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Allergies – an Itchy Situation

By Dr. Hermann

Our pets can suffer from allergies just like people; however, our pets may not always display the signs of allergies like we do. Here is just a partial list of the more common signs of allergies in pets:

- ✚ Itchy skin either generalized or in a specific area of the body such as the eyes, ears or face.
- ✚ Bacterial skin infections or rashes either generalized or located in a specific area called “hot spots”.
- ✚ Chewing or nibbling on the top of the legs or paws.
- ✚ Excessive licking of the paws.
- ✚ Excessive ear wax production or ear infections.
- ✚ Rubbing of the muzzle on the floor.
- ✚ Less frequently, sneezing or watery eyes.

These signs can be caused by many types of diseases, but these are the more common signs displayed by pets with allergies.

The problem:

Like in humans, allergies can be triggered by many things including inhalant (airborne), topical (contact with the skin), and/or food allergies. How the body reacts to these allergies can be multifactorial making it difficult to treat or manage allergies by a single solution. To better understand why a multimodal approach to managing allergies is necessary, let's look at what happens in the body when an allergy is triggered.

The allergy reaction:

When a pet is exposed to an allergen a series of pathways are triggered depending upon whether it is inhalant, topical or food. For example,

Inhalant Allergen → multi-step process involving T-Lymphocytes, B-cells and the release of IgE → release of histamines and other inflammatory chemical mediators such as cytokines, interleukins, leukotrienes and prostaglandins → dilation of blood vessels (red skin), mucous secretions including ear wax and oils on the skin, nerve stimulation (itching, biting and chewing of the skin), and smooth muscle contraction.

Contact Allergen → multi-step process that is different than the inhalant allergen that involves T-cells that destroy target cells and activates macrophages and the release of hydrolytic enzymes → physical signs similar to the inhalant allergen. Sometimes issues with the internal organs and/or endocrine systems can affect the skin making the skin more sensitive to topical irritation.

Food Allergen → depending upon the type of reaction with the protein in the food, the process may follow different pathways → abdominal pain, bloating, vomiting, and/or diarrhea may be the result.

As one can see, there are many pathways and chemicals that are involved when our pet has an allergy reaction. Some of the more common treatments that may be employed include:

- ✚ Antihistamines
- ✚ Special shampoos and leave on conditioners
- ✚ Topical sprays
- ✚ Special ear cleaners and medications
- ✚ Fatty acid supplements
- ✚ Antibiotics
- ✚ Antifungals
- ✚ Parasite treatment
- ✚ Steroids or Atopica

The success or failure of the treatments attempted depend upon what the cause(s) of the allergy is (are). So what are the causes of allergies?

Causes of allergies:

Just about anything on the planet can cause an allergy reaction, but some of the more common causes include:

- ✚ Pollens from weeds, trees, and grasses
- ✚ Molds
- ✚ Dust, dust mites, etc.
- ✚ Human and animal dander
- ✚ Highly chlorinated water
- ✚ Home furnishings including fibers, dyes, plastic products, polishes, cleansers, cement, etc.
- ✚ Certain medications
- ✚ Foods
- ✚ External parasites such as fleas and mites
- ✚ Internal parasites including intestinal parasites, heartworm, etc.

Management of allergies:

In most cases, there is not a cure for allergies but only management. Since there are many causes and reactions to allergies, finding out the causes are imperative to have a successful management of

allergies. Your veterinarian will need to perform a series of tests in order to determine the best course of treatment for your pet. Some of the more common tests include:

- ✚ Physical exam and history
- ✚ Skin scrapings – looking for mites, bacteria, fungal infections, etc.
- ✚ Skin impression smears – looking for infections, etc.
- ✚ Microscopy of ear debris – looking for underlying ear infections
- ✚ UV light – looking for skin infections
- ✚ Fecal analysis – looking for internal parasites
- ✚ Blood work – looking for internal organ issues or endocrine disorders such as low thyroid or adrenal gland malfunction
- ✚ Allergy testing – skin and/or serum (blood)
- ✚ Treatment for parasites even if not found on exam

Based on the diagnostic findings, a multi-modal approach to manage the allergies is employed as listed above; however, sometimes that is still not enough. At times, additional therapies may need to be instituted such as:

- ✚ Immunotherapy – in the form of allergy shots or oral liquid.
- ✚ Food trials – there are no diagnostic tests for food allergies, so this option is performed by trial and error and can take many months to determine what foods your pet may be allergic to.
- ✚ Apoquel

Apoquel

In the past, when pets would not respond to more basic approaches to allergy treatment, veterinarians have had to use steroids to help suppress the many reactions described above. Steroids have proved to be very effective in allergy management but the side-effects of steroids have been less than desirable. There is hope however with a new medication called Apoquel.

Apoquel works at the level of the release of cytokines, the initial trigger for inflamed and itchy skin. Apoquel is a new type of drug, not a steroid, which quickly and significantly reduces the effects of the allergy reaction in our pets. Apoquel can be used while other tests are performed to determine the cause of the allergies. Apoquel can be used with other medications such as antihistamines or non-steroidal inflammatory drugs (Rimadyl, etc.). Apoquel does have some restrictions of use such as it cannot be used with steroids, dogs under one year of age, or pets with certain health conditions. Apoquel is only approved in dogs.

Apoquel is proving to be a very important component in the management of allergies and is showing great promise in the future. Unfortunately, because it is a new medication, it is currently on backorder. We hope that it will be available in the coming months.

For more information on allergies, the management of allergies and/or Apoquel, please consult your veterinarian.