



## WHAT YOU SHOULD KNOW ABOUT FLEAS

Despite numerous technological advances, fleas continue to be a frustrating and potentially life threatening problem for our beloved pets. There are many effective flea control products on the market today, but the problem seems to be one of understanding the flea and it's life cycle.

### WHAT KIND OF DAMAGE CAN FLEAS CAUSE?

#### \*\* Flea allergy dermatitis

Fleas do not make animals itchy unless they have an allergy to flea saliva. This is the reason why you can have multiple pets in the same house who all have fleas, but only one of them is itchy. When dogs and cats who are allergic to flea saliva are bitten by just one flea, their skin can be inflamed and itchy for a whole month after that single bite! When the pet then scratches their skin, secondary infections can develop, like "hot spots", that require medical treatment.

#### \*\* Flea anemia

Fleas survive on your pet by sucking blood from them, and a life threatening anemia (low red blood cell count) can develop secondary to a flea infestation. FLEAS CAN KILL YOUR PET BY CAUSING A SLOW BUT FATAL AMOUNT OF BLOOD LOSS! Pets that have a flea infestation will have "flea dirt" on their body that looks like tiny little black specks. This actually is dried blood left on the pet where fleas have been feeding.

#### \*\* Feline infectious anemia

Some fleas actually carry a life threatening blood parasite that they can transfer to a cat while feeding.

#### \*\* Cat scratch fever (Bartonellosis)

Some fleas transmit a bacteria called *Bartonella henselae* to domestic cats while feeding. Infected cats then carry this bacteria in their body and humans can be infected by being scratched or bitten by an infected cat.

#### \*\* Tapeworm infection

Some fleas carry tapeworms, and cats can be infected when they are grooming and inadvertently ingest the flea.

## **COMMON MISCONCEPTIONS ABOUT FLEAS**

**\*\* My pet cannot have fleas because he lives entirely indoors**

Fleas thrive and multiply inside your home! Often, they hitch a ride on your dog and cat so they can live out the winter in a nice, warm house.

**\*\* I would know if my pet had fleas because I would be getting bitten**

Humans are not the natural host for fleas, and a hungry flea will only bite a human as a last resort if an animal host is not available. If a person in the house is getting bitten by fleas, that indicates that there is a huge flea population in the environment that needs to be treated.

We cannot have fleas in the house because we only have hardwood floors and not carpet Fleas love to develop in the cracks between the boards of hardwood floors.

**\*\* I don't see any fleas on my pet, so there must not be any there**

In 90% of the cases where an owner thinks the pet does not have fleas, a veterinarian finds live fleas and/or flea dirt with a flea comb.

Dogs and cats will instinctively lick any fleas away that are on their body. Sometimes all we can see is the secondary skin disease that can result from fleas.

## **THE FLEA LIFE CYCLE**

**\*\* The egg**

An adult female flea can lay up to 40 eggs a day! The eggs are laid on the pet, and then fall off to hatch in the environment. Eggs are very resilient and can survive at very high and very low temperatures, but they incubate best at temperatures between 65 - 80 fahrenheit.

**\*\* The larvae**

Eggs hatch into larvae in the environment, and the larvae then go through three larval stages before spinning a cocoon and pupating. Larvae prefer the same temperatures as eggs but are killed at 95 fahrenheit - this means they must find a place to be protected against summer heat like in a shady part of the yard or INDOORS.

**\*\* The pupae**

Pupae inside their cocoon are almost impossible to kill - they can also stay inside their cocoons for up to a year waiting for an animal host to walk by! A pupae will remain inside it's cocoon until it detects a nearby host through vibrations, carbon dioxide gradients, and sound and light patterns. When the mature pupa senses any of these things, it emerges from the cocoon, hungry and eager to find a host.

A common scenario is the following:

A pet is boarded during the owner's vacation. The owner picks up the pet from the boarding kennel and returns home. While the pet was gone, larva have turned into pupa which are waiting inside their cocoons for a host to return. The pet reenters the home, and many pupa hatch at once into adult fleas which immediately jump onto the pet. The boarding kennel is blamed for the pet picking up fleas there, when in actuality, the pupae were waiting to emerge and all hatched at once as they sensed the pet reenter the home.

**\*\* Adult fleas**

A newly hatched unfed flea is able to live for months without a blood meal, but is always trying to find a host. Once a host is found, a flea will never purposely leave that host (eg. a flea will not jump from one pet to another) but may be dislodged by a pet grooming or scratching itself.

After a flea finds a host and takes its first blood meal, it will die within a few weeks if separated from the host. The female flea will begin to produce eggs within 24 - 48 hours of her first blood meal and will continue to produce eggs until she dies. A female flea can lay up to 40 eggs a day on the pet which then drop off into the environment to complete their life cycle!

On average, the time from egg to adult flea is about 3 weeks, and an adult flea lives about 4 - 6 weeks on the pet.

### **HOW CAN I GET RID OF FLEAS? MY FLEA CONTROL DOESN'T SEEM TO BE WORKING!**

**\*\* Targeting fleas in the environment**

Many times owners are using a topical monthly adulticide (product that kills adult fleas), and come in to tell us it is not working, and they are still seeing fleas on their pet. The reality is that the product is killing adult fleas on the pet, but not before they have produced lots of eggs that drop off into the environment and develop into new adult fleas. If one female flea can produce 40 eggs a day, it is easy to do the math and see that you can end up with a big population of fleas in the environment FAST! Using an adulticide alone when there is a flea problem is not enough - we have to address the fleas in the environment. The flea you see on your pet today, is probably not the flea you see on your pet next week - new ones are continuously hatching and jumping back on the pet.

### **LUFENURON (PROGRAM)**

Lufenuron is a wonderful product that you can give in pill form once a month to your pet to sterilize fleas. In other words, when a flea jumps on the pet who is on lufenuron, it will not be able to lay viable eggs, thereby interrupting the flea life cycle so no new fleas can hatch.

Since all adult fleas must find a host to survive, lufenuron over time will help to eliminate a flea problem in the environment if all pets in the house are on it. Lufenuron works best if it is used in combination with an effective adulticide (frontline plus, advantage, etc.....

## \*\* Resistance to flea products

Fleas are smart! Individual fleas can develop a genetic resistance to an adulticide, and pass this resistance along to it's babies. When an adulticide has been working to control fleas for a long time and suddenly isn't working as well, resistance should be considered. Changing the adulticide you are using periodically is the best way to avoid fleas developing resistance to these products over time. In addition, if lufenuron is being used, resistant fleas will be made sterile so they cannot pass along resistance to their babies.

## \*\* Treating the environment

Often, by the time we recognize that fleas are a problem on the pet, there is a large population of eggs, larva and pupa in the environment. Because only adult fleas on the pet are exposed to adulticides and lufenuron, it takes some time for these products to eliminate fleas in the environment as all the eggs have to hatch, become larva, become pupa, become adults which have to jump on a pet to be killed or sterilized. To speed this process, we often recommend treating the environment with an effective spray to kill any eggs, larva or pupa that are there wailing to hatch. Talk to your veterinarian about which products are most effective at killing fleas in the home and yard.