

Groupe Vétérinaire MONVET Inc.



Cats are often presented to the veterinarian because of excessive shedding. One of this common problem's cause, allergies, inspired us to create this guide. Inside, you will find a list of the different allergy types and the way to diagnose and to treat them. By knowing more about the condition your pet is living with, you will be better equipped to help him feel better.

## What is an allergy?

It is an individual's immune system's abnormal reaction to a substance (allergen) normally present in the environment or in food. Just like humans, cats are not born with allergies. They become allergic to an allergen after having been repeatedly exposed to it. Plus, once they're allergic to something, they stay allergic to it for the rest of their lives. Their symptoms can even get worse over time. Fortunately, we can help control them.

## The symptoms

Allergies cause red itchy skin. However, itching sometimes goes unnoticed because cats are real champs at scratching behind our backs. Sometimes, the itching is so intense that they pull at their hair until they get partially or totally bald.



#### **Itching scale**

Here is a scale, graduated from zero to ten, that can help you evaluate the apparent severity of your cat's itching.

0	The cat seems normal. He rarely scratches/chews at himself.
1-2	<ul> <li>Very little itching. He only occasionally scratches/chews at himself. Not much more often than before the skin problem first appeared.</li> </ul>
3-4	A little bit of itching. He scratches/chews at himself a little more often. When he sleeps, eats, plays, exercises or focuses on something, he does not scratch/chew at himself.
5-6	The itching is moderately severe. He scratches/chews at himself regularly. At night, yes, but not during the day when he's eating, playing, exercising or focusing on something.
7-8	The itching is intense. He scratches/chews at himself for long periods of time. At night and when eating, playing and exercising. Even when someone tries to get his attention.
9-10	The itching is intense and almost constant.  Nothing can distract him. The only way to make him stop scratching/chewing at himself is to physically restrain him.

### The Feline Eosinophilic Syndrome

This syndrome is unique to cats. It is a specific symptom of allergies that presents in three possible ways:



Indolent ulcers



Eosinophilic patches



Eosinophilic granulomas

Oddly enough, these lesions rarely indispose cats.

## **Types of allergies**

Four allergy types cause skin symptoms: insect bite, contact allergy, atopy and food allergies. Usually, cats suffer from more than one type of allergy.

#### Insect bite allergy

Lesions and itching can be present anywhere on the body. Typically on the back, near the tail, when fleas are involved. Just one is enough to trigger a reaction in a sensitized animal. Often, no fleas are even found in the coat of affected cats.



#### **Contact allergy**

Skin lesions associated with a contact allergy appear where it touched the allergen. For example, a perfume sprayed on a cat's cushion can irritate his tummy, back and paws.

#### **Atopy**

Atopy is the ability of genetically predisposed individuals to develop an allergy to allergens in their environment. For example, dust mites (most often), mold, dander, dust, pollen or grass.

Affected cats develop this type of allergy because their faulty skin allows allergens to come in and their defective immune system produces inflammatory and pruritic molecules.

Cats itch mainly on the face and neck. As for lesions, they generally appear behind the ears, on the chin, on the abdomen and on the legs as:

- · alopecia (baldness),
- miliary dermatitis (patchy haircoat),
- acnea,
- excoriations (scrapes).

Respiratory symptoms sometimes accompany skin problems: chronic cough, sneezing, conjunctivitis, etc.

In 75% of cases, symptoms first appear between 6 months and 2 years old. They are present all year long or only from spring to fall, depending on the allergens involved.



Acnea on the chin

#### **Food allergies**

Food allergies cause itching and lesions identical to, and in the same areas of the skin, as atopy. Therefore, it is impossible to differentiate the two conditions based on the cat's appearance.

With food allergies, digestive symptoms are sometimes present as well (eg. vomiting, diarrhea, gas). They can also be the sole symptoms present.

#### Food allergies or intolerance?

These two terms are often mixed up when cats have digestive trouble after eating. It is important to distinguish food allergies from food intolerance, because the two conditions are very different.

With food allergies, it is the cat's immune system that develops sensitivity to one or more ingredients in the food, after having been exposed to it before. Even a tiny amount of allergens is enough to trigger an adverse reaction.

