

# Pet Allergies



Artuvetrin<sup>®</sup>  
Therapy

What is allergy and how  
can it be treated?

# What is allergy?

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

# 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



# What if my pet is allergic to food?

The most common allergens responsible for food allergy in dogs include beef, chicken, wheat and milk proteins.

Frequently the food has been part of their diet for a long time.

The symptoms can appear at any age, but in many cases first signs are seen when they are 1 year old. Food allergy symptoms are mainly present throughout the year (non-seasonal).

Besides the typical symptoms of allergy, between 10% and 15% of dogs with food allergy also seem to have gastrointestinal complaints, such as vomiting, diarrhea, weight loss and abdominal discomfort.



## How can it be diagnosed?

**The only way to diagnose food allergy is through a food elimination trial.**

This trial consists by introducing a new diet (known as elimination diet) and should be followed for at least 6-8 weeks. If there is an improvement noticeable after this time, the previous (old) diet should be reintroduced for a maximum of 3 weeks to see if the symptoms reoccur.

If they do reoccur, then return to the new diet. If your pet improves again, the diagnosis of food allergy is confirmed.



It is very important that your dog does not consume any treats, snacks or flavoured medication during the food elimination trial

# Which new diet can I give?

**A food elimination trial can be done with a home-cooked diet, a commercial diet with hydrolysed proteins or a commercial diet that contains proteins your pet has not previously tried. It is not easy to determine a right option when it comes to selecting which elimination diet to use.**

Commercial diets, even if with new proteins for your pet, can sometimes contain protein sources not declared on the label. In two studies, undeclared proteins were found in 83% and 90% of the tested foods.

In commercial diets containing hydrolysed proteins, these proteins have been broken down into smaller pieces in order to prevent a reaction. There are conflicting studies on the effectiveness of hydrolysed diets, with 10% to 40% of patients who are allergic to the basic protein continuing to show symptoms on a hydrolysed version.

Home cooked diets are the most reliable option, however more time consuming and less practical.



## How can my pet be treated for food allergy?

Once your pet has been diagnosed with food allergy, the only treatment is strict avoidance of the responsible food or its ingredients.



# 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<sup>1</sup> and 12.5% of cats<sup>2</sup> 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.

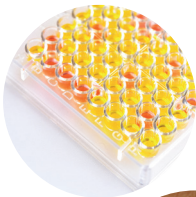
Dogs showing symptoms through the whole year will be mainly allergic to indoor allergens (e.g.: house dust mites, storage mites, dander and molds). Seasonal symptoms are mainly a result of an allergy to pollen (outdoor allergens). It often occurs that a pet is allergic to more than one of these allergens.

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

- Lhasa Apso
- Boxer
- Poodle
- Cairn Terrier
- Schnauzer
- Labrador
- West Highland White Terrier
- Jack Russel
- Alsatian
- Golden Retriever
- Fox Terrier<sup>3</sup>

# How can it be diagnosed?

Your pet is diagnosed with atopy, if all other skin diseases with similar symptoms (including food allergy) have been ruled out and if the allergic symptoms are still present.



The next step is to know which allergens are responsible for the allergic symptoms. The responsible allergens can be determined through a blood test or/and a skin test.

Your veterinarian can take a blood sample from your pet and send to a laboratory that will analyse the amount of antibodies present in the blood against different and most relevant allergens.



Another option, is to inject small amounts of different allergens in the skin and evaluate the local reaction. Each test or a combination of both are good options.

# How can my pet be treated for atopy?

The most effective treatment for atopy is to completely avoid the responsible allergens. However, this is practically impossible in most cases. Not only are many allergens like house dust mites, grasses, and tree pollen difficult to avoid, where there is an allergy to multiple allergens it is practically impossible to address them all through avoidance.

