



Understanding Allergy in Pets

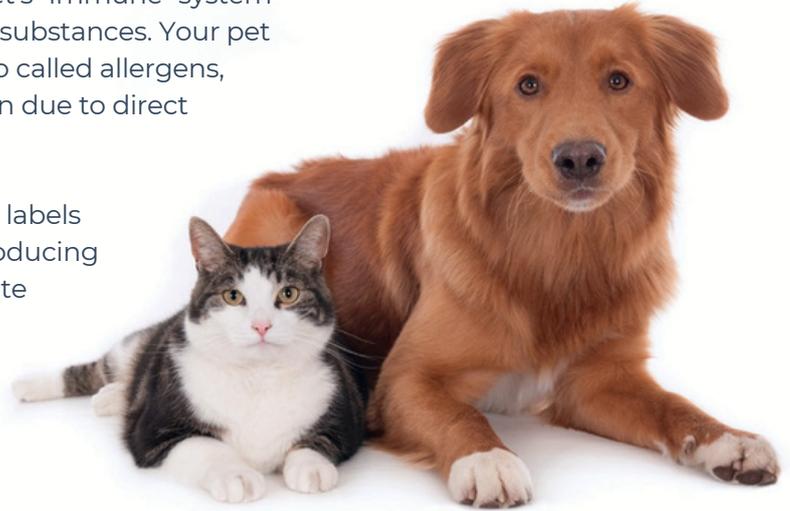
What is allergy?

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Just like humans, pets can also be allergic. The immunological mechanisms underlying allergy in pets are essentially the same as in humans.

Allergy is a disease in which your pet's immune system reacts abnormally to everyday harmless substances. Your pet can be exposed to these substances, also called allergens, by inhalation or ingestion, but most often due to direct contact of the allergen with the skin.

After exposure, the body recognises and labels these allergens as 'foreign' and starts producing inflammatory mediators which will initiate the allergic reaction.



How does my pet get allergies?

Allergies can be hereditary, but can also be developed over time after repeated exposure. In most animals, the initial signs of allergy start between 1 and 3 years of age.

Types of allergies

Some pets have more than one type of allergy, for example atopy and food allergy. The symptoms of these different types of allergies can be very similar, making it often hard to distinguish.

