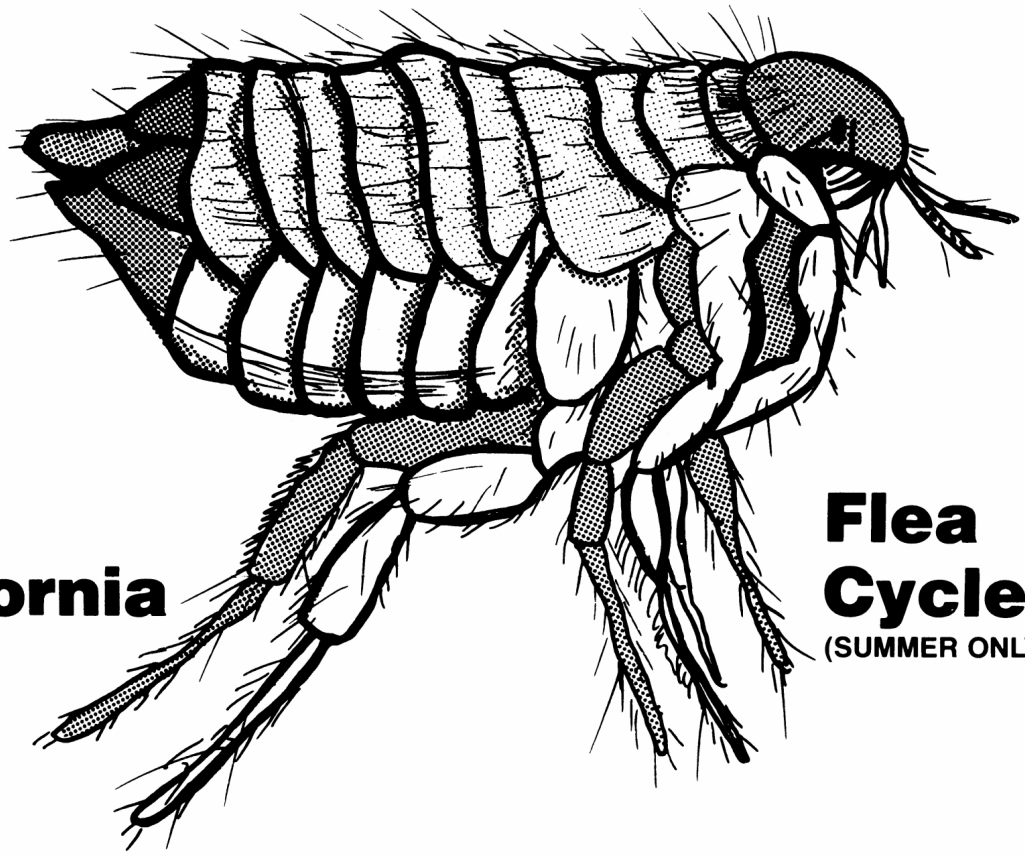
SOUTHERN CALIFORNIA VETERINARY MEDICAL ASSOCIATION
We Care



The California Flea Cycle
(SUMMER ONLY)

FACT SHEET

THE EGGS are laid on the host and will eventually fall to the ground and hatch within 2-3 days.

THE LARVAE stages 1 through 3 are ground-based and feed on organic material. They live deep in the carpet or lawn.

THE PUPAE develop when the larvae form cocoons. They store their energy and emerge as adult fleas when conditions are right: (1) temperature and humidity at 80/80; (2) pressure-sensitivity: they can emerge when stepped on.

THE ADULT flea has up to 30 days to find a host or it will die. At this point, it will run out of energy it stored while in the pupae state. After its first blood meal, the reproductive cycle begins and within 48 hours the female starts laying her eggs. From this point on, the flea does not leave the host, except by insecticide death, preening by the host, or old age. The maximum adult life span is: male, 3-4 weeks; female, 6-9 weeks.

FLEA BEHAVIOR

The California summer provides perfect breeding, feeding, and hatching conditions for this very successful parasite. When conditions of light, heat, and pressure are right, the insect can go through its entire life cycle (from egg to adult) in as little as 10-14 days. The adult's maximum life span on the host is about 9 weeks and the average is 4-6 weeks. This applies only to an untreated animal.

Untreated animals can carry and support a colony of 60-100 fleas per week. Each female in a colony lays an average of 20 eggs/day and can produce as many as 600 eggs/month. A dog carrying approximately 60 fleas (50/50 male/female) will yield as many as 18,000 eggs in a month.

The adult flea spends its entire life on the host. Once it has had its first blood meal, the flea must continue to feed and reproduce in order to keep its metabolism in balance. If it stops feeding and leaves the host, its chances for survival are greatly reduced. Adult fleas do not live in carpets, drapes, furniture, or bedding (eggs, larvae, and pupae do). The flea is a perfect definition of a parasite. It must live on the host in order to survive. At this state, its only function is to reproduce, and it must constantly feed in order to mate.

When a flea feeds, it consumes the equivalent of its body weight in blood.

Fleas **can** live up to 2 years, but only in a perfectly controlled laboratory environment.

The vast majority of fleas in California are *C. felis* (cat fleas). Dog and human fleas are very rarely seen.

Reference: *Entomology in Human and Animal Health,* 7th Edition, McMillan Press, Robert Harwood and James Harwood.

FLEAS CAN CAUSE

1. Anemia—in small animals.
2. Allergies—from 30% to 50% of itching is caused by allergy to the flea's saliva which contains anti-coagulants.
3. Infection/hot spots.
4. Tapeworms—through injestion of flea.

Also, fleas may possibly transmit feline leukemia in multi-cat households.

WHAT DOES NOT WORK

Vitamin B/Brewers Yeast: Researchers use this to feed their fleas.

Deterrents: Pennyroyal, eucalyptus, citronella, garlic, walnut oil, and cedar bedding are all momentary deterrents, but they will not stop a hungry flea.

Ultrasonic Sound Devices: They have been proven to be ineffective and may cause insects and other pests to reproduce at a faster rate.

Spott On: The FDA has not approved this product for use on small animals. This and other systemic poisons may be effective in killing fleas, but they may also kill the animal. They were developed for treating 1,000-pound cattle and the lower-end dosages may not safely translate to a 10-pound cat or a 40-pound dog.

TREATMENT

The effectiveness of a flea control program depends on keeping the animal and its environment clean, and on the regular use of proper insecticides.

1. Adulticides are applied externally to the animal through shampoos, powders, dips, sprays, and flea collars. Shampoos should be rinsed thoroughly and powder or spray (containing the same active ingredient as the shampoo) can then be applied.

Flea collars should be used only in non-infested environments. Most collars begin to kill within 24-48 hours. Never use a flea collar with other insecticides.

2. Spray or bomb indoor environment only with a combination of adulticide/insect growth regulator (IGR). This kills both the adult and the egg/larvae. House bombing can be effective as long as 10 weeks.

Vacuuming and steam cleaning are necessary in flea control, but are not more than 10-15% effective.

3. Spray outdoor environment with a recommended insecticide or have it done professionally. Depending on weather conditions, outdoor spraying can last as long as 10-14 days, so it must be repeated during heavy flea season. Carbamates are light sensitive and have reduced effectiveness in sunlight.

RESISTANCE

There are pockets of resistant fleas in any given environment, but there is no scientific proof to document this due to the large number of variables that need to be controlled. Certain insecticides may appear to be ineffective when used at higher temperatures (80 degrees and above). In these instances, some insecticides may break down, and with higher temperatures, it is easier for the flea to metabolize the poison, thus its resistance is greater.

The flea is a very successful parasite and is thriving in our environment because

1. There has been a pet population explosion (20-25 million in California). This increased population has caused a higher density in fleas.
2. People are not using proper control methods.

Today's insecticides are effective in controlling flea populations when used on a regular basis. There is not likely to be a newer or more powerful poison developed for several years, so this means that flea control can only be accomplished by the veterinarian's awareness and his willingness to educate the pet-owning public. Lack of treatment or improper application may be the reason behind claims of resistance.

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