There are a number of short-term medications to help control your pet's allergy symptoms, such as steroids, cyclosporine, oclacitinib and lokivetmab. These products are a good option for controlling the symptoms (itch), especially in a first stage, however they do not treat the cause of the allergy. This means that your pet will continue to be allergic and its immune system will still react to the allergens. In addition, most of them come with side effects or "mask" other health problems, making it harder to detect and treat (for example ear infections).

At this moment, the only treatment that addresses the cause of atopy is allergen-specific immunotherapy. Immunotherapy is a medical treatment where very small amounts of allergens (pollen, mites, molds, etc.) to which your pet is allergic

Allergen-specific immunotherapy is the only treatment that addresses the cause of atopy

are injected subcutaneously (beneath the skin) in increasing amounts. The goal is to change the immune system's response so that it becomes less sensitive or not sensitive at all to those allergens. As a result, the allergic reaction and symptoms will decrease or disappear, as well as the need for other short-term medications.

Immunotherapy is safe, effective and well recognised for long-term use<sup>4</sup>.

After determining which allergens your pet is allergic to, through our allergy tests, a specific custom-made immunotherapy can be produced – Artuvetrin® Therapy





# What is Artuvetrin® Therapy?

Artuvetrin® Therapy is a personalised immunotherapy prepared with the allergen extracts that are responsible for your pet's allergy. It is a licensed veterinary medicine, prescribed by your veterinarian. It is completely custom-made, safe and can be given for long periods<sup>4</sup>.

Artuvetrin® Therapy is the only licensed immunotherapy in Europe\*.

\*Licensed in the Netherlands



## What to expect?

**The efficacy rate for Artuvetrin® Therapy is about 75%<sup>5</sup>. Most pets show improvements within a few months, but can take up to 12 months before the treatment gives noticeable results.**

In the beginning of the treatment, it might be necessary to give short-term symptomatic medications in conjunction with Artuvetrin® Therapy to ensure your pet is comfortable and its symptoms are under control. Consult with your veterinarian how to control your pet's symptoms in the meantime.

In 10% of the dogs treated, the itching is observed to increase and then fade away again 1-2 days after the injection.

It's recommended to contact your veterinarian for a follow-up treatment at least 30 days before a new vial is needed. Compliance with the treatment plan is key.





# How to start the Artuvetrin<sup>®</sup> treatment?

**Before starting, we recommend to read the information leaflet inside of the treatment package.**

The first dosage starts at 0.2 ml, after which it is gradually increased over longer intervals to a maximum of 1 ml. For some pets, this treatment schedule can be too fast. If so, your veterinarian can advise on how to deviate from the standard dosage schedule.

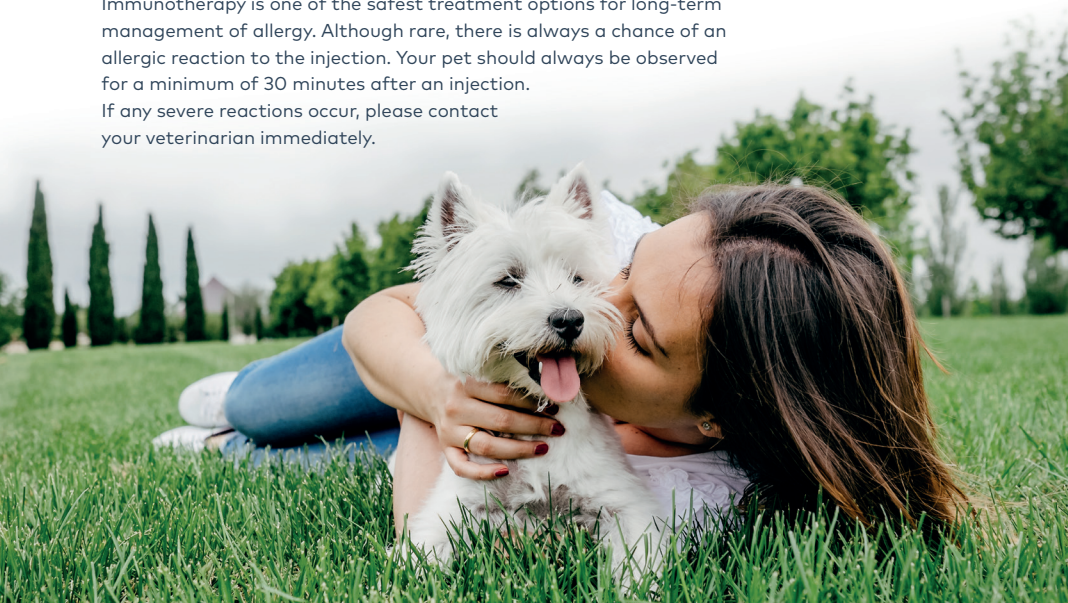
Once the maintenance dose of 1 ml is reached (after 13 weeks), continue a monthly injection interval. This maintenance interval can also be adjusted depending on the time period that provides the best control.

Advised schedule	Dosage
Week 1	0.2 ml
2 weeks later (week 3)	0.4 ml
2 weeks later (week 5)	0.6 ml
2 weeks later (week 7)	0.8 ml
3 weeks later (week 10)	1.0 ml
3 weeks later (week 13)	1.0 ml
4 weeks later (week 17)	1.0 ml
4 weeks later (week 21)	1.0 ml

With the content of one vial of Artuvetrin<sup>®</sup> Therapy, a treatment set lasts for 10 months.

## Possible side effects

Immunotherapy is one of the safest treatment options for long-term management of allergy. Although rare, there is always a chance of an allergic reaction to the injection. Your pet should always be observed for a minimum of 30 minutes after an injection. If any severe reactions occur, please contact your veterinarian immediately.



# Understanding immunotherapy results

While every pet responds differently to any given medication, Artuvetrin® Therapy has proven to have a successful efficacy rate, with 75% of patients improving after starting the treatment.

It may take several months before significant improvement is seen. It is recommended to continue the treatment for at least 12 months before deciding whether or not it is the best way to manage your pet's allergy.

A small percentage of animals may not improve significantly enough. If your pet turns out to be one of these cases, it is critical that you work closely with your veterinarian. Fleas, food allergy, secondary skin infections or other factors can contribute to a lack of improvement, so it is important to have regular follow-ups, especially

during the first year of treatment. Occasionally, it can be necessary to change the dosage and interval. In some cases, it may be beneficial to retest if it is suspected your pet has developed new allergies.

Every pet's allergy condition is unique. Therefore, the dose and interval between injections should be tailored according to your pet's response. Working close with your veterinarian will give you the best chance for sustained, long-term, safe relief from its allergies.



# What else can be done to help managing my pet's allergy?

A multimodal approach to allergy is important. You can use, in conjunction with Artuvetrin® Therapy, a few other products that can help improving your pet's condition.



## Control environmental exposure

Avoid contact with allergens is the most effective way to treat the symptoms. Although most of the allergens are impossible to avoid, there are some preventive options than can help.

Pet's Relief® ALLERGONE is an innovative allergen neutralizing spray designed to reduce the exposure to house dust allergens. It provides a long term protection of 5 months after a single application.

## Skin health supplements

It is believed atopy is associated with a defect in your pet's skin barrier. This makes it easier for allergens to enter the body and cause symptoms. Dietary skin supplements can support and improve the skin barrier<sup>6</sup>.

Pet's Relief® ATOPI-3 is a complete and well-balanced dietary supplement that includes essential fatty acids (omega-3I), Vitamine A, Vitamine C, Vitamine E, Zinc and MSM (methyl-sulfonylmethane). It is specially developed to support the skin barrier, help repairing damaged skin and help reducing skin inflammation.



## Baths

Bathing may help relieve itching and remove environmental allergens from the pet's skin. It is key to pick the right shampoo, as frequent bathing with the wrong product can dry out the skin.

## References

- 1 Hillier et al. Vet. Immunol. Path 81 (2001) 147-151
- 2 Ravens et al. Vet. Derm. Volume 25 Issue 2 (2014)
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