or without detergent. Borate applied in water poses less hazard to the lungs than borate applied as a dust and it binds to carpet fibers so it cannot be vacuumed up.
- **Flea traps** can be useful if you don't own a pet but still have fleas (but also check for wild animals or rodents nesting in or around your home). Adult fleas are attracted to the warmth and light of a small electric bulb and are caught on sticky paper. Traps will work better in areas where you can exclude animals and humans.
- **Insect growth regulators (IGRs)** prevent flea eggs from hatching and inhibit larvae from developing. IGRs can be applied to areas such as carpets and pet bedding. IGRs will not kill fleas that have reached adulthood before the material is applied. Use IGRs in combination with other measures listed in this fact sheet. Some products combine IGRs with permethrin to control both pre-adult and adult fleas.

Outside Your Home

- **Treat outside only where you have found high flea populations.** To find these areas, walk around the yard in a pair of white socks. Check areas where animals rest, sleep, or regularly travel. You will easily see fleas that jump onto the socks.
- **Do not try to combat fleas by spraying around the perimeter of your house or spraying your entire yard.** Spot-treat only those areas where you find large populations of fleas. Fleas will more likely be on an animal or inside your home. Concentrate your efforts there.

What You Can Do, cont.

- **Check for wild animals** like raccoons and opossums nesting under the house or porch. Dead animals can also be the source of a flea infestation. Treat nests under the house with diatomaceous earth.
- **Use beneficial nematodes** in soil where you have found fleas. Be sure to water the area before and after application. For sources of nematodes see the Products & Resources.

For Your Animal

Note: Ultrasonic collars and machines are not effective.

There is no scientific evidence that these products impact fleas and they are not recommended.

The products below should be used on your animal only during flea season. If these products are over-used, fleas will eventually become resistant to them.

- **Fipronil (Frontline®) & imidacloprid (Advantage®)** are applied to the skin of the animal in a small amount at one spot, usually at the base of the neck or between the shoulder blades. The insecticide spreads over the entire body of the pet and is effective for at least a month. These products have a low acute toxicity for mammals but can be irritating to eyes and should not be ingested. Use gloves when applying these pesticides.

- **Lufenuron (Program®)** is given orally to the animal. Fleas that ingest this chemical produce only a few viable eggs, and larvae from those eggs cannot mature. Because lufenuron accumulates in fat and crosses the placental barrier, do not treat pregnant, nursing, or very young animals.

Prevention

- **Restrict pets to a regular sleeping space** so you can focus cleaning efforts in fewer areas.
- **Use washable pet bedding** that can be gathered up easily by the four corners and laundered frequently. Soapy water destroys all flea stages.
- **For highly allergic people:** Protect yourself with a long sleeved-shirt and long pants tucked into socks. If the weather is hot, a pair of long white socks will offer some protection. Pick off fleas and drop them into soapy water. Apply repellents to shoes and clothing rather than skin.
- **Keep wild animals and rodents away from the house.** Patch holes or cover them with screen (1/4" hardware cloth) to prevent animals from getting in.

Products

Insecticidal Dusts

Concern® Diatomaceous Earth Crawling Insect Killer,
Grow More® Diatomaceous Earth

Hand Duster

Pest Pistol® (If unavailable locally, call 888-784-1722 to order.)

Borate-based Carpet Treatments

Fleanix® (If unavailable locally, call 415-459-4003 to order.)

Insect Growth Regulators (IGRs)

Hartz® Flea Control Capsules for Dogs, Hartz® Control One Spot for Cats and Kittens

Flea Trap

Raid® Flea Killer Plus

On Your Animal (available from vets)

Frontline® (fipronil), Advantage® (imidacloprid)

Ingested by Your Animal (available from vets)

Program® (lufenuron)

Beneficial Nematodes—*Steinernema carpocapsae*.

Available from Rincon Vitova, P.O. Box 1555, Ventura, CA 93002; 805-643-6267

Note: New products are constantly coming to the market. Brand names listed are for example only. No endorsement of specific products is intended nor is criticism implied of similar products that are not mentioned. Always use according to directions on product label.

For More Information

If you have questions about the information in this fact sheet, contact the Marin County Department of Agriculture at 415-499-6700, or the Bio-Integral Resource Center, PO Box 7414, Berkeley, CA 94707; 510-524-2567.