

What is allergen-specific immunotherapy (ASIT)?

For allergen-specific immunotherapy, individualised treatment solutions are prepared specifically for your horse based on the results of an allergy test (only for environmental allergens such as pollen, moulds, mites, and insects; not possible for food allergens).

These contain small amounts of the allergens which your horse is allergic to or sensitised. These are injected to your horse over a period of several months, in gradually increasing concentrations and dosing intervals.

In most cases, this treatment increases your horse's immune system tolerance to the respective allergens. As a result, your horse feels comfortable in its surroundings again. Improvements are often noticeable within a few weeks of starting treatment. However, in some cases, it can take up to several months before improvement is noticeable. Overall, **this type of therapy is effective in about 70% of cases, either reducing the severity of allergic signs or completely eliminating them.** An allergy is a disease that cannot be cured, therefore, an ASIT treatment – if successful – must be administered lifelong.

In rare cases, side effects may be observed, such as a short-lived worsening of clinical signs. In most cases, they can easily be managed by your veterinarian through a dose adjustment. Therefore, it is very important to discuss any changes or observations during allergen-specific immunotherapy with your veterinarian, so that any necessary dose adaptation can be made.

Please consider that an allergy is a disease that **cannot be cured** and will persist lifelong. It is also possible for allergies to be passed on to offsprings. The only way to manage an allergy and to improve your horse's quality of life is to identify the causative allergens, try to avoid them as much as possible and/or use an allergen-specific immunotherapy. **Together with you, your veterinarian will be able to make a diagnosis and develop a therapy strategy that will help to achieve a higher quality of life for your horse.**



Short overview

- ➔ **Most often clinical signs**
pruritus, hives, respiratory diseases, head shaking
- ➔ **Triggering allergens**
pollen, house dust and storage mites, moulds, insects, food ingredients
- ➔ **First clues**
season, affected body areas
- ➔ **Skin test**
- ➔ **Blood test**
- ➔ **Food hypersensitivity**
- ➔ **ASIT**
allergen-specific immunotherapy



Laboratory profile

Name:	LABOKlin Labor für klinische Diagnostik GmbH & Co. KG
Office:	Bad Kissingen
Founded:	1989
Qualifications:	One of the leading laboratories in Europe
Operating in:	Europe, Asia, Arabian Peninsula
Team:	Over one hundred specialists and veterinarians
Specialty:	Research projects at the federal level

Handed out directly from your vet



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Service

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Allergies in Horses



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Help & Advice

An allergy (= hypersensitivity reaction) is a condition that can affect horses in many different ways. It can cause significant discomfort in the form of **itching** and **skin changes** and/or **respiratory problems**, which may even lead to a massive impairment of quality of life and diminishing horse's value.

Clinical signs most often detected in horses suffering from allergies



1. **Itching** to the point of self-inflicted injuries, hairless patches (rubbed-out mane and tail), crusts, scales or thickened skin on the abdomen, armpits, groin and chest.

2. Hives (urticaria)



3. **Equine asthma** (allergy-related coughing) is a lung disease in horses that is similar to certain forms of asthma in humans.

4. **Headshaking** (the cause of headshaking is multifactorial, however, experience shows that in many cases allergens play a major role; these animals often respond remarkably well to allergen-specific immunotherapy).

If one or more of these signs are present, an allergy may be suspected.

Allergy based disorders of the skin can be very frustrating for the horse-owner as well as for the veterinarian. The variety of abnormal reactions of diseased skin is limited, and therefore, the clinical signs observed in the skin of allergic horses are very similar for different conditions such as atopic dermatitis (allergy to pollen, mites, moulds), adverse reactions to food or insect bite hypersensitivity (also known as Culicoides hypersensitivity, or „sweet itch,“) that, of course, have different underlying causes. Many horses with „classic“ sweet itch react not only to insects, but also to other allergens such as pollen, mites or mould. Furthermore,



some horses have a combination of different allergies at the same time. This makes a definitive diagnosis and treatment very challenging.

Triggering allergens (= substances causing hypersensitivity/ allergy):

1. **Atopic dermatitis:** pollen (grass, herb and tree pollen), house dust and storage mites, as well as mould.

2. **Insect bite hypersensitivity:** biting midges (*Culicoides* spp.), black flies (*Simulium* spp.), mosquitoes (*Culex* