

McKeever Dermatology Clinics, Inc.

Allergies in Dogs

Allergic diseases (atopic dermatitis, atopic disease, allergic inhalant dermatitis, and food hypersensitivity) are conditions in which an animal is predisposed to become sensitized to a substance or substances more easily than a normal individual. When sensitized and exposed to these offending substances, activated cells in the skin will cause inflammation (dermatitis).

What can dogs become allergic or sensitized to?

Allergies can be caused by grass and tree pollens in the spring and weed pollens in late summer and fall. House dust, house dust mites, cotton, wool, molds and foods are the types of substances that can produce allergic reactions that persist all year around.

Clinical appearance or signs of allergies:

Pruritis (itching) is the most consistent finding in allergies. Other signs may include conjunctivitis (inflammation of membranes of eyelids), inflammation or redness between the toes resulting in excessive licking or chewing at the feet, inflammation of the ears or ear infections, inflammation or redness in the axillary areas (under the front legs), ventral abdomen (stomach area) and under the tail. A small percentage of pets may also evidence sneezing.

Complications of allergies:

Inflammation of the skin may be responsible for one or all of the following conditions:

- *Secondary Staph Infection* – Inflammation of the skin creates an environment favorable for the growth of Staphylococcus bacteria. These bacteria may result in formation of papules (small red bumps), pustules, and folliculitis (inflammation of the hair follicles). Lesions of Staph infection may occur on any part of the body but are most often found on the ventral abdomen and back. Old lesions may appear as small circular areas of scaling and hair loss. Individual lesions will heal while new lesions develop. Lesions resulting from the Staph will often produce as much or more discomfort than the allergic response.
- *Seborrhea* – Inflammation in the skin often stimulates the sebaceous glands (oil glands) to produce more sebum (oil) than normal. The excessive oil may cause the pet to have a strong odor.
- *Scale (dandruff)* – Inflammation in the skin may lead to faster turnover of skin cells causing excessive scaling.

Diagnosis:

Is generally based on history and clinical finding, allergy testing and diet trials. However, to rule out other diseases and determine which therapy would be most appropriate it is often necessary to evaluate culture, skin biopsies, blood counts, and blood chemistries.

- *Allergy testing* – May be performed to determine what the pet is allergic to. 80% of the allergic dogs tested will react to one or more of the 60 substances we test for. It is felt that skin testing is a more accurate method for determining what a dog is allergic to than the ELISA or RAST blood tests.
- *Diet trials* – In order to rule out food allergies, a 10 week feeding of a trial diet is necessary. Ideally, this should be with Hill's Science Diet ZD food.

Treatment of Allergies in Dogs

Unfortunately, allergic disease in dogs is similar to the same condition in man as it can very seldom be cured but just controlled through periodic or continuous use of medication.

Drugs Used:

Hyposensitization (allergy shots) – Generally take from 4-12 months to become effective. They provide excellent control of the pet's allergies in 65% of cases. They help another 15% but are not completely perfect, and provide no appreciable benefits for about 20% of cases.

Cortisone (steroids) – Derivations or modifications of this drug are the most frequently used form of therapy.

- *Tablets* – Several modifications of cortisone are available in this form and one may provide relief when another does not. The most desirable regimen of therapy is alternate day treatment utilizing a low dose of a short acting form such as Methylprednisolone.
- *Injectables* – These generally provide relief of symptoms for 2-6 weeks. Injectables are not recommended because they cannot be as easily adjusted to fit the pet's needs.

Side effects of cortisone therapy:

Few major side effects will be produced with short or long term low dose therapy utilizing alternate day treatment. Three categories of changes may be noted with moderate and high dose therapy.

- *First* – May cause an increased thirst and appetite. This is not harmful but if water intake is increased markedly, the pet, if a house dog, will have to be allowed outside more frequently to urinate.
- *Second* – May produce a change in body metabolism whereby body protein is broken down to form a dilute glycogen solution which is stored in the liver. Clinically, breakdown of body protein may lead to a thin or poor hair coat, a decrease in muscle mass (especially the abdominal muscles resulting in the pet having a potbellied appearance), and enlargement of the liver. Although these changes may be disconcerting aesthetically they are seldom responsible for severe illness.
- *Third* – May lead to chronic urinary tract infections which may or may not have obvious clinical signs. It is therefore recommended that a urine culture be done every six months.
- *Fourth* – May, especially with high dose and long term therapy, produce changes in the pancreas leading to a pancreatitis. This complication is serious and may lead to the pet's demise.

Antihistamines – May be helpful in controlling mild allergies or allow the use of a reduced dose of cortisone. Often one type of antihistamine will work when another will not. Therefore, we routinely dispense three different antihistamines (hydroxyzine, diphenhydramine, and chlorpheniramine) and use each for two weeks to see which work best.

Shampoos – Benzoyl peroxide shampoos used every 4-7 days are very beneficial in removing excessive accumulation of oil, scale, and surface bacteria. A tar and sulfur shampoo may be used to slow down the turnover rate of the skin which helps prevent excessive scaling. A conditioner is generally recommended following the shampoo as it is soothing and prevents skin dryness.

Antibiotics – Used to control secondary bacterial infection when it is contributing significantly to the dermatitis.