

# All you want to know about fleas!

The flea species most commonly found in homes, the cat flea or *Ctenocephalides felis*, occurs on both cats and dogs and also bites people. This section will explain how to identify flea bites, adult fleas, and flea larvae, pupae and eggs. Bites usually occur along the ankles and lower portions of legs from fleas in carpet. You'll notice a flea bite before the flea. Flea bites vary in appearance from tiny red dots to raised red bumps similar to mosquito or spider bites. They are usually accompanied by an itchy halo of redness that may last for several hours. Children are usually more sensitive to flea bites than adults.

A board-certified dermatologist should be able to help you identify a bite on human skin.

## Adults

Fleas are only about 1/16"-1/8" long and are difficult, though not impossible, to be seen by the naked eye.

**Fleas are wingless.** To travel from host to host, they leap incredible distances by using their long hind legs. (Michael Peter Balzary got his nickname based on his jumpy nature.) Fleas can leap as far as 7 inches vertically and 13 inches horizontally – quite a distance for such a small insect. [“An equivalent hop for a human would be 250 feet vertically and 450 feet horizontally!”](#) Their backward pointing spines on their body help them stick to hair on a host and make them hard to remove by scratching or shaking. The row of spines on their head is called a genal comb. Their laterally flattened body (like a bluegill) enables them to meander through fur, hair or feathers with ease. Other descriptive features include:

- 3 pairs of legs
- Dark, reddish-brown in color
- Short antennae with 3 segments
- Hard-bodied (hard to crush)

## Eggs

- Smooth
- Oval-shaped
- White in color

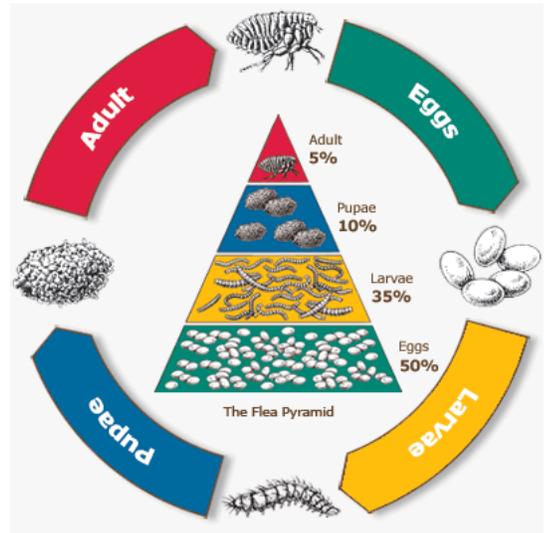
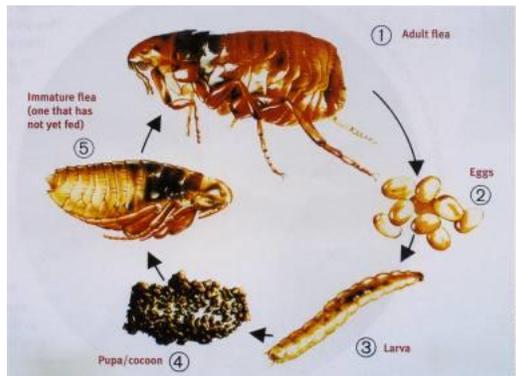
## Larvae

- About 1/4" long
- Body is white- or straw-colored when freshly molted; reddish-brown when feeding
- Head is brown
- Legless, maggot-like
- Roll up into a ball when disturbed
- Long hairs on each of the 13 body segments

## Pupae

- Silky cocoon
- Sticky and covered with debris particles
- Nearly impossible to kill unless smashed

**Fleas' life cycle:** A flea life cycle (from egg to larva to pupa to adult) takes from 2 weeks to 8 months. The length varies depending on temperature, humidity food and species with the optimum temperature being 70°F to 85°F and the optimum



humidity is 70%. **95% of a flea infestation population is in the immature stages, while only 5% of the population are adults.** The breakdown of the immature population consists of 50% eggs, 35% larvae, and 10% pupae.

**The process:**

### **Stage 1 – Egg:**

1. The female, after a blood meal, lays about 15-20 eggs per day – that’s up to 600 in a lifetime – usually on the host.
2. Eggs do not stick to the host, so they drop out anywhere – on carpets, rugs, upholstered furniture, etc.
3. The eggs hatch in 2 days to 2 weeks into larvae – in floor cracks, crevices, along baseboards, in beds, etc.

