



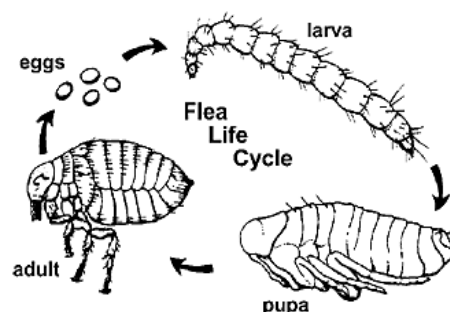
FLEAS



Fleas are the most common external parasite of companion animals. Not only do fleas cause physical discomfort to pets and humans, they also carry tapeworms and can cause severe allergies. Flea control has always been a challenge for veterinarians and pet owners because the adult fleas cause the clinical signs, yet the majority of the flea population (eggs, larvae and pupae) are found off the pet in and around the home. The ideal flea control program utilizes products that target the various stages of the flea life cycle, not only the adult fleas on the pet. To better understand how to control fleas, we must have an understanding of the flea life cycle.

The Life Cycle of the Flea

Adults: The cycle starts when an adult flea finds its way to the pet. Once there, it immediately begins feeding on the pet's blood, producing "flea dirt" (feces), mating and laying eggs. The average adult's life span ranges from a few days to several weeks, depending upon whether it's removed by the pet during self-grooming or killed by flea control



Eggs: Flea eggs (approximately the size of a grain of salt) are laid on the pet after the female adult has taken a blood meal and mated. Studies show she lays an average of 27 eggs per day – production which can continue over a 100-day period, enabling a single female to lay over 2,000 eggs in her short lifetime. The eggs are dislodged from the pet by shaking and scratching, after which they fall to the ground.

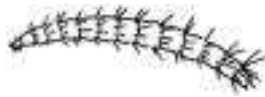
Larvae: In 1-10 days, flea eggs hatch into worm-like, rice-sized larvae. Over the course of 5-11 days, they molt twice, becoming larger with each molt. They feed off organic debris and flea dirt which has fallen off the pet. Larvae then crawl downward, away from the light, to a dark, low-traffic area (commonly deep in carpeting below furniture) in which to pupate, or form a cocoon.

Pupae: Once they've found a dark location, larvae enter the pupal stage by spinning a cocoon similar to a butterfly's, built with carpet fibers, dust and other environmental debris. If proper conditions exist (heat, pressure, vibration and carbon dioxide stimulation supplied by the pet), an adult flea emerges in approximately 7-10 days. If the pupa does not receive the proper stimuli, **it can remain quiet in the cocoon for up to 50 weeks.** As a result, pupae emergence can occur over an unpredictable series of weeks or even months.

After emerging from their cocoons, new infestations of adult fleas are now ready to keep the cycle going.



The opposite side of this handout has a diagram of the flea life cycle indicating which products Summer Street Animal Clinic carries and recommends. The following page is a list of general recommendations for prevention and treatment of fleas and the final page highlights all the products Summer Street Animal Clinic carries and in which situations they are best suited. Every situation is unique and our doctors and staff will be happy to tailor a specific flea control program for your pets.



Larva

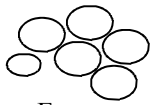
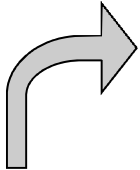
Effective products for control of flea larva

Given to the animal

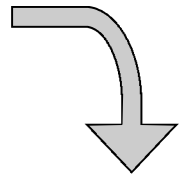
1. Frontline Plus
2. Vectra 3D (Canine Only)

Used on the Environment

1. Mycodex Plus Environmental Control
2. Ectokyl IGR Total Release Fogger
3. Virbac Yard Spray



Eggs



Pupa

Effective products for control of flea eggs

Given to the animal

1. Frontline Plus
2. Vectra 3D (Canine Only)
3. Sentinel (Canine Only)
4. Revolution

Used on the Environment

1. Mycodex Plus Environmental Control
2. Ectokyl IGR Total Release Fogger
3. Virbac Yard Spray

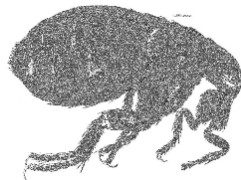
Effective products for control of pupa

Given to the animal

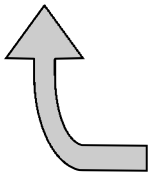
No effective products

Used on the Environment

1. Mycodex Plus Environmental Control (Somewhat effective)
2. Ectokyl IGR Total Release Fogger (Somewhat effective)



Adult



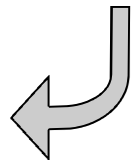
Effective products for control of adult fleas

