



# Flea Control Protocol

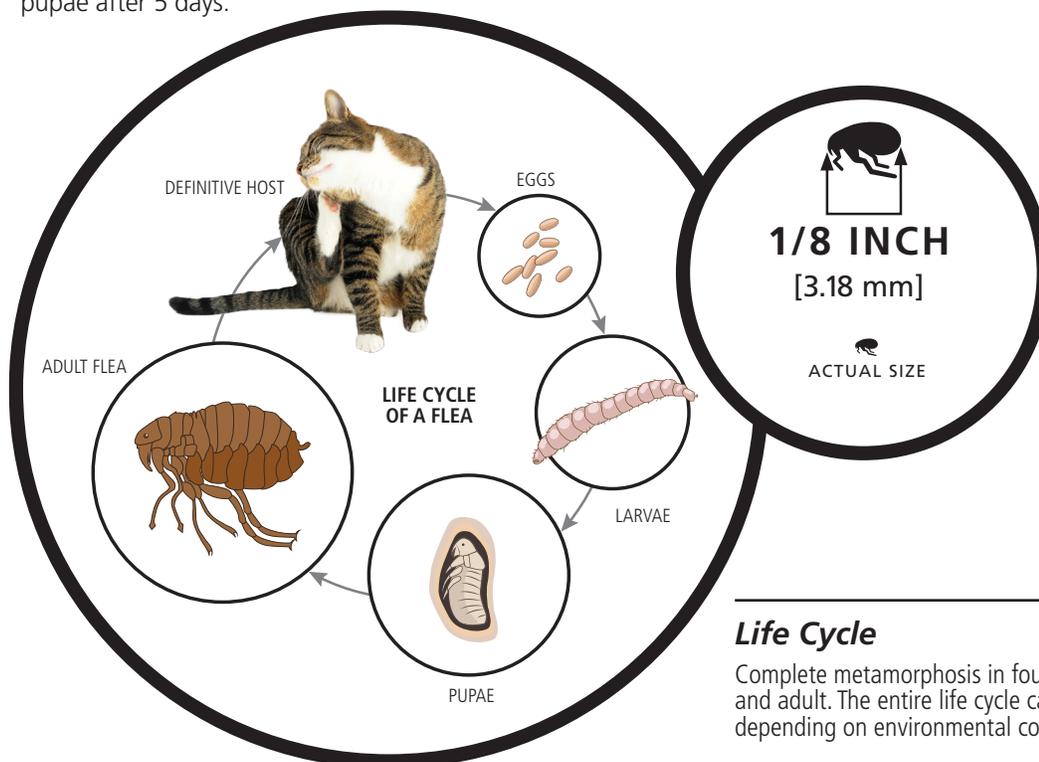


## Understanding Flea Habits and Life Cycle

- Fleas have 4 life stages: eggs, larvae, pupae, adults.
- After each blood meal, the female lays 11 to 46 eggs a day on the host animal. Some eggs may fall off from the host after they dry.
- Eggs hatch in about 10 days with the developing larvae feeding on the adult feces, which contain bits of dried blood.
- The larvae have three instar stages with the third instar pupating. Depending on environmental conditions, this can be a period of seven days to several months. When mature, they spin silk-like cocoons coated with local debris aiding in camouflaging the pupae.
- Under ideal conditions, adult fleas can emerge from pupae after 5 days.

## Control Strategies

- Meticulous inspection
- Correct identification
- Treat pet (by homeowner or veterinarian)
- Thorough vacuuming
- Effective application of indoor insecticide
- Effective application of outdoor insecticide
- Include Insect Growth Regulator in control program
- Conduct follow-up service



### Life Cycle

Complete metamorphosis in four stages: egg, larva, pupa and adult. The entire life cycle can take from 14 to 174 days, depending on environmental conditions.



## Inspection

### Talk with the client

- Where have they seen fleas on the premises and at what locations are they getting bitten?
- Where and when on their bodies are they getting bitten? Fleas often bite around the legs, feet and ankles.
- Make sure fleas are the problem. Find and positively identify them.
- How many and what kind of pets do they own?
- Have the pets been treated for fleas?
- Ask about wildlife, strays, pets that may have visited, or items brought into the home from places that potentially had pets.

### After you have positively identified fleas as the problem

- Locate and map all potential hotspots. See key development sites on page 3.
- Inspect all areas where pets spend their time. Remember to account for pet type. Cats will often spend time in areas higher off the ground while dogs will not.
- Remember to account for wildlife or stray animals. Look for breeding and resting areas outdoors, in or around the structure, and under the structure (e.g. crawlspace, pier and beam foundations, chimneys and attics).

## Pre-Treatment

Communicate what to expect during and after the treatment. Make sure you inform the clients that it is normal to see fleas emerging from pupal cocoons in the next 7 to 28 days depending on environmental conditions. Communicating this before and after the treatment is essential to minimize call backs.

## The Importance of Using an IGR

Insect Growth Regulators (IGRs) like NyGuard (Juvenile Hormone analog or JH analog) are ideally suited for controlling fleas. JH analogs disrupt endocrine-regulated processes which ultimately interferes with the development of flea larvae. This prevents the establishment of biting adult fleas and helps achieve longer control. IGRs should be applied to pet living areas both indoors and outdoors to control the population of fleas.

## Sprayer Tank Mix

Product	Infestations	
	Light	Heavy
Onslaught® FastCap	0.50 fl. oz. per gal	1.0 fl. oz. per gal
NyGuard®	4 ml* per gal	12 ml* per gal

\* NyGuard can be mixed at up to 12 ml per gallon for difficult-to-control infestations. Apply up to 1 gallon per 1500 sq. ft. Always follow the package label instructions.

## Treatment Indoors

- Treat all carpet, cracks in wood floors, rugs, under furniture, cracks and crevices. Pay close attention to areas where pets frequent and rest.
- Treat under beds and couches. Remove the couch cushions and treat underneath. Pay close attention to cracks, tufts in fabric and pet beds.

## Treatment Outdoors

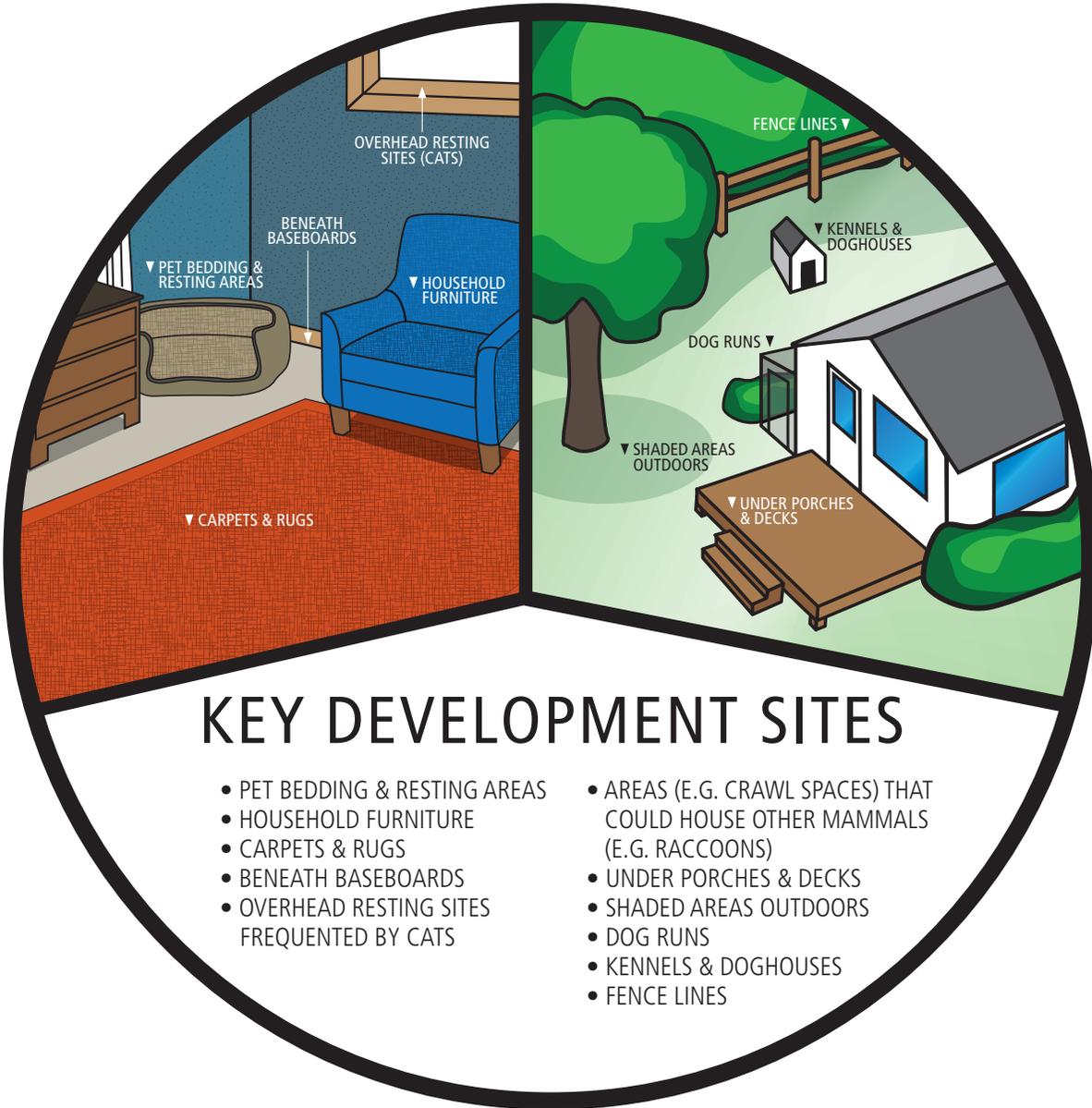
- Treat all pet runs, shaded areas, fence lines and any areas frequented by pets and/or wildlife. If complete treatment of the lawn is required, make sure you have the proper credentials mandated by your state (turf, lawn or ornamental license).
- Remember to consider the structural design of the home. Structures with pier and beam and crawl space construction may harbor fleas as well. Treat these areas if necessary.
- Remember to treat in areas where wildlife or strays rest and breed.

## Post-Treatment

- Re-communicate what is to be expected after treatment. Recommend that the client vacuums for the next 7 days to help remove existing pupae and stimulate adults to emerge. Schedule a follow-up inspection or treatment if necessary.



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**NyGuard® IGR**  
Insect Growth Regulator

- Residual flea control lasts up to 7 months
- Can be used both indoors and outdoors
- Effectively breaks reproductive cycle



**Onslaught® FastCap**  
Microencapsulated Insecticide

- Labeled for indoor broadcast surface spray, including carpeting
- Versatile, can be used indoors and outdoors
- Combines fast-acting and controlled release technology



**NyGuard® Plus**  
Flea & Tick Premise Spray

- Proprietary formula kills fleas, ticks, flea eggs and larvae
- Eliminates pet odors, including urine
- No-drip application



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