With food intolerance, the adverse reaction happens at the very first exposure, by either one of these mechanisms:

- A metabolic problem. For example, a defective lactase enzyme causes an inability to digest lactose in milk.
- An intoxication. For example, with chocolate.
- Food poisoning. For example, with rotten meat.



#### Who develops food allergies?

Breeds most often affected are Siameses, Burmeses and Birmans.







#### **Food allergens**

The allergens implicated are almost always animal proteins. The foods known to cause allergies most often are as follows, in decreasing order of frequency:

- Fish
- Beef
- Milk products









## The diagnosis

Diagnosing an allergy can be a challenge because many different things can cause itching and similar lesions. Figuring out what type of allergy a cat suffers from adds another element to the puzzle. Since there is no simple and quick test available, we must proceed systematically.

Here are the steps to follow:

- 1- Identify and treat bacterial, fungal and parasitic infections.
- 2- Rule out internal diseases with blood and urine tests.
- 3- Confirm or exclude food allergies with an eviction diet trial.
- 4- Identify environmental allergens with serological or intradermal tests.

#### The eviction diet trial

An eviction diet trial consists of feeding the cat hypoallergenic food for about 2 to 3 months. The goal is to reduce or eliminate any potential food allergens from his diet and see if the symptoms go away or not.

This test is the only reliable method for diagnosing food allergies. Either with a hydrolyzed protein or a novel protein commercial food or with home-cooked meals. Ideally, this is done during winter to avoid seasonal allergens interfering with the results.

It is imperative to eliminate all extras from the cat's diet for the duration of the test. This means no non-hypoallergenic treats, table scraps, food supplements, flavored toothpaste and medications, etc.



#### **Hydrolyzed protein diets**

The term *hydrolyzed* protein means that proteins are cut into pieces, too small for the immune system to recognize and react to. We recommend using this type of food to do the test. Additionally, these diets are complete and balanced, so they can be used for maintenance afterwards.







#### **Novel protein diets**

Novel protein diets usually contain only one protein and one source of carbohydrates (sugar). By giving the cat a limited number of ingredients to which he has never been exposed, the risk of him reacting to them decreases.

This type of food is not ideal to do the test. The immune system can start to react to its proteins at any time. Also, if the cat has been exposed to the foods' ingredients before, he may already be sensitized to them. Hydrolyzed protein diets are therefore more appropriate for the test when the animal has previously eaten the ingredients present in the novel protein diet or when his food history is not known precisely.







#### Home-cooked diets

From a diagnostic point of view, home-cooked hypoallergenic diets are ideal because they contain a minimum of ingredients, all of which are precisely known.

However, they are often impractical:

- Many owners don't have the time or the will to prepare their cat's meals.
- The ingredients required can be expensive and hard to find.
- It is often difficult to follow the prescribed recipe faithfully and for months on end.
- Cross-contamination is frequent. For example, fish cut on a cutting board can contaminate the hypoallergenic food if it is prepared on the same board without it having been cleaned properly.

Thus, in order for the test result to be reliable, one must follow the recipe to the letter and make sure that no potential allergens contaminate the cat's food.

Since these diets are neither complete nor balanced, they should not be used longer than necessary.



#### **Treats**

We have tasty hypoallergenic treats your cat can eat during the test to complete his meals. They do not interfere with the results.





#### **Provocation**

Provocation consists of reintroducing the previous diet once the test is over and observing whether the symptoms reappear or not. This step is important to confirm or exclude the diagnosis of food allergies. Symptoms can take up to two weeks to come back.

#### **Sequential provocation**

After causing the symptoms to return, we can try to identify which food allergens the cat is reacting to. Here is how:

- 1- Switch back to the hypoallergenic food until the itching and the lesions disappear completely.
- 2- Add only one ingredient to the diet and watch out for the symptoms' reappearance for the next 2 weeks.
- 3- Proceed in the same manner with the other ingredients, one at a time.

#### **Veterinary supervision**

It is important to be accompanied by a veterinarian while you are doing the eviction diet trial. First, because it is a long process during which it can become difficult to respect the imposed constraints. Second, because the veterinarian's expertise is essential to determine whether the test is conclusive or not.