On animal

1. Capstar
2. Frontline Plus
3. Vectra 3D (Canine Only)
4. Comfortis (Canine Only)
5. Revolution
6. Adams Flea and Tick Mist

In Environment

1. Mycodex Plus Environmental Control
2. Ectokyl IGR Total Release Fogger
3. Virbac Yard Spray



Flea Treatment

Summer Street Animal Clinic general recommendations

Once fleas have been identified on an animal treatment is an absolute necessity. Left untreated any flea infestation becomes more severe, will transfer to other animals, will become established in the home, and may cause flea allergy dermatitis and tapeworm infections in affected animals.

As mentioned earlier in the handout any treatment of a flea infestation must focus on not only adult fleas but also eggs, larvae, and pupae to be effective. Frontline Plus, Vectra 3D, and Comfortis monthly will kill all adult fleas on the dog and will sterilize flea eggs and kill larvae through their active ingredients. **Summer Street Animal Clinic recommends Trifexis, Comfortis, Vectra 3D or Frontline Plus monthly for a minimum of 6 consecutive months for all dogs around the home. For all cats in or around the home, we recommend Frontline Plus or Revolution monthly for a minimum of 6 consecutive months.**

If the infestation is mild, Comfortis, Trifexis, Frontline Plus, Vectra 3D or Revolution alone may solve the problem. More severe infestations will require more intensive treatment of the pet, home, and yard.

Severe infestations



Pet treatment

- ✓ Veterinary checkup to determine severity and treat concurrent diseases (tapeworms, flea allergy dermatitis, pyoderma, etc.)
- ✓ Trifexis, Comfortis, Vectra 3D, Frontline Plus or Revolution monthly for 6 months **minimum**
- ✓ Capstar or Comfortis for quick adult flea knockdown.



Yard treatment - Summer Street Animal Clinic recommends Virbac yard spray to control outdoor flea infestations. A simple way to check for outdoor fleas is to walk about the yard with white knee-high socks and then inspect for fleas which may have attached themselves. Yard treatment can be accomplished with a hose or hand sprayer.

Home treatment - Physi-

cally vacuum entire home paying especially close attention to areas where the pets spends most of their time. Once done vacuuming remove vacuum bag and dispose in a sealed container. Launder all bedding pets have used. Use a spray or fogger to kill eggs and larvae to prevent them from becoming adults. We have Mycodex Plus Environmental Control, Duratrol Household flea spray and also Ectokyl IGR foggers available. Foggers have the advantage of treating a large area whereas sprays are more effective at getting in hard to reach areas such as behind and under furniture. Follow all label safety precautions when using home treatments (food preparation areas, aquariums, etc.). In very severe infestations the home may need to be treated again in 3-4 weeks if new fleas are continuing to emerge. Exterminators can also be used to effectively rid environment of all stages of the flea.





Flea and Tick Prevention Options

CANINE



Comfortis:

- **ONLY TO BE GIVEN TO DOGS!**
- Comfortis is the first FDA-approved, chewable, beef-flavored tablet that kills fleas and prevents flea infestations on dogs for a full month.
- Comfortis is a fast, month-long flea prevention which starts killing any fleas on the pet within 30 minutes.
- You can play with your dog immediately after treatment. No need to isolate pets. Just treat and play. Ideal for families with children.
- Because Comfortis is administered orally, there's no risk of application site reactions
- **Needs to be given with food** to prevent upset stomach.
- Recommended for patients with minimal tick exposure, if ticks are a concern this product works great in conjunction with a Preventic collar.



Vectra 3D:

- **ONLY TO BE GIVEN TO DOGS!**
- New topical triple action formula that parasites have never encountered.
- Kills fleas at all stages of development, four species of tick.
- Kills 96% of fleas within 6 hours, up to 100% in 12 hours
- Repels and kills three species of mosquitoes.
- Provides a full month of protection.
- Remains effective after bathing and swimming.
- Recommended for patients who seem to show a resistance towards other flea preventions.
- This product is perfect for hunting dogs and dogs that spend time outdoors.