Atopy

Sensitivity to pollen, mites, moulds and skin cells of other animals

Food allergy

Sensitivity to components of the diet such as chicken

Flea allergy

Sensitivity to flea saliva

Contact allergy

Sensitivity to materials such as plastic, linoleum and paint

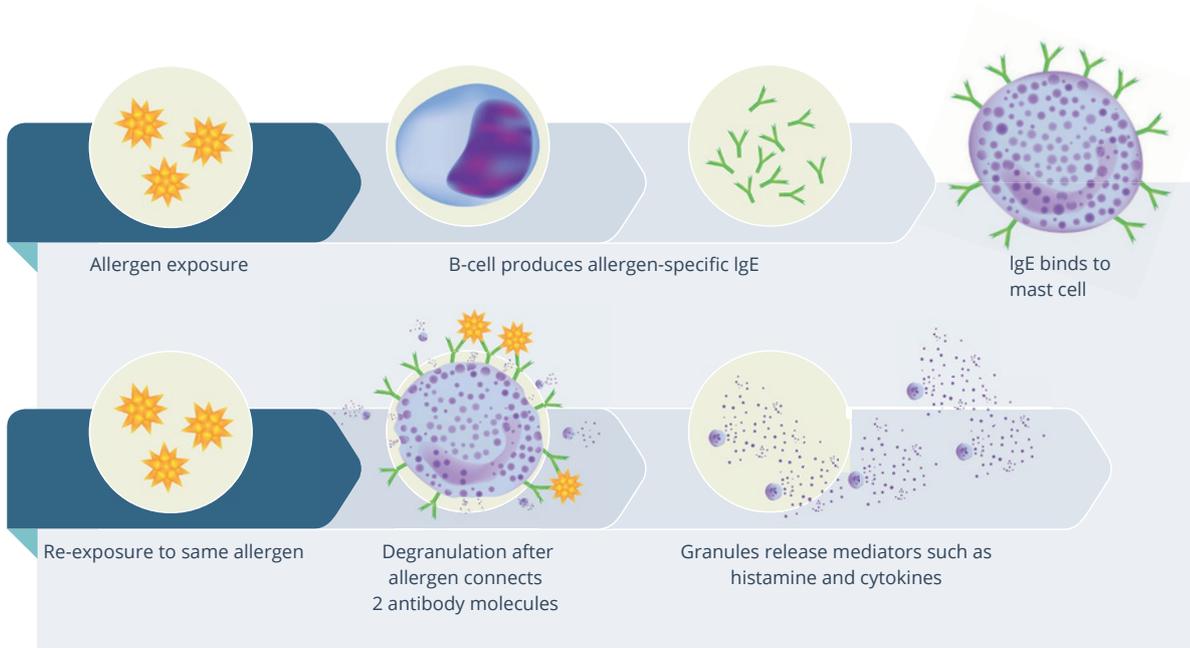
Drug allergy

Sensitivity to antibiotics, antiparasitics and other medicines

Pathogenesis

When an animal is in contact with an allergen for the first time, its immune system will react by producing IgE antibodies. These antibodies are specific for the allergen.

When the animal encounters these allergens again, the allergen will be presented to a mast cell which is already connected to the allergen-specific IgE. This leads to the production and release of mediators, such as histamine and cytokines.



Atopic dermatitis

Atopic dermatitis is a hereditary form of allergy where the animal is sensitive to airborne substances from the environment, such as pollen, mites, moulds and dander.

It is thought to be the most common form of allergy (10-15% of the dog population¹)

Any dog can develop atopy but certain breeds are at a higher risk. Such breeds include the Lhasa Apso, Schnauzer, Boxer, Labrador, Golden Retriever, Poodle, West Highland White Terrier, Cairn Terrier, Jack Russell, Fox Terrier, Cocker Spaniel, Dalmatian, Bulldog, English Setter, Irish Setter and Chihuahua.



Orchard grass



Rye grass, perennial



Fescue, meadow



Timothy



Pellitory



Nettle



Birch



Hazel



Mugwort



English plantain



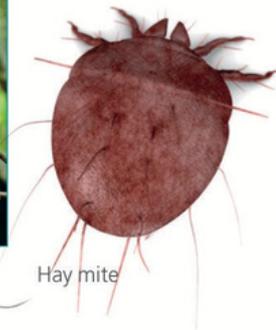
English plantain



Willow



Hazel



Hay mite



House dust mite

What if my pet has atopy?

Atopy is one of the most common and important types of allergy in pets. Between 3% and 15% of dogs and 12.5% of cats suffer from atopy (also known as atopic dermatitis).

It is a hereditary allergy to substances from the environment such as pollen from plants (grasses, weeds and trees) dust and storage mites, molds and dander.

The first symptoms generally occur before the age of 3 years, but it is not uncommon in older dogs.

Dogs showing symptoms through the whole year will be mainly allergic to indoor allergens (e.g.: house dust mites, storage mites, dander and molds). Seasonal symptoms are mainly a result of an allergy to pollen (outdoor allergens). It often occurs that a pet is allergic to more than one of these allergens.

Certain breeds appear to be at higher risk of developing atopy:

- Lhasa Apso
- Schnauzer
- Alsatian
- Boxer
- Labrador
- Golden Retriever
- Poodle
- West Highland White Terrier
- Cairn Terrier
- Jack Russel
- Fox Terrier³



What are the signs of allergy?

The most common sign of allergy is itchy skin, which can lead to:

The usual locations of the itching are the belly, feet, base of tail, and face, especially around the eyes, mouth and ears. Occasionally, watery eyes, sneezing and coughing can be observed.