#### And then what?

The cat can continue to eat the hypoallergenic food used for the test if his symptoms are under control, and as long as it is complete and balanced. This excludes home-cooked hypoallergenic meals. As for novel protein diets, don't forget that your cat can eventually become allergic to them.





#### **Testing for atopy**

Two tests can identify the environmental allergens to which a cat reacts: serological and intradermal tests.

#### **Serological tests**

These tests consist of measuring the amount of antibodies against known allergens there are in a cat's blood. When this amount is too high, it is concluded that the cat's immune system reacts to these allergens.



#### Intradermal tests

These tests are similar to those done in humans. They consist of injecting different known allergens into the cat's skin and observing if redness appears. If so, this indicates that he is reacting to these allergens.



#### The limits of atopy tests

Like all tests, atopy tests are not foolproof. Here are their limitations:

- They can turn out positive, even in patients who are not allergic.
- The cat may react to allergens that are not on the list of those checked. The test then comes out falsely negative.
- They do not distinguish itching caused by atopy from itching caused by something else.
- They do not replace a complete dermatological investigation.

#### Why test for atopy?

These tests are not used to diagnose atopy, but rather to decide which allergens to include in desensitization preparations.



#### Desensitization

In an ideal world, we would identify all the allergens a cat reacts to and eliminate them from his environment. Because in real life this is not possible to do with most allergens (eg dust mites, dust, pollen), the next best thing is to desensitize the pet's immune system to them.

Desensitization, also called immunotherapy, involves injecting the animal with increasing concentrations of the environmental allergens to which he reacts. The goal is to get his immune system to "tolerate" and stop reacting to them. It works well in about 55% of cats.

#### The treatment

#### Medications

Medications used to treat allergies relieve itching in different ways.

#### **Antihistamines**

Antihistamines prevent histamine, one of the molecules that cause itching and redness, from being released by the immune system's cells during an allergic reaction. When used alone, they work best if the symptoms are light.

#### **Anti-inflammatory drugs**

The most commonly used anti-inflammatory drug is cortisone. It prevents inflammatory molecules from acting. It is indicated with both food allergies and atopy.

#### **Immunosuppressants**

Immunosuppressants decrease the immune system's activity by preventing the production of inflammatory molecules. Immunosuppressants are used mainly in cases of atopy.

#### **Antipruritic medications**

The term antipruritic means "against itching". The main effect of this class of drugs is to prevent the pruritic signal from being transmitted in the skin. They also have some anti-inflammatory effects, although not as strong as cortisone's. They are indicated for all types of allergies.

#### **Food**

Foods designed to help treat atopic skin are aso available. They are enriched with omega 3 and 6 essential fatty acids. Omega-3 reduces inflammation and omega-6 restores the skin barrier. Essential fatty acids also improve skin hydration, reduce the risk of infections, promote healing of lesions and make the coat shinier.









#### **Over-the-counter products**

A variety of great products are available on our shelves. They are used with dermatological food and with medications to control symptoms.

They include omega-3 nutritional supplements, shampoos, conditioners and topical liquids. These products help heal the skin just like food:

- by cleansing and moisturizing it;
- by repairing and restoring the skin barrier's integrity;
- by helping to fight bacterial and fungal infections;
- by reducing inflammation.

















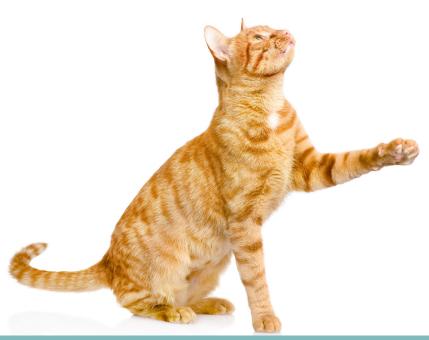




### The final word

Skin and digestive problems are frequent in cats. Several reasons, besides allergies, can cause the same symptoms. It can therefore be complicated to identify the cause(s) involved. To solve this puzzle, we must proceed step by step. This includes testing and doing therapeutic trials with drugs and food.

We hope this guide helps you understand the condition your cat is suffering from and how we diagnose and treat it. Although we can't cure his allergies, we can still manage his symptoms. By working together, we can help him feel better in his own skin.





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Certain services are not available for all animal species nor in all our locations.

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