Triflexis:

- **ONLY TO BE GIVEN TO DOGS!**
- 3-in-1 prevention of fleas, heartworm and intestinal parasites.
- Similar to Comfortis in flea prevention and protection.
- Needs to be given with food to prevent upset stomach
- Recommended for patients with minimal tick exposure. If ticks are a problem with your dog, this product works great with a Preventic collar.



Preventic tick collar:

- **ONLY TO BE GIVEN TO DOGS!**
- Provides safe and effective control of ticks for up to three months.
- Prevents new ticks from attaching and feeding within 48 hours after application.
- Kill and detach ticks.
- Water resistant.
- Works great in combination with Comfortis and Triflexis to prevent both flea and ticks.



Frontline Plus:

- Provides long-lasting, effective control of fleas and ticks on your pet.
- Kills up to 100% of existing fleas in less than 24 hours
- Remains waterproof for 30 days even if your pet swims or is bathed.
- Need to wait 48 hours before or after application to bathe.





Flea and Tick Prevention Options

FELINE



Revolution:

- Kills adult fleas and prevents flea eggs from hatching.
- Prevents heartworm disease (rare in felines, but increases incidence)
- Treats and controls ear mites
- Treats and controls roundworms and hookworms which are known zoonotic agents
- Recommended for cats with little to no tick exposure.



Assurity:

- Topical, once a month application
- Starts working fast-- begins killing fleas in 30 minutes
- No weight range/cut-off



Capstar:

- Perfect answer to the fast kill of adult fleas.
- Within 20 minutes Capstar is on board and killing adult fleas with all fleas on the pet being dead by two hours post pilling.
- Is ideal in severe infestations when used in conjunction with some form of prevention.
- There is NO residual effect after 24 hours.
- Does not kill flea eggs, larvae, or pupae.



Frontline:

- Provides long-lasting, effective control of fleas and ticks on your pet.
- Kills up to 100% of existing fleas in less than 24 hours
- Remains waterproof for 30 days even if your pet swims or is bathed.
- Need to wait 48 hours before or after application to bathe.



Weight and Age Key

Canine



- Comfortis:
5lbs+ and 14 weeks or older
- Trifexis
5lbs+ and 8 weeks or older
- Vectra 3D:
2 1/2lbs+ and 7 weeks or older
- Frontline Plus:
8 weeks or older
- Sentinel:
2lbs+ and 4 weeks or older

Feline



- Revolution for kittens:
<5lbs and 8 weeks or older
- Revolution for cats:
5lbs+ and 8 weeks or older
- Assurity for cats:
8 weeks or older
- Frontline Plus:
8 weeks or older
- Capstar:
2lb+ and 4 weeks or older

Summer Street Animal Clinic

Other flea product guide

Environmental Control Spray



- Environmental Control spray is used to kill fleas, flea eggs and larvae that reside in the upholstery, carpet, bedding or any other place where your pet sleeps.
- This user friendly spray is lemon scented and is safe to use without evacuating the house of all living objects.
- Although Environmental Control spray has a residual effect for 210 days after application, Summer St. Animal Clinic recommends re-spraying the house every four weeks.
- Environmental Control is most applicable in heavy infestations and should be used in conjunction with other flea products that provide the animal with residual protection.

Ectokyl Fogger



- Ectokyl fogger is Summer St. Animal Clinic's house bomb option.
- For heavy infestations foggers are sometimes beneficial in reducing the amount of fleas in the environment.
- Ectokyl contains an insect growth regulator that inhibits fleas from re-infesting your house.
- Three weeks after the initial treatment with Ectokyl foggers the bombing should be repeated to insure adequate protection.

Yard Spray

- Yard spray concentrate is used exclusively for the treatment of heavy infestations.
- This convenient spray should be applied to all areas of the yard including under trees, paying special attention to shady areas.
- Make note that this spray may need to be used every two weeks until infestation is under control. Summer St. Animal Clinic recommends using this in conjunction with residual products for the pet.



Caution - It may be tempting to simply use flea collars or spot-on's from department stores to prevent fleas. Although these products are less expensive they are generally ineffective. Most department store flea products contain pyrethrins. Pyrethrins are a group of chemicals which have lost most of their effectiveness against fleas due to their many years of use. It must be noted that the most expensive flea product you can buy is the one which does not work.