### **Stage 2 – Larva:**

1. Takes a week to several months to develop.
2. Are blind and avoid light.
3. Larvae sustain themselves by eating digested blood from adult flea feces, dead skin, hair, feathers, and organic debris that is found in carpet, rugs, fabric on furniture, and your pet’s bedding material. They are less likely to survive on tile floors, wood floors, or other smooth and impermeable surfaces.

### **Stage 3 – Pupa:**

1. Takes about 5-14 days to develop into adult fleas.
2. Silken cocoon is woven by larva.
3. Pet hair, carpet fibers, dust, and other debris sticks to cocoon.
4. Adults emerge once movement from a potential host is noticed.

As long as they’re cocooned, fully-developed adult fleas can survive without food for several months. Otherwise, newly emerged adult fleas can only live about 1 week without a blood feast. What helps them emerge from the cocoon stage is vibration (such as walking across the floor after the house was empty while you were on vacation), carbon dioxide (such as from a cat or dog exhaling), physical pressure, or heat.

### **Stage 4 – Adult:**

Adult fleas may live from 2 months to 1 year without feeding, but newly emerged adult fleas only live about 1 week if a blood meal is not obtained. **LOOK FOR EVIDENCE OF ADULT FLEAS PRIMARILY OVER THE TAILHEAD AREA OF YOUR CAT OR DOG WITH THE PRESENCE OF FLEA DIRT. THESE WILL BE SMALL BLACK SPECKS OF FLEA POOP THAT MIGHT HAVE A SLIGHT COMMA SHAPE TO THEM.** To confirm whether it is flea dirt or not, place it on a white or light-colored surface and add a drop or two of water. Within 20- 30 seconds it will start leaching a red color since flea dirt is actually your pet’s digested blood after it passes through the flea.

Keep in mind that adults do not necessarily emerge all at once. If you treat an infestation, be prepared for a second hatching within about 10-21 days. **THAT IS WHY IT IS VERY IMPORTANT TO TREAT THE ENVIRONMENT TWICE (AT A MINIMUM). FOLLOW THE FIRST TREATMENT WITH A SECOND ONE A MONTH LATER!**

Treating the house is paramount to complete flea treatment. If you treat only the dog or/and cat, and don’t treat the house, getting rid of all the fleas will be like trying to pay off a large credit card bill by just paying the minimum each month. It will take a long time!

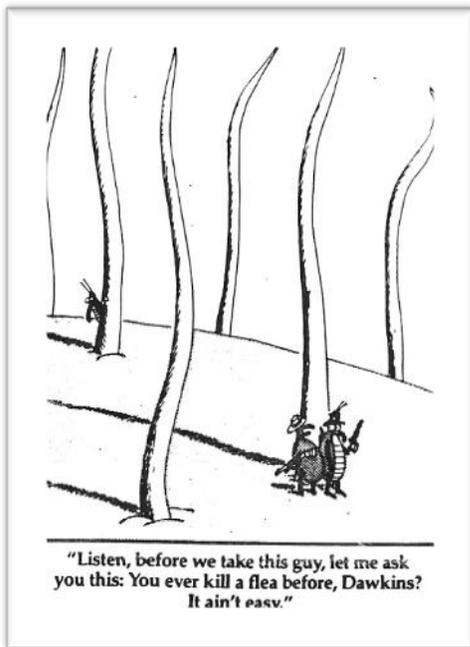
## HINTS FOR TREATING THE HOUSE AND THE OUTSIDE ENVIRONMENT:

- ✦ Cut up a flea collar and put it in the dust collection chamber of your vacuum cleaner. The warmed up air will activate the collar and kill and stage of the flea life cycle that was sucked into the chamber. It will also work on dust mites. Do tie off and throw the vacuum clean bag contents away frequently.
- ✦ Be sure to thoroughly vacuum the whole house and not miss under and behind furniture where pets may go.
- ✦ Wash any bedding material that your pet sleeps on to get rid of the pre-adult fleas that exist there.
- ✦ If you use foggers to treat the house, be sure to pre-treat areas that foggers will penetrate very well: under sofas and chairs. Place sofa and chair cushions on edge so that it gets under these areas. Do not be skippy in the number of foggers you use, and at the same do not overdo it and create an explosive situation.
- ✦ In using house and carpet sprays, do not over saturate an area. A light and even spray treatment of the floor and furniture surfaces are more appropriate. We have a good one: MYCODEX ENVIRONMENTAL SPRAY.
- ✦ If you hire a professional exterminator, be sure they know you have a flea problem and that they don't just spray along the baseboards. Have them return in 1 month to repeat treatment.
- ✦ In treating the outside environment, focus on areas of the yard that are shaded most of the day, and where you see your cat or dog spending a lot of time. Bright sunlight tends to desiccate or dry out the pre-adult fleas.
- ✦ Go to your lawn and garden center and seek professional advice as to what product(s) they recommend.
- ✦ ALWAYS REPEAT ALL TREATMENTS AT LEAST ONCE MORE A MONTH LATER!!

