



INHALANT ALLERGY

What are allergies, and how do they affect dogs?

One of the most common conditions affecting dogs is allergy. In the allergic state, the dog's immune system "overreacts" to foreign substances (allergens or antigens) to which it is exposed. These overreactions are manifested in three ways. The most common is itching of the skin, either localised (one area) or generalised (all over the dog). Another manifestation involves the respiratory system and may result in coughing, sneezing, and/or wheezing. Sometimes, there may be an associated nasal or ocular (eye) discharge. The third manifestation involves the digestive system, resulting in vomiting or diarrhoea.

What is inhalant allergy?

The most common type of allergy is the inhalant type, also known as atopy. Dogs may be allergic to all of the same inhaled allergens that affect humans. These include tree pollens (cedar, ash, oak, etc.), grass and weed pollens, moulds, mildew, and the house dust mite. Many of these allergies occur seasonally, such as the grass pollens. However, others are with us all the time, such as moulds, mildew, and house dust mites.

What happens when a dog inhales something to which it is allergic?

When humans inhale allergens, we express the allergy as respiratory problems. These include coughing, sneezing, a runny nose, and watery eyes. The dog's reaction, however, usually produces severe, generalised itching. It will chew, lick, or scratch almost any area of the body, including the feet. Chewing and scratching produce hair loss and inflamed areas of the skin. Saliva will stain light coloured hair, so dogs that lick excessively will have orange or reddish brown hair. This is often seen on the feet. Although most people think that itching is related to fleas, the most common cause of itching in the dog is inhalant allergy.

What is causing my dog's allergy?

That is not a question that can be answered easily. The itching produced by grass pollen is the same as that produced by oak pollen allergy. In other words, an individual animal can be allergic to many different things with the end result (itching) being the same. In some cases, allergy testing can make specific determinations, and sometimes an educated guess can be accurate if the itching corresponds with the blooming season of certain plants. However, it is not always necessary to know the specific allergen for treatment to be successful.

What is meant by "seasonal allergy" and "year round allergy"?

As the names imply, some dogs only have allergic reactions during specific periods of the year. Others will itch year round. A year round allergy occurs for two reasons. First, the allergen is present year round. This is the case for indoor dogs that are allergic to house dust mites, also known as "house dust". Second, the dog is allergic to so many things that at least one of those allergens is present at all times.

My dog seemed to have a seasonal allergy for several years, and now it seems year round. Is that possible?

Not only is that possible, it is almost expected. As the dog ages, it usually becomes allergic to more and more things. After several years of acquiring new allergies, it reaches the point that it is constantly exposed to something to which it is allergic.

My dog seems to have a grass allergy. Does that mean it should not walk on grass?

No. Dogs that are allergic to “grass”, for example, are really allergic to grass pollen. The blades of grass will cause no harm to your dog. Some grasses are more allergenic than others, depending on the amount of pollen they release into the air. Keeping it mowed so it does not pollinate seems logical, but your neighbours must do the same because the pollen is airborne. The same principle applies to trees. Dogs are not allergic to the wood of a certain tree, only to its pollen.

How is inhalant allergy treated?

Treatment depends largely on the length of the dog’s allergy season and involves four approaches:

1. Anti-inflammatory drugs.

Anti-inflammatory therapy will dramatically block the allergic reaction in most cases. **Corticosteroids** may be given orally. If steroids are appropriate for your dog, you will be instructed in their proper use. **Antihistamines** can be of value in treating the allergic dog when they are combined with steroids. In some dogs, antihistamines can significantly decrease the amount of steroid needed to provide relief. **Fatty acid supplementation** can also be implemented with steroids and antihistamines. When the three of them are combined, most allergic dogs are significantly improved. This is a non-specific approach which does not treat the allergy, only the result of the allergic state (itching).

2. Shampoo therapy.

Many dogs are helped considerably by frequent bathing with a **hypoallergenic shampoo**. It has been demonstrated that some allergens may be absorbed through the skin. Frequent bathing is thought to reduce the amount of antigen exposure through this route. In addition to removing surface antigen, bathing alone will provide some temporary relief from itching and may allow the use of a lower dose of steroids. Some of the hypoallergenic shampoos incorporate fatty acids; these may be absorbed through the skin and offer a localised anti-inflammatory action. The role of the fatty acids in allergy treatment is an area of active research interest in veterinary medicine.

3. Hyposensitisation.

The third major form of allergy treatment is hyposensitisation with specific antigen injections . Once testing identifies the specific allergens, very small amounts of the antigen are injected weekly. The purpose of this therapy is to reprogram the body’s immune system. It is hoped that as time passes, the immune system will become less reactive to the problem-causing allergens. If hyposensitisation appears to help the dog, injections will continue for several

years. For most dogs, a realistic goal is for the itching to be significantly reduced in severity; in some dogs, itching may completely resolve. Generally, steroids are only used on a brief and intermittent basis. This therapeutic approach is recommended for the middle-aged or older dog that has year round itching caused by inhalant allergy.

4. Antibiotics.

Dogs that damage their skin by licking, chewing and scratching are quite susceptible to bacterial infections in the skin. If this occurs, antibiotics should be given until the infection is controlled. The skin infection itself can be quite irritating and cause a dog to itch even more.

Although hyposensitisation is the ideal way to treat inhalant allergy, it does have some drawbacks and may not be the best choice in certain circumstances and for these reasons:

- (a) Cost: This is the most expensive form of treatment.
- (b) Age of Patient: Because many dogs develop additional allergies as they get older, young dogs may need to be retested 1-3 years later.
- (c) Success Rate: About 50% of dogs will have an excellent response, about 25% get partial to good response, and the remaining 25% get little or no response. The same statistics are true for people undergoing hyposensitisation.
- (d) Food Allergies: Although tests for food allergy are available, the reliability of these tests is so low that it is not recommended at this time. A food trial remains the best diagnostic test for food allergy.
- (e) Time of Response: The time until apparent response may be 2-5 months, or longer.
- (f) Interference of steroids: Dogs must not receive oral steroids for 2 weeks prior to testing; these drugs will interfere with the test results.

My dog has fleas. Are these responsible for the itching?

A dog with inhalant allergy will itch even if fleas are not present. However, if your dog has fleas, the itching will increase. Although getting rid of all of your dog's fleas will not stop the itching, it will make it much easier to control the itching successfully.

My dog has a terrible odour. Is that related?

There are two possible causes of odour associated with inhalant allergy. These dogs are very prone to ear infections because the ear canal is an extension of the skin. When it becomes inflamed, it is easily infected and this will smell it is likely to have seborrhoea.

Sebum is the oily material normally produced in the skin. When a dog scratches, sebum production increases dramatically. This produces a musty odour. A bath will remove the odour, but it is gone for only a few hours. The key to controlling seborrhoea is to stop the itching and scratching. In addition the sebum is a good medium in which bacteria can grow. This again results in an unpleasant smell.

Is there another disease that can be part of my dog's problem?

Yes. Skin infections (which themselves may increase itching) are common with atopy and may aggravate allergic conditions.