

## Flea allergy dermatitis, Flea bite hypersensitivity

### *Flea allergy*

#### **Affected Animals:**

Any breed or sex of dog can be affected. The average age for flea allergy is three to five years. Cats also can be allergic to fleas.

#### **Overview:**

Dogs that have flea allergy dermatitis are hypersensitive to the saliva a flea passes into the dog's skin when it bites. The bite from a single flea will have a minimal affect on a normal animal, but dogs with flea allergy will experience immediate itching, redness and swelling. It is the dogs themselves, and not the fleas, that typically do the worst damage. When a dog scratches its fleabites excessively, hair loss and skin abrasions can result. Some dogs will develop circular, red, painful sores called hot spots that can occur anywhere on the skin, but commonly are seen along the back and tail base.

The most common canine allergic skin disorder, flea allergy only can be resolved by preventing the dog from being bitten by the flea and removing all the fleas from the dog's environment. There are medications available, however, that will alleviate the itching and discomfort until complete flea control is achieved.

#### **Clinical Signs:**

Pruritus, alopecia, barbered hairs, papules, erythematous macules with crusts, and acute moist dermatitis can be seen in a typical dorsal lumbar and tail base pattern. The lesions can extend to the thighs and caudal abdominal areas. Secondary pyotraumatic dermatitis, pyoderma, and seborrhea are commonly noted. Chronic skin changes include thickening of the dermis with acanthosis, hyperkeratosis and lichenification.

#### **Symptoms:**

Common findings in a dog that is allergic to fleas include increased scratching or itchiness, loss of hair, hairs that appear broken, crusts and erosions of the skin, and pimple-like bumps. Thickened skin with darkened areas can be seen in severe cases. Fleas or flea feces, which can be difficult to detect, indicate the presence of fleas. Hot spots sometimes can be seen along the dog's back and tail base. These sores are usually circular, red, oozing, and very painful, often requiring medical attention.

**Description:**

Flea allergy is the most common canine allergic skin disorder, affecting dogs with an abnormal sensitivity to the saliva a flea injects into the skin when it takes a blood meal. In reaction to flea allergen, allergic dogs will have inflammation and irritation of their skin -- not to mention intense itchiness. Hair loss and skin lesions can result when a dog scratches or bites its irritated skin.

The problem may last year-round in warm climates or in flea-infested indoor environments. In regions with cold winters, the allergy will appear seasonally during the warm months of the year. Treatment of flea allergy requires eliminating the fleas from the dog, other pets, and the surroundings. Various medications can provide temporary relief of itching for severely affected dogs until flea control is achieved.

It may be difficult to detect fleas on a dog, but brushing it over a white sheet may help: flea feces, a dark, black material, that falls from the dog's hair onto the sheet would suggest the presence of fleas. A flea comb also can be used to look for the feces or the fleas themselves. Dogs should be examined often if itching is noted.

**Diagnosis:**

The symptoms of flea allergy can mimic other disorders of the skin. Before concluding that a dog is allergic to fleas, the examining veterinarian first will attempt to rule out allergies to food and inhalants, internal parasites, drug reactions, hair follicle inflammation (folliculitis), fungal infection, and other topical parasites -- all of which may have signs similar to an allergic reaction to fleas. A thorough history and physical exam will be required, during which the veterinarian will analyze the type and size of the skin lesions.

It is often very beneficial for dogs with suspected allergies to be tested for allergens that may be causing the dog to be itchy and uncomfortable. There are two common techniques that veterinarians can use to determine any underlying allergies to allergens such as fleas. One technique is called intradermal skin testing which requires the injection of different allergens into the skin. This usually is done by a veterinary dermatologist and may require sedation. The second technique involves taking a blood sample and sending it to a laboratory for allergy testing. This is called serologic allergy testing. There are varying opinions about serologic testing, so consultation with the examining veterinarian will be necessary.

**Prognosis:**

A dog with flea allergy dermatitis will always remain allergic to fleas. The severity of this allergy typically worsens as the dog ages. If fleas are eliminated from the dog's environment, the dog will stop suffering the symptoms of flea allergy. If the response is incomplete but flea control has been achieved, the dog should be reevaluated by the veterinarian for concurrent allergies.

**Transmission or Cause:**

When a flea sucks blood from a dog, it passes its saliva into the dog's skin. Dogs that are allergic to flea allergen will experience swelling, irritation, and itchiness. When the dog scratches the bites, further trauma to the skin -- lesions, hair loss, and more intense itchiness -- will result. A single flea bite can cause these symptoms in an allergic dog; animals without this allergy must be bitten many more times before their skin becomes irritated.

**Treatment:**

The goals of treatment are to alleviate the dog's allergic reaction to fleas by preventing the flea from biting the animal and eliminating the fleas from the environment. It is very important that owners completely remove the fleas and their eggs from the animal's environment. This involves the treatment of all household animals for fleas to prevent the allergic dog from becoming reinfested. There are many commercially available products that kill fleas both indoors and outdoors. Additional products have been designed for use on the dog. Professional pest extermination companies, which usually carry a satisfaction guarantee, are also an option. A veterinarian can customize a flea control program to meet an allergic dog's individual needs.

Therapy for the allergic reaction is based on the severity and history of the symptoms. Following an evaluation of the dog, the veterinarian may prescribe any of the following medications: topical treatments, medicated shampoos, steroids, antihistamines, antibiotics, and fatty acid supplements such as skin oil replacement. The examining veterinarian often will recommend a commercially available product that kills fleas on contact, before they have a chance to bite. These products are ideal in helping prevent further flea allergic reactions.

The effectiveness of allergy shots, or hyposensitization, for treating flea bite hypersensitivity remains controversial. This method of treatment, prescribed by a veterinary dermatologist, usually is reserved as a final therapeutic step for severely afflicted animals not responding to strict flea control.

**Prevention:**

Prevent fleas from entering the household. If evidence of fleas is noted on the dog or on any other pets in the household, early intervention can stop the problem before the symptoms become severe