



COUNCIL BLUFFS VETERINARY CLINIC

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## Fleas

Fleas are arthropod insects that feed on the blood of mammals (i.e., dogs, cats, humans, squirrels, etc). The adult flea will typically remain with one animal until they are removed or die. The adult flea feeds on the blood of the animal. The females will lay eggs on the animal. The eggs will drop off of the animal and come to rest in the grass, carpet, wood flooring, furniture, etc. Larvae hatch from the eggs in 2-12 days. The larvae eat the blood-containing feces of the adult fleas, or flea dirt, as it falls off of the animal. The larvae will grow and undergo 2 moltings within 9-200 days after hatching. Next, the larvae will spin cocoons (pupae) and develop into adult fleas over the course of 7 days to 1 year. The fleas will remain inside the cocoon until they sense the passing of an animal from the heat, vibrations, and carbon dioxide they produce. Once they emerge from the cocoon, they must start feeding in 1-2 weeks or they will die.

### Flea facts

- The average life span of the flea is 6 months to 2 years.
- Fleas thrive in warm, moist environments. Larvae require high humidity and temperatures of 65-80° F.
- While in the cocoon, the flea is resistant to the effects of insecticides, drying, freezing, insect development inhibitors (IDIs), and insect growth regulators (IGRs).
- Adult fleas can live on a single animal for more than 100 days.
- If removed from a host, an adult flea will die in 2-4 days.
- On average it takes 21-28 days for an egg to develop into an adult flea. This is why fleas are seen on a pet 3-4 weeks after treatment.

There are a number of problems that fleas can cause to both your pets and yourself.

- Hypersensitivity or Flea Allergy Dermatitis (FAD). This problem occurs when the animal's immune system reacts to the flea saliva, resulting in a release of histamine. The histamine release causes the animal to scratch and bite himself/herself. The animal will usually develop red bumps, crusting sores, and hair loss as a result of scratching and biting. The locations that are most often affected are the lower back, tail, thighs, and belly. This problem is typically seen in animals 3-6 years of age, although any animal could develop this problem. Treatment includes monthly flea prevention of all pets in and out of the house to minimize the exposure to the allergen (flea saliva), as well as antihistamine therapy, as directed by your veterinarian, to inhibit histamine release. Additional treatment may include steroids for severe allergies and antibiotics for secondary bacterial skin infections.

- **Anemia.** Anemia is a low red blood cell count that can make an animal feel weak and tired. This is caused by the adult fleas feeding on the blood of the animal. A heavy flea infestation can cause severe anemia in small, young animals (i.e., puppies and kittens). Severe anemia may require a blood transfusion to treat.
- **Tapeworm.** Fleas are the intermediate host for 1 type of tapeworm, an intestinal parasite (*Dipylidium caninum*). Animals and people can become infected with tapeworms by eating a tapeworm-infected flea. The following clinical signs can be seen in animals: itching around the butt causing the animal to drag its butt or chew on its butt, diarrhea, and gas. The following clinical signs can be seen in people, especially children, with heavy infestation: belly pain, decreased appetite, diarrhea, nausea/vomiting, weight loss, gas, and itching around the butt. It is important to note that this tapeworm cannot be spread directly from a cat, dog, or person to another cat, dog, or person.
- ***Bartonella henselae*.** This is a bacterium that is eaten by fleas while feeding on an infected cat. The live bacteria are passed in the flea feces where it is then eaten by the larvae. Transmission of this disease is suspected to occur when a flea or flea feces is eaten. Most cats that become infected become carriers, without showing signs of disease. This bacterium causes Cat Scratch Disease (or Cat Scratch Fever) in humans. It is suspected that this disease is spread to people when a cat scratches a person with a claw that is contaminated with flea feces containing this bacterium.
- Fleas can bite people causing red, itchy bumps.

## **Prevention**

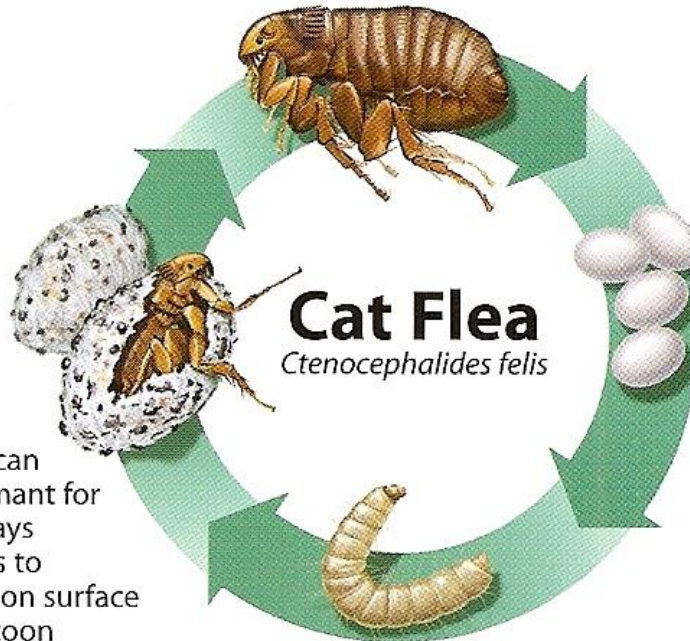
To best prevent a flea infestation, it is recommended that all pets inside and outside of the house be treated with a monthly flea prevention product all year round. Many types of flea collars provide minimal to no protection against fleas. Topical and oral flea prevention products are typically going to provide whole body protection of your pet and thus be more effective as a preventative. Some products may have additional benefits, such as protection against ticks, mosquitoes, lice, heartworm, ear mites, intestinal parasites, demodex, or sarcoptes. Consult with your veterinarian about the options available and ask for a recommendation on the product that would be best for your pet.

Avoid products containing permethrin or amitraz on dogs that may be groomed by cats or if they come into direct contact with cats as these products are toxic to cats.

## Flea Life Cycle

### Adult Flea

- Female: 4-5 mm long    Male: 2-3 mm long
- Characterized by a hard exoskeleton (chitin)
- Blood meal is necessary before reproduction
- Fleas mate after feeding
- Egg laying begins within approximately 24-48 hours



### Flea Eggs

- Tiny white eggs that fall off pet indoors and outdoors
- 0.5 mm long
- Eggs begin to hatch within approximately 1-6 days

### Flea Pupae

- Flea pupae can remain dormant for up to 350 days
- Debris tends to accumulate on surface of sticky cocoon
- 2-3 mm long
- Pupae begin to hatch in approximately 14 days

### Flea Larvae

- Caterpillar-type young
- 1-2 mm long
- Larval stage lasts for approximately 5-11 days

*Fleas are voracious, consuming up to 15× their weight in blood daily.<sup>6</sup>*