## HINTS AND PRODUCTS FOR TREATING YOUR CAT OR DOG:

- ✦ Flea collars do not work very well since most of the fleas spend their time on the back quarter of your pet. Best place for them is to cut them up and place them in your vacuum cleaner bag or container.
- ✦ Flea shampoos are NOT long lasting! Once you rinse the shampoo off, there is no residual killing action.
- ✦ Flea dips and powders may be too toxic for your pet and for those who handle them. Be careful to read and follow all label directions is you use them.
- ✦ DO NOT combine multiple flea treatment products in trying to get rid of all the fleas on your pets. ***Be sure to check with us on those products that are safe to use together.***
- ✦ If you use Over the Counter (OTC) flea products, be sure to read and follow ALL label directions. Many products indicate they are not to be used on cats. There can be fatal consequences if mistakes are made in this area.
- ✦ In using any of the number of topical 'spot-on' products, be sure to follow the 2-day rule: No bathing for 2 days before or after the application of the product. These products work by 'creeping along the sebaceous or oily glands in the skin'. If you bathe your pet, you will get rid of this oily layer and it will not spread as effectively.
- ✦ If using a flea birth control product such as Program or Sentinel, or Comfortis (which kills adult fleas for a month), be sure to follow label directions and give them with a small meal for better absorption.

## FLEA HUMOR



## FLEA KILLING PRODUCTS FOR YOUR PETS

(THOSE IN RED ARE AVAILABLE AT TSAC)

<b>TABLE 1</b>	<b>Flea Killing Ingredient</b>	<b>Flea Sterilizing or Additional Ingredients</b>	<b>For Dogs or Cats</b>	<b>Youngest Age or Size Approved For Use</b>	<b>Waterproof or Water Resistant &amp; HOW OFTEN GIVEN/APPLIED</b>
<b>Comfortis</b>	spinosad	none	dog	14 weeks; at least 5 lbs	Waterproof Given orally once a month
<b>Vectra 3D</b>	dinotefuran & permethrin	pyriproxyfen (flea sterilizer)	dog	7 weeks; at least 2.5 lbs	Waterproof; Applied monthly
<b>Vectra for Cats</b>	dinotefuran	pyriproxyfen (flea sterilizer)	cat	8 weeks	water resistant; Applied monthly
<b>Promeris</b>	metaflumizone	amitrax (for additional parasites)	dog	8 weeks	Waterproof; Monthly application recommended
<b>Promeris Feline</b>	metaflumizone	none	cat	8 weeks	Waterproof; Monthly application recommended
<b>Revolution</b>	selamectin	none	dog or cat Best for cats	6 weeks puppies 8 weeks kittens	Waterproof; Monthly application recommended
<b>Advantage</b>	imidacloprid	none	dog or cat	7 weeks puppies 8 weeks kittens	water resistant; Monthly application recommended
<b>K9Advantix</b>	imidacloprid & permethrin	none	dog	7 weeks	water resistant; Monthly application recommended
<b>Advantage Multi also called Advocate</b>	imidacloprid	moxidectin (for additional parasites)	dog or cat	7 weeks puppies 9 weeks kittens	water resistant; Monthly application recommended
<b>Frontline</b>	fipronil	none	dog or cat	8 weeks	Waterproof; Monthly application
<b>Frontline Plus</b>	fipronil	methoprene (flea sterilizer)	dog or cat	8 weeks	Waterproof; Monthly application recommended
<b>Program</b>	none	<a href="#">lufenuron</a> (flea sterilizer)	dog or cat	4 weeks	Waterproof; Monthly oral with meal; For cat injection, every 6 months
<b>Sentinel</b>	none	<a href="#">lufenuron</a> (flea sterilizer) & milbemycin (for additional parasites)	dog	4 weeks; at least 2 lbs	Waterproof; Orally given monthly with meal

<b>Capstar</b>	nitenpyram	none	dog or cat	4 weeks; at least 2 lbs	Waterproof; As needed-given orally or daily (no lasting activity)
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<b>Assurity</b>	spinetoram	none	cat	8 weeks	Waterproof; monthly topical application
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