

KEEPING FLEAS OFF YOUR PETS AND OUT OF YOUR YARD



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. 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.

Look for tiny eggs and tiny, white, worm-like flea larvae on the floor, in rugs, in cracks and crevices, and anywhere pets rest or sleep. Larvae feed on dried blood excreted by adults.

Flea traps can help you pinpoint a problem if you don't own a pet but still have fleas. Animals nesting near your house may be the source.

LESS-TOXIC CONTROLS

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 wide container of soapy water nearby to drown captured fleas.
- **Bathe dogs** to drown fleas. Use a 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 carpets picks up adult and egg-stage fleas, but is less effective at removing larvae. Clean cracks and crevices; or better still, seal permanently with caulk. Try gently vacuuming 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 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 the powder with water in a rug shampooing machine with or without detergent. During shampooing, borate binds to carpet fibers and cannot be vacuumed up. Borate applied in water poses less hazard to the lungs than borate applied as a dust.
- **Flea traps** attract adult fleas to the warmth and light of an electric bulb and the fleas are caught on sticky paper. Fleas prefer a warm body so traps will work better in areas where you can exclude animals and humans.

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.
- **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. Apply beneficial nematodes to soil where you have found fleas. The soil temperature must be between 60°F and 90°, and the soil should be moist. Irrigate before and after application, but don't soak the area. For sources of nematodes, see the Products and Resources box.

For Your Animal

- **Ultrasonic collars and machines are not effective.** There is no scientific evidence that these products affect fleas, and they are not recommended.



Choose less-toxic pest controls for your home and garden.

The following insecticides should only be used during flea season. Unnecessary use may speed up the process of fleas becoming resistant to these chemicals:

- **Fipronil (Frontline) and imida-cloprid (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 (chronic toxicity of fipronil unknown) but can be irritating to eyes and should not be ingested. Use gloves when applying them.
- **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.
- **Insect growth regulators (IGRs)** such as methoprene (Precor) and pyriproxyfen (Nylar) do not kill adult fleas, but break the flea reproduction cycle by preventing flea larvae from turning into adults. IGRs are sold in

a variety of applications including spoton formulations and tablets for your animal. Some products combine IGRs with other pesticides. In general, products containing just IGRs pose the fewest risks. IGRs have low toxicity to mammals, but are toxic to some aquatic organisms; therefore, it's best to limit the use of IGRs to indoor applications where the product won't go down an indoor drain.

PREVENTION

- **Restrict pets to a regular sleeping space** so you can focus cleaning efforts on 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 by wearing a long-sleeved shirt and long pants tucked into socks. If the weather is hot, just a pair of long white socks will offer some protection. Pick off fleas and drop them into soapy water. Apply insect repellents to shoes and clothing rather than to skin.
- **Keep wild animals and rodents away from the house.** Patch holes or cover them with screen hardware cloth to prevent animals from getting in.

THINGS TO AVOID AND WHY

These considerations will reduce the potential indiscriminate use of chemical control products and therefore reduce the potential exposure of pesticide residues to humans, animals and the environment.

- Use of pesticide products without:
 1. knowing what pest you are trying to control,
 2. consideration of alternative control options (IPM),
 3. selecting the most appropriate product for your situation, and
 4. reading and following the label directions.
- Automated aerosols and plant feeders: These devices may disperse chemicals in a way that can increase the risks of exposure to unintentional targets.
- Careless use of ground sterilants: These can leach; either use great care or alternative control methods to prevent damage to desired plants or water contamination.

ACKNOWLEDGMENT

The Central Contra Costa Sanitary District originally developed this Integrated Pest Management (IPM) outreach program for California. The Partners for Clean Water, with assistance from the Idaho Department of Agriculture and the University of Idaho Cooperative Extension, modified the information for Idaho.

WATER POLLUTION

Common household pesticides (a term which includes all chemical control such as herbicides, insecticides, rodenticides, etc.) can make their way into treated wastewater and local waterways, and may be at levels that can harm sensitive aquatic life. Pesticides can also get into ground water which may be used as drinking water. Water pollution prevention agencies have teamed up with participating retail stores, and professional pest control associations to reduce the risks associated with improper pesticide use.

Use pesticides according to label directions, paying close attention to surface and ground water advisories. Dispose of unwanted or leftover pesticides at a household hazardous waste collection facility or event; or through the Idaho State Department of Agriculture (ISDA) Pesticide Disposal Program (PDP). Clean, plastic pesticide and fertilizer containers may also be recycled through ISDA's Container Recycling Operation Program (CROP). Please call 208-465-8442 or visit: www.agri.idaho.gov for more information. For additional information on pesticide disposal, call 1-800-CLEANUP or visit: www.1800CLEANUP.org.

FOR MORE INFORMATION

Active ingredients are listed on the front of the product. Pesticide information profiles can be found on the Oregon State University hosted webpage <http://extoxnet.orst.edu/pips>. The University of Idaho's Extension Educators, located in most counties, can often assist in local pest management questions. No endorsement of specific brand name products is intended, nor is criticism implied of similar products that are not mentioned.

For more information, contact:

Partners for Clean Water

www.PartnersForCleanWater.org

Idaho State Department of Agriculture

www.agri.state.id.us/

University of Idaho IPM website:

www.extension.uidaho.edu/

University of Idaho Cooperative Extension Master Gardeners in your area

www.extension.uidaho.edu/idahogardens/

Western Integrated Pest Management Center

www.wripmc.org/

IPM Institute of North America

www.ipminstitute.org/

National Pest Management Association

www.PestWorld.org

