

FLEAS & TICKS 101

A veterinary guide to protecting our canine and feline patients.



Flea and tick prevention and control are essential parts of caring for your pet. You know these parasites bite, and cause itching and scratching that can drive your pet crazy. But they are also serious threats to your pet's health and that of your family. What's more, the many effective types of flea and tick treatments work differently, so choosing can be a complex decision.

That's why we want you to understand as much as possible about how fleas and ticks live, feed, and reproduce—so together we can select the best possible products for protecting the pets and people in your household.

THE LIFE CYCLE OF THE FLEA



Eggs

- 1-10 days
- Roll off everywhere



Larvae

- 5-11 days
- Feed on flea feces



Pupae

- 7-14 days
- Very difficult to kill (cocoon protects from insecticide)
- Can live up to 1 year!
- Heat, vibration, humidity, CO₂ cause adults to emerge from cocoons



Adults

- 2 to 3 months
- Immediately feed
- Female lays 50 eggs/day; 2000 in lifetime

All about the flea (and the threats you don't see)

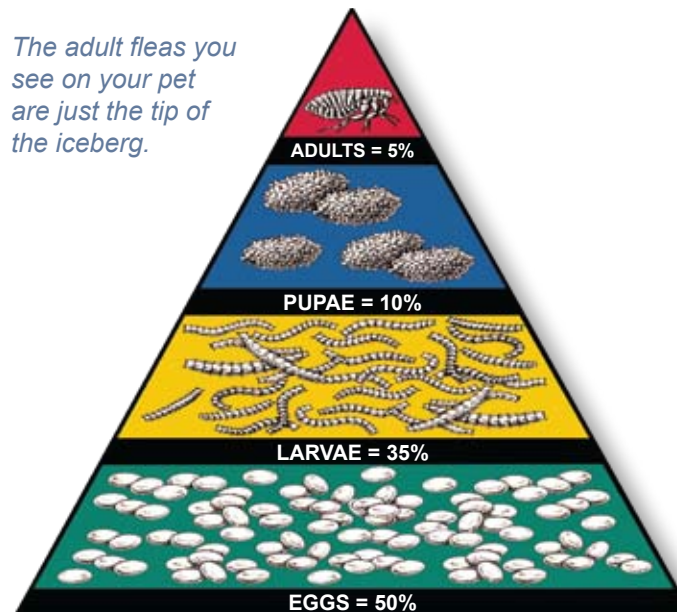
The trouble with fleas is that you only see about 5% of the entire population that may dwell in your home. The rest are tiny eggs, larvae, and pupae that lurk in your carpets, pet bedding, and anywhere else your pets spend time. That's why many of today's flea treatments, known as insect growth regulators, target these immature stages of development. It's also why year-round flea control is so important.

Managing the type of flea that attacks dogs and cats (called the "cat" flea, or *Ctenocephalides felis*) requires a multi-pronged approach. No matter where you live, we and all the most respected veterinary organizations recommend year-round control to keep your pet healthy.



Flea Population Pyramid

The adult fleas you see on your pet are just the tip of the iceberg.



Controlling fleas on your pet

Both topical and oral flea control products are available to kill fleas on your pet and/or disrupt their life cycle. We can help you choose the right one or combination of products based on your pet's and family's needs.



Controlling fleas indoors

Adult fleas live on your pet where they can feed on blood, but their eggs and feces, which look much like salt and pepper, drop off into any areas where your pet spends time – in carpets, bedding, and furniture.



There, the eggs become larvae, which actually feed on the blood-rich flea feces. Each larva eventually forms a pupa which spins a cocoon, and then the pupa develops into an adult flea while still in the cocoon.

When the adult flea senses that a host may be nearby—from vibration, carbon dioxide, or heat—it emerges and hops aboard, and the process begins again.

Frequent, thorough vacuuming and washing bedding in hot water can help reduce the number of fleas in your home. We can also recommend an environmental flea control product that is appropriate for indoor use.

Why once is not enough.

Before they become adult fleas, flea larvae develop into pupae and spin a protective cocoon, which shields them from environmental flea treatments. That's why you must re-treat after two weeks—to ensure you kill any fleas in the pupal stage that survived the first treatment.