Allergy symptoms can be present through out the year or only during a season, depending on the allergens that trigger the allergic reaction, for example pollens are seasonal, while mites are present all year.



- Scratching, biting, and chewing at the skin
- Excessive face rubbing
- Excessive grooming
- Hair loss
- Recurrent ear infections

How do I know if my pet has allergies?

Not all itchy skin and scratching is due to allergies. There are many other conditions that can cause your pet to be itchy. Allergy diagnosis requires that the veterinarian first eliminates all other possible causes with similar symptoms.

Your veterinarian will exclude fleas, mites (such as scabies and demodex), bacterial, yeast and fungal infections. Although this work-up may seem extensive, it is absolutely necessary that these problems are diagnosed and treated before thinking of allergy.

If the allergy symptoms remain after excluding all other potential causes, the next step is to diagnose or exclude **food allergy**, through a food elimination trial. When food is also not the cause of the allergy, then **atopy** can be diagnosed.



Skin problems that have similar symptoms to allergies must first be excluded



Clinical signs

The most obvious sign of an atopic condition is itching. Itching is caused by inflammatory skin, typically on the paws, head, armpit or groin. Dogs often lick or bite their feet and can be seen rubbing their heads along the floor or other objects.

The skin inflammation can be exacerbated by bacterial (Staphylococcus) or yeast (Malassezia) infections.

Occasionally, atopic dogs will develop watery eyes, sneezing or asthma. Sometimes digestive symptoms appear. Allergy symptoms can be present throughout the year or only during a season, depending on the allergens that trigger the allergic reaction.

In most animals, the initial symptoms of atopy appear between 1 and 3 years of age.



- Itching
- Skin inflammation
- Ear inflammation
- Loss or discoloration of hair
- Watery eyes
- Sneezing

Ears

Appearance:

Waxy discharge; redness; odor

Behaviour:

Scratching or rubbing ears with paws or against furniture

Skin

Appearance:

Reddened; possibly with crusts or scales; odor with secondary infections

Behaviour:

Scratching and licking sides/belly, elbows, groin

Feet

Appearance:

Inflammation, redness, odor, brown discoloration where licking has occurred

Behaviour:

Licking and chewing of feet/pads

Face

Appearance:

Inflammation; redness; conjunctivitis; swelling

Behaviour:

Scratching or rubbing face with paws or against furniture

- + Otitis externa
- Recurrent pyoderma
- Watery eyes
- Sneezing
- Asthma

Hair& Coat

Appearance:

Bald spots; brown discoloration where licking has occurred

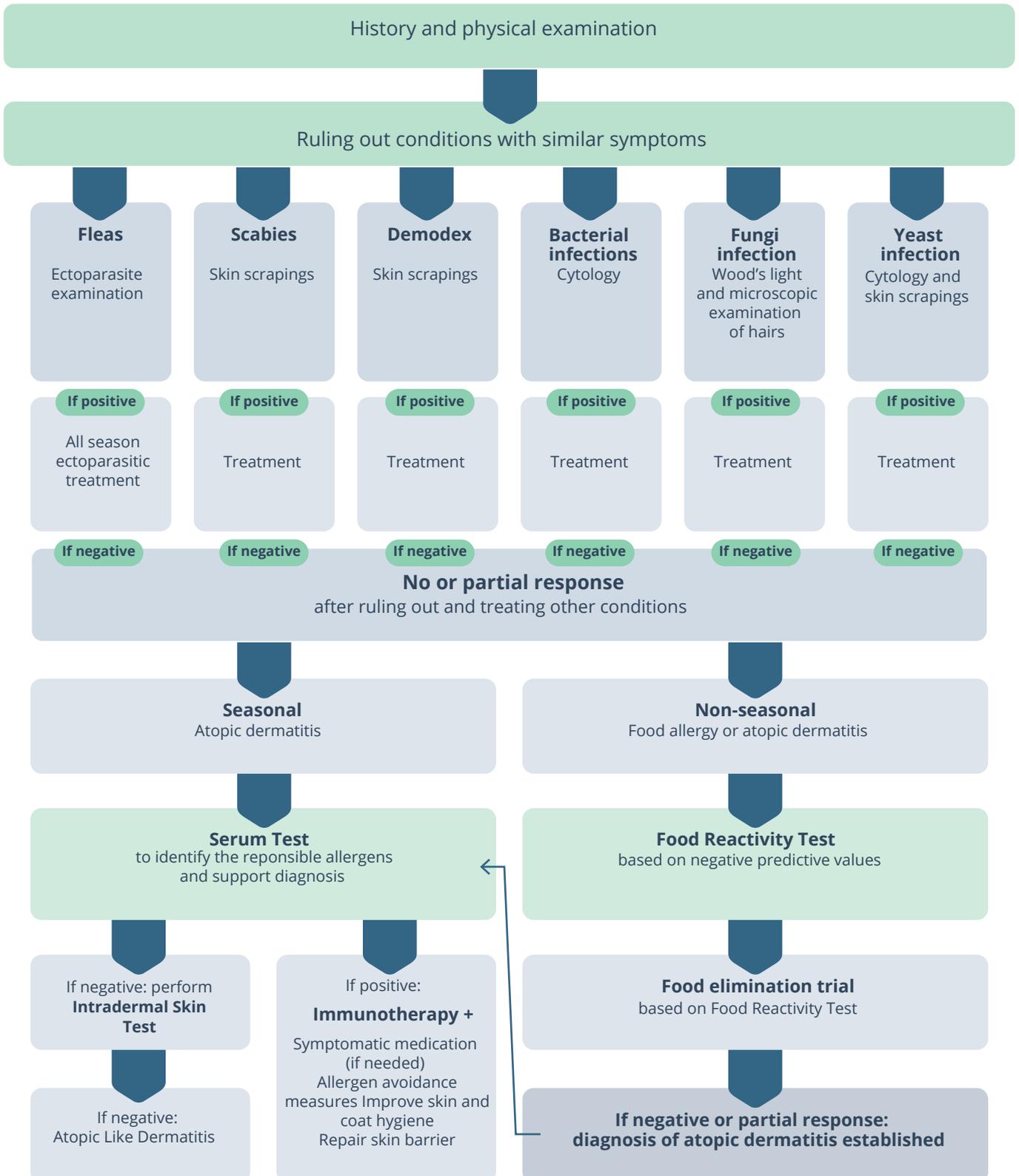
Behaviour:

Scratching sides/belly, rubbing face against furniture or carpet, licking



Diagnosing Allergy

The diagnosis of atopy should be based on the clinical history and by excluding other conditions that can present similar symptoms. Your vet will do an allergy work up, taking different steps to rule out other possible causes.



What Next?

Once a diagnosis of allergy has been made by ruling out other possible causes and looking at the history of the patient, an allergy test can be done to help identify what allergens are triggering the symptoms. Allergy testing can help form appropriate treatment plans.

Allergy testing can be done in one of two ways:

- **Serum Testing** - a sample of blood is taken and sent off to an allergy testing laboratory where they look for the presence of IgE against a selection of commonly found allergens
- **Intradermal Skin Testing** - a more specialist test that involves injecting very tiny concentrations of allergen directly into the skin and looking for a positive reaction characterised by weals that arise on the skin surface if the patient is sensitive to that allergen

It is important to be reminded that neither test is diagnostic and allergy must be diagnosed prior to the test. If the test shows a positive reaction to one or more allergens, the relevance of that allergen can be determined by looking at the clinical history and the animal's exposure to that allergen. In some cases, depending on when the allergy test is being conducted, it may be beneficial to do both a serum test and a skin test.





THE ALLERGY JOURNEY

UNDERSTANDING ALLERGY & ALLERGY MANAGEMENT

For more information on allergy including what causes it, how to diagnose and treat it as well as lots of other useful information please scan the QR code or visit:

<https://go.nextmune.com/theallergyjourney>



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