

# Our fidgety friends

Summertime is synonymous with pet pests and it is that time of the year again! *I'm sure you did not treat for ticks and fleas monthly in the winter.* Why should you – you did not see them! That is where the flea dirt hits the fan.

Let's go back to the basics of flea ecology.

The adult fleas on pets represent the 'tip' of the flea 'iceberg'. 1-5% of the total flea population is represented as adult fleas on your pet. One female flea may have more than 2000 descendants in her lifetime.

## The flea pyramid



*Ctenocephalides felis* (the 'cat' flea) is the most common parasite of cats and dogs. Some interesting facts on the flea lifecycle:



**Adults:** Adults can survive 48-96 hours in the environment without a blood meal. The lifespan of an adult is 2-3 weeks with a maximum of 3 months.

A female flea can lay 20-50 eggs in one day and **potentially 2000** in her lifetime. The lifecycle of a flea takes 3-4 weeks on average to be completed. A female flea consumes 15X her own body weight in blood daily. **Fleas can bite up to 400 times a day.**



**Eggs:** Eggs are laid on the host, remain on the coat for 2 hours and then falls to the ground. Eggs can survive freezing temperatures and hatch as soon as warmer weather sets in.



**Larvae:** Larvae develop from eggs on the floor. They feed on skin debris and adult flea faeces in the environment. They crawl under couches, beds or into carpet fibres (up to a distance of 20-50cm).



**Pupae:** Pupae are formed within 7 days. This stage is resistant to most chemicals and can lie dormant in an environment for 6 months before the adult flea emerges. Stimuli for the emergence are temperature, vibration and carbon dioxide.

***Now that we know what bug is snug in our rug, we have to kill these critters.***

It is safe to say, looking at the pyramid and the lifecycle that we have to employ **IFC** for this extermination. No, it's not the Men in Black; it is an Integrated Flea Control program focussing on all the flea stages, both on your pet and in your environment.

#### **How do we do this?**

1. Adult flea control is easy with fast acting, long lasting and safe insecticides available from your vet.
2. Control of immature flea stages is a little more involved and is four fold.
  - Regular vacuuming of the environment
  - The use of surface sprays in the environment
  - The use of a product with an IGR (insect growth regulator) on the pet (found in veterinary products).
  - The use of an IGR in the environment.
3. Treating all the pets in the household even if you do not see a flea!

#### **How does an IGR work?**

IGRs prevent the eggs from hatching and the larvae from pupating.

Now let's get back to the creepy crawly of real life situations!

#### **1. Only one of my dogs is scratching and I saw a flea on it, should I treat all my pets?**

Definitely! Your other pets and you are oblivious to the fact that they are the silent taxis.

#### **2. I have treated my pets 2 weeks ago and I am still seeing fleas. The product does not work!**

You obviously treated 2 weeks ago because you found fleas on your dog. Flea control products are not repellents, even though people perceive them to be. They don't kill fleas instantly, but are intended to kill newly acquired fleas within 18-24 hours. The fleas you are seeing are indeed newly emerged from the pupae in the environment. Remember that 95% of the flea population is in your environment. Resolution of the infestation and disappearance of the fleas at every stage may take 4-6 weeks.

#### **3. We banned the dogs from our bedroom when we discovered fleas on them, now we are covered in flea bites.**

Your dog is the direct carrier of the fleas, right? Now your treated 'living flea magnet' is no longer allowed in your room. The only host for thirsty fleas therefor is yours truly. So let the dogs in, not out, and let the fleas feed on them and come into contact with the flea control product you applied.

#### **4. We now know that our environment is a problem. What are the products we could use?**

Various surface sprays are available for carpets and bedding. Animal hairs with product on are shed and the eggs and larvae that come into contact with that are also affected. Some products are ingested by the flea via a blood meal and passed out in the faeces. Larvae that feed on the faeces are killed.

#### **5. What about the resistance rumours?**

According to the experts like Prof. Michel Franc, Professor of Veterinary Parasitology, France: "While differences in susceptibility to modern insecticides do occur in various flea strains, *there is no documented resistance to the modern adulticides* in field collected flea isolates. Since resistance selection is a possibility

when it comes to fleas, the best strategy for preventing future resistance is integrated flea control. No scientific publication on resistance to all new insecticides has been published.”

Resistance is the process of evolution whereby selection pressure is placed on a closed population. Flea populations are generally not considered to be closed populations. The use of an IGR undoubtedly slows down or inhibits this selection process.

Ask yourself the question when fleas are driving your pet and you nutty: Are you one of the South African households that on average treat for fleas 1.7 times per year? No, it's the neighbour of course! Just like eating Kellogg's daily keeps you healthy and regular, **monthly flea control keeps the vet away!**

As they say: it's not over until the fat lady sings! So the last words are on our fat female tick foes.

Adult ticks seek out dogs for their blood meal. Immature ticks have other hosts. Adult ticks climb up on grass blades, stretch out their legs and wait for a passing host. Heat, movement and carbon dioxide will trigger this behaviour. As the host brushes against the ticks' legs, they crawl onto the host. When adult ticks climb on a host, the male mates with the female while she feeds. Once engorged, the females drop off and lay their eggs. They lay around 2000 eggs, shrivel up and die.

Tick control is focussed on the adult tick only. Your tick control product needs to be effective for a full month and have a rapid knock down effect on adult ticks. It takes about 48 hours for the parasite e.g. *Babesia canis* using the tick as a host, to be activated and transferred to the dog.

#### **Can I still see ticks on my dog after the effective treatment?**

**Yes, there are two possible reasons:**

1. Ticks are often found in highly concentrated pockets. If a product demonstrates 99% efficacy and a dog comes into contact with 1000 ticks after treatment, there could be a possibility that a few ticks might attach.
2. Ticks use a cement-like substance to attach to the dog's skin. After treatment with an effective product, ticks will die, but these ticks may stay attached until their feeding parts disintegrate and they fall off the dog. Removal of ticks on the dog at the time of treatment is recommended.



Ask us to help when you feel out of control and we will tailor make your parasite control programme.