



Mansfield Animal Clinic

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Allergy – Inhalant Allergy in Dogs

What are allergies and how do they affect dogs?

An *allergy* is a state of over-reactivity or hypersensitivity of the immune system to a particular substance called an *allergen*. Dogs with allergies develop a hypersensitivity reaction or response to substances such as pollens, flea saliva, and so on. Most dogs with allergies develop skin symptoms, especially itching, although the allergy may also affect the respiratory or digestive system, or the eyes.

Is there more than one type of allergy?

Yes, there are at least five common types of allergy in the dog:

- a) Flea
- b) Inhalant
- c) Food
- d) Contact
- e) Bacterial Hypersensitivity

I have been told that my dog is atopic. Is this the same as inhalant allergy?

Yes. With atopy, the dog's immune system overreacts to an airborne or inhaled allergen. **After flea allergy dermatitis (FAD), atopy is the second most common type of allergy in the dog.**

What exactly causes an inhalant allergy?

A wide variety of allergens can cause atopy. These are similar to the causes of hay fever or asthma in people. When the affected individual inhales dust, pollens or molds, the allergic response occurs.

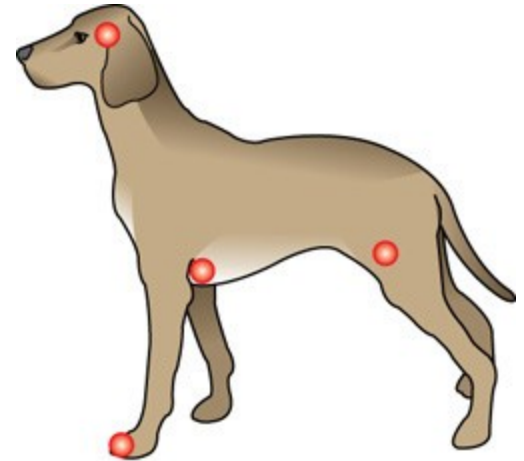
What happens to the dog when this occurs?

A dog with atopy is usually itchy during specific seasons of the year.

"Affected dogs chew, lick and scratch all over."

Affected dogs chew, lick and scratch all over, especially on the feet and face. Saliva will often stain light colored hairs resulting in orange or reddish brown hair. The dog may also scratch and rub around the eyes and ears, the axillae (armpits), the groin or the inside of the thighs.

In humans, inhaled allergens cause respiratory problems such as hay fever or asthma. Dogs will occasionally show respiratory signs in addition to the pruritus (itching).



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How do you find the cause of my dog's inhalant allergy?

Diagnosis is not easy. It is based on the presence of clinical signs and ruling out other causes of pruritus such as flea allergy dermatitis or food allergies. The clinical signs and itching caused by grass pollen are the same as those caused by house dust mites and many molds. In other words, your dog may be allergic to several different things with the result being the same: excessive itching and scratching.

A thorough medical history will help narrow the causes. For example, if the itching occurs in the spring when certain pollen is prevalent, this narrows the field of investigation.

I heard that my dog will have to have allergy tests to make a diagnosis. Is this true?

In order to determine the *exact* cause of your dog's itching, allergy tests will be required. Allergy tests provide a specific diagnosis in approximately 80% of cases. There are two primary methods of allergy testing. The traditional allergy test is called *intra-dermal allergy testing* or *skin testing* and consists of injecting a tiny amount of an allergen into the skin. If the body produces a response to the allergen, it is allergic to that substance. A more recently developed allergy test involves taking a blood sample, and is called *IgE allergy testing*. The blood is tested for the presence of IgE antibodies against specific allergens. If it contains a high number of these IgE antibodies, an allergy is presumed to exist. Your veterinarian will discuss the best type of testing for your pet's condition.

"For about half of the treated dogs, these "allergy injections" result in significantly reduced itching."

Once the diagnosis has been made, it may be possible to desensitize the dog to the offending allergens. A specific allergy serum is made for your pet according to the results of the allergy tests and is given in a series of shots. The principle behind hyposensitization or "allergy shots" is that the controlled injections of increasing amounts of the offending allergens will "reprogram" the dog's immune system and lessen its hypersensitivity. For about half of the treated dogs, these "allergy injections" result in significantly reduced itching.

If this does not work, what else can be done?

Anti-inflammatory drugs including corticosteroids and antihistamines will often bring relief from itching. An oral form of the drug cyclosporine, has recently been approved for use in atopy, and may prove beneficial in some cases of allergic dermatitis. Certain omega fatty acids (omega 3) provide some relief for many pets with allergic skin disease. Antibiotics may be required if there is a secondary bacterial skin infection (pyoderma). However, these products treat only the clinical signs, not the underlying allergy.

My friend's dog has atopy and seems to be helped by

frequent baths. Can I try this?

Many dogs benefit from frequent bathing with special hypoallergenic shampoos.

"Research shows that some allergens are absorbed through the skin; frequent bathing may help reduce the amount of allergen that the patient absorbs."

Research shows that some allergens are absorbed through the skin; frequent bathing may help reduce the amount of allergen that the patient absorbs. Some of the special shampoos incorporate omega fatty acids, which may be absorbed through the skin and help reduce the itching.

My dog only itches in the spring and I have been told she has a seasonal allergy. What does this mean?

Seasonal allergy and atopy are terms used to describe the same type of allergic skin disease. The majority of atopic dogs experience itching during certain seasons, when flowers or trees are blooming and producing pollens. Other atopic dogs will have problems year-round, which mean that the allergen is constantly present, or that the dog has developed multiple allergies. A common cause of non-seasonal atopy is the house dust mite.

My dog has a grass allergy. Does that mean he should not walk on grass?

No. So-called "grass allergies" are more correctly termed *grass pollen allergies*. Pollens are airborne. Closely cut grass with no seeding heads will cause fewer problems for your dog, but there is little you can do to prevent your pet from being exposed to grass pollens.



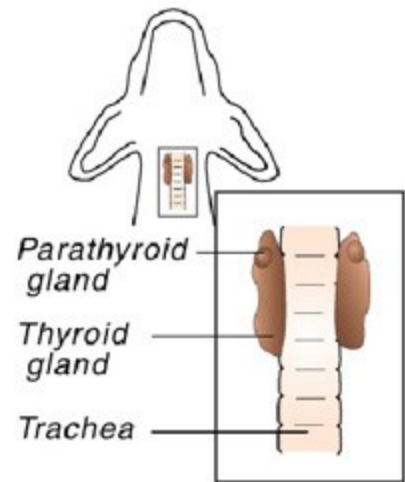
Are there any other conditions connected with atopy that I should know about?

Yes. Some dogs with atopy also have *hypothyroidism* or low thyroid gland production. Hypothyroidism affects the skin and may exacerbate allergic skin conditions.

Dogs with chronic skin infections or allergies should be tested for hypothyroidism. If your pet has hypothyroidism, desensitization therapy and anti-inflammatory medications will often fail to help your pet unless the hypothyroid condition is also treated.

When my dog's allergies are bad, she seems to have a terrible smell. What causes this?

When allergies occur, the skin produces more *sebum*, which is an oily material that causes a musty odor. Once the itching and scratching are controlled, the odor and *seborrhea* should clear up. A skin or ear infection may also cause skin odor.



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"Bacteria, fungi and yeasts are all opportunists that can cause a secondary infection in dogs with underlying atopic dermatitis."

Bacteria, fungi and yeasts are all opportunists that can cause a secondary infection in dogs with underlying atopic dermatitis. The secondary infection may require specific antimicrobial treatment in addition to the allergy treatment.

*This client information sheet is based on material written by: Ernest Ward, DVM
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