Atopic dermatitis in dogs (allergic dermatitis, canine <u>atopy</u>) is a hypersensitivity or over-reaction to a variety of commonplace and otherwise harmless substances in the environment. These allergens include plant pollens, <u>house dust mites</u>, or mold spores. Most allergic dogs begin to show signs between one and three years of age. Due to the hereditary nature of the disease, several breeds of dogs appear predisposed to allergies. These dog breeds include Golden Retrievers, Labrador Retrievers, West Highland White Terriers and other terriers, and Bulldogs. However any dog, including mixed breed dogs, can have atopic dermatitis.

Signs

Atopic dogs will scratch, chew, lick, or rub areas of the body such as their paws, face, and rear end. They can have recurrent skin, ear, and anal gland inflammation and infections. This itchy behavior, or pruritus, can cause hair loss and reddening and thickening of the skin. In some dogs, other causes can work with a dog's allergies to cause itching. For example, parasites such as fleas or infection from bacteria or yeast can all worsen the level of itching from allergies. Therefore, it is important to treat any other health problems that could cause itching to manage your pet's allergies.

Diagnosis

Once your pet's veterinarian has diagnosed atopic dermatitis, allergy tests can be used to identify what a pet is allergic to in the environment. There are two types of allergy tests, the intradermal allergy test and blood testing for allergies (serologic allergy testing). In an intradermal allergy test, the fur is clipped on one side of the chest and small amounts of common allergens are injected into the skin. The skin is then observed for a reaction to the allergen. In a blood allergy test, a blood sample is obtained and sent to a laboratory. At the laboratory, the protein levels (antibodies) to the allergens are measured.

Each allergy test has its advantages and disadvantages. Most veterinary dermatologists recommend intradermal allergy testing. This is because many factors, including which laboratory is performing the test, can affect the results of blood allergy testing. However, intradermal allergy testing has the disadvantage of needing to be done by a specialist and usually requires a mild sedative to relax the dog during the test.

Treatment

If a dog is diagnosed with atopic dermatitis, there are three methods of therapy.

- Avoiding allergens: It is usually not possible to remove all allergens from a pet's environment because even a small amount can trigger a dog's allergies. However, bathing can help remove allergens from the skin. A hypoallergenic cream rinse or spray can remoisturize the skin after bathing.
- *Medications:* A variety of anti-allergy drugs are available. These drugs include antihistamines, <u>steroids</u> (cortisone), <u>cyclosporine</u>, and newer drugs such as oclacitinib and lokivetmab. Some dogs develop side-effects from taking certain anti-itch

- medications, such as steroids. Different anti-allergy medications may need to be tried because not every medication works in all pets.
- Allergen specific immunotherapy: Immunotherapy involves giving a series of diluted allergens based on what your dog is allergic to. Allergen-specific immunotherapy makes dogs less sensitive to their allergens and 60-80% of patients improve on immunotherapy. However, improvement on immunotherapy takes time and it is important try the immunotherapy for several months so it can take effect. When helpful, immunotherapy is usually continued life-long but can be given less frequently over time.