

Artuvetrin®



ALLERGY IN DOGS



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Allergy in dogs

The aim of this brochure is to provide you with some background information about allergy in dogs.

How the disease is diagnosed and what the options for therapy are.

At the back of this brochure you will find more information about the specific treatment with Artuvetrin®.

What exactly is an allergy?

An allergy is actually an exaggerated and adverse reaction by the body's immune system to external substances. As soon as the immune system encounters anything that is foreign to the body, it responds by creating antibodies and immune cells. When the same substance is encountered again, the body decides whether to react and how. This is where the fault lies in allergy patients. Instead of reacting slightly or not at all, there is a severe reaction.

What happens then?

When there is repeated contact with the allergen (as the material from outside the body is known) the immune system reacts by producing substances that cause an inflammatory response in the skin (sometimes in the mucous membranes too) and subsequently cause itching.

What can dogs be allergic to?

Allergies are common in dogs. Types of allergy that dogs may suffer from include:

- allergy to fleas induced by flea bites
- allergy to food where animals develop a hypersensitivity to certain components in their diet.
- contact allergies where an allergic reaction in the skin is seen to such things as plastic, linoleum, paint and cleaning materials.
- occasional allergic reactions can arise after medications are given.
- atopic conditions sometimes called atopy: An allergy to materials that may be released in the environment, comparable to hay fever or dust mite allergy in humans.

Because the symptoms associated with the various allergies may look very similar, it is important that a proper investigation is carried out to find the precise cause of the allergy.

Atopic conditions

Atopy is one of the most important forms of allergy in dogs. Between 3% and 15% of dogs suffer from an atopic condition¹. It is a hereditary allergy to the pollen of flowering plants (e.g. grasses, weeds, trees), flakes of animal skin, fungi or various dust and storage mites.

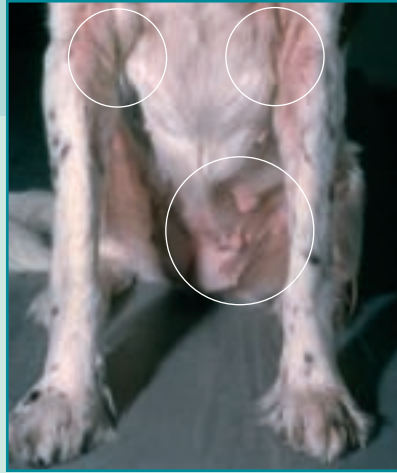
The symptoms in an atopic individual usually manifest themselves before the age of 3 years. The initial symptoms are often mild and are tolerated by owners because they respond well to short-term symptomatic therapy or because they initially only appeared at certain times of the year such as pollen allergies in the summer.

Certain breeds appear to be at higher than average risk of developing atopy. Such breeds include the Lhasa Apso, Schnauzer, Alsatian, Boxer, Labrador, Golden Retriever, Poodle, West Highland White Terrier, Cairn Terrier, Jack Russell and Fox Terrier².

Symptoms of atopic conditions

The most obvious sign of an atopic condition is itching. Commonly, dogs will lick or bite their feet and can be seen to rub their heads along the floor or other objects. This can cause skin inflammation. Occasionally, allergic animals will develop watery eyes or sneeze.

The inflammation of the skin on the paws, head, armpit or groin and the itching are



Inflammation at armpit and groin.



Inflammation at the back of the carpi.

the most important criteria for making this diagnosis. The skin inflammations can be exacerbated by bacterial (staphylococcus) or yeast (malassezia) infections, which will naturally require treatment.

Diagnosis of an atopic condition

Other conditions that appear similar to atopy are excluded, based upon previous history and an extensive examination. The next step in the investigation of an atopic condition is to carry out an allergy test. There are two kinds of allergy tests available; a serum (blood) test and a skin test.



Skin Test: Injection of allergens.



Skin Test: Reactions in 20 minutes.

Artuvetrin® Test

A serum test and a skin test have both been included in the Artuvetrin® range. Both tests have been specially developed to determine which substances the dog is allergic to.

The veterinarian makes the choice of a serum test and/or a skin test.

Artuvetrin® Serum Test

The Artuvetrin® Serum Test employs the latest techniques. With this test, which substances the dog is allergic to is determined through the blood. The veterinarian draws blood from the dog and then sends this away to a laboratory.

The blood is tested for a large number of frequently occurring allergies; mites/insects, grass pollen, tree pollen, pollen from herbs and flowers, fungi and skin flakes. Using the test results, the veterinarian is able to determine which substances the dog is allergic to.

Artuvetrin® Skin Test

In the Artuvetrin® Skin Test, the substances the dog is allergic to are determined by the reaction of the skin to injections. Based on the previous history or experience, the vet compiles a skin test consisting of relevant allergens. The veterinarian performs the Skin Test himself or herself within the practice.

Skin Test Method

Before the test is performed, any medications that influence the allergy and the itching (e.g. prednisone and antihistamines) must be discontinued for a number of weeks. The skin test is performed on the chest wall after this has been carefully shaved.

A very small quantity (0.05 ml) of the allergens and control solutions is injected into the skin at various locations. After 15-20 minutes, all injection sites are assessed for swelling of the skin.

Naturally, if the dog is allergic to a particular substance, after injection in the skin an inflammatory reaction occurs that manifests itself as a swelling. The degree of the swelling is compared with the degree of swelling of the control solutions and thus it may be determined to which substances the dog is allergic.

There are of course many substances an animal may be allergic to; however the substances that in most cases cause allergy in dogs have been included in the Artuvetrin® Skin Test.

Treatment of atopic conditions

When it has been determined with the aid of an allergy test that the dog is allergic, various forms of treatment are possible. Each form of treatment should in principle be continued for life.

- The best and simplest treatment is to avoid contact with the substance or substances (allergies to more than one material is observed regularly in dogs). Unfortunately that is not always feasible.
- Drugs to treat the inflammation such as corticosteroids (prednisolone) and cyclosporine are excellent at suppressing the allergic reaction. However, these medicines do have significant disadvantages, especially when they have to be given as long-term therapy over an animal's lifetime as is the case with atopic conditions. For that reason, it is advisable only to administer these medications for short periods. Medicines such as antihistamines do not have much effect in dogs.
- An entirely different type of treatment is described as allergen-specific immunotherapy. After determining what the dog is allergic to, it is possible to make the dog less sensitive, or insensitive, to these substances. To do this, special vaccines are prepared for each patient, based on the various substances that cause the allergic reaction in that patient: Artuvetrin® Therapy. These vaccines are then administered at steadily increasing intervals and at higher and higher doses. The aim of the injections is to make the immune system less sensitive to the substances that trigger the allergic reactions.



Artuvetrin® Therapy.

When can a dog be considered for Artuvetrin® Therapy?

Dogs that have problems for more than 3 months of the year can in principle be considered for allergen-specific immunotherapy such as Artuvetrin® Therapy.

The treatment ensures that the complaint is kept under control and that the symptoms are greatly reduced.

Treatment results

The proportion of dogs that respond well to the treatment is about 75%³.

It will take time for the treatment to have any noticeable results. Stopping the treatment and re-examining the dog is only advised if there are no visible results at all 8 months after starting treatment.

Undesirable effects

Artuvetrin® Therapy has virtually no side effects and can therefore be given for long periods⁴. In 10% of the dogs treated, the itching is observed to increase and then fade away again 1-2 days after the injection.

Examination/treatment

The Artuvetrin® Serum Test or Skin Test is used to determine what your pet is allergic to. Based on the results of the allergy test, Artuvetrin® Therapy will be prepared specially for your pet. The results of the allergy test and the allergens that will be included in the Artuvetrin® Therapy can be seen in the table below.

Artuvetrin® allergens			
	Test positive - include in therapy		Test positive - include in therapy
INDOOR		OUTDOOR	
Tyrophagus putrescentiae (copra mite)		Birch	
Dermatophagoïdes farinae (farinae mite)		Hazel	
Lepidoglyphus destructor (hay mite)		Willow	
Dermatophagoïdes pteronyssinus (house dust mite)		Cypress, Italian	
Acarus siro (flour mite)		Olive	
		Sycamore, eastern	
Cat epithelium		Tree pollen mixture I	
Flea		Tree pollen mixture II	
Alternaria alternata		Plantain, English	
Aspergillus fumigatus		Mugwort, common	
Cladosporium herbarum		Nettle, stinging	
Malassezia		Pellitory, wall or erect	
Fungi mixture I		Lambs quarter	
		Weed pollen mixture	
OUTDOOR			*
Orchard grass			*
Timothy			*
Fescue, meadow			*
Rye grass, perennial			*
Blue grass, Kentucky			*
Grass pollen mixture			*

* Tested positive and included in the Artuvetrin® Therapy.

Advised treatment schedule

Allergen-specific immunotherapy with Artuvetrin® Therapy will be built up according to a particular schedule, as shown in the table below. As you will notice, the time between injections increases. Initially there are two weeks between the injections and this increases up to four-week intervals between injections later on. Your veterinarian can decide if there is any need to vary this schedule. It is a good idea to make a note of the injection dates and add any comments yourself.

Artuvetrin® Therapy			
Advised schedule	Date	Dosage	Remarks
week 1		0.2 ml	
week 3		0.4 ml	
week 5		0.6 ml	
week 7		0.8 ml	
week 10		1.0 ml	
week 13		1.0 ml	
week 17		1.0 ml	
week 21		1.0 ml	
week 25		1.0 ml	
	*		
	**		

* Next injection in consultation with your veterinarian

** Because each Artuvetrin® Therapy is prepared specially for the individual, there will be a delay between ordering and delivery.

It is therefore advisable to order the follow-up therapy at least two weeks in advance.

Injection technique

Artuvetrin® Therapy is administered by subcutaneous injection. You have the option of injecting your pet yourself. Ask your veterinarian to demonstrate the technique to you. For the sake of clarity, all the actions are shown again below. Shake the vial thoroughly before use. After use, store the vial in the refrigerator (do not freeze).

1. ▶ Fill the syringe.
 - ▶ Point the needle upwards.
 - ▶ Remove any bubbles by tapping the syringe.
 - ▶ Then press the plunger gently until the first drop of liquid appears.
2. ▶ Lift up the skin at the neck and use your index finger to make a small indentation.
3. ▶ Position the needle in the indentation you have made and push it gently through the skin.
 - ▶ Release the skin at the neck.
4. ▶ Press the plunger to empty the syringe slowly and evenly.





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