Controlling fleas outdoors

Outside your home, whether you live in the city or country, it's important to eliminate flea-friendly environments and discourage flea-carrying animals.

Here are a few steps to take:

- ✓ Flea eggs and larvae thrive in moist areas protected from the sun, so you may want to use a flea spray to treat shaded areas (under decks, under shrubs).
- ✓ Rake up leaves and debris to dry out flea hiding spots
- ✓ Eliminate or contain garbage, pet food, compost, and other materials that attract wildlife which may harbor fleas, such as opossums and raccoons.



Did you Know?



Fleas are great jumpers, launching up to 8 inches vertically and 12 inches horizontally. So after an adult flea emerges from the cocoon, getting to your pet is just a few hops away.

TYPICAL LIFE STAGES OF TICKS*



Eggs



Six-Legged Larva



Eight-Legged Nymph



Eight-Legged Adult



Ticks are tougher than you think

Ticks are very good at transmitting disease. And unfortunately, tick control is often more difficult than flea control, in part because most ticks live on wildlife where we can't disrupt their reproduction.



That's a key reason you should use year-round tick control to prevent ticks from ever getting a chance to bite and infect your pet. We can help you choose the most effective product for your pet and lifestyle.



To prevent tick-borne illnesses:

You must use a product that prevents biting, repels ticks or kills them quickly, before they take a blood meal. Ticks can transmit disease in as few as four hours, so once you find a tick attached to your pet, the damage has likely already been done.

Controlling ticks on your pets

Year-round topical tick protection is crucial for protecting companion animals against tick-borne illness. But even the best products may not kill every tick. Limiting the time your pet spends in tick-friendly environments such as heavy woods, grasses or brush will reduce exposure to ticks. And be sure to check your pet carefully for ticks after any outdoor adventures.

*There are nearly 850 species of ticks.



Controlling ticks outdoors

In addition to year-round tick prevention on your pet, take these steps to help reduce tick exposure:

- ✓ Keep outdoor areas around your house dry: remove wood piles, keep grass mowed and weeds cut – ticks love moist, shady areas
- ✓ Clean up materials like bird seed or pet food that may attract tick-carrying rodents
- ✓ Use yard sprays at the shrubby, shady edges of your yard where ticks thrive.

Three reasons controlling ticks is tricky



1 Ticks can lay up to 22,000 eggs at a time



2 There are literally hundreds of species of ticks, making controlling all of them virtually impossible



3 Almost every warm-blooded wild animal can be a tick carrier, including deer, birds, rabbits, wild turkeys and rodents.

They're everywhere!



Tick-Borne Diseases

Who is at risk?

	Humans	Pets
Lyme Disease	✓	✓
Rocky Mountain Spotted Fever	✓	✓
Babesiosis	✓	✓
Ehrlichiosis	✓	✓
Relapsing Fever	✓	
Colorado Tick Fever	✓	
Tularemia	✓	
Tick Paralysis	✓	✓
Anaplasmosis	✓	✓
Cytauxzoonosis		✓
Hepatozoonosis		✓

Did you Know?



Ticks are second only to mosquitoes when it comes to transmitting pathogens like bacteria and viruses.



**This flea and tick
guide is provided by:**

The Parasite Fight

As veterinarians, we have the medical training to recommend the best products to protect your pet's health. There are many excellent flea and tick products available for controlling these parasites in your home, your yard, and on your pet. Each product has its own benefits, and we'll work with you to recommend the best ones to fit both your lifestyle and your pet's needs.

Two things to remember:

1. Vigilance is important

Now that you know a bit about the complex life cycle of fleas and ticks, you can see why it's so important to follow product instructions precisely. While it can be hard to remember monthly treatments or follow-up applications, that's the only way to be sure the product can do its job.

2. Follow instructions carefully

The risks for disease from parasites far outweigh any concerns about topical tick and flea products. Brief itching or tingling are especially common and may cause your pet's skin to twitch, roll or scratch. However, call us if your pet experiences skin irritation or redness, diarrhea, vomiting, trembling, or seizures after you have administered any flea or tick product.



You can help prevent adverse reactions by:

- > *Carefully reading and following the directions on the product.*
- > *Knowing the exact size and weight of your animal for proper dosing – don't guess!*
- > *Use the correct product for your animal – NEVER use a dog product on a cat or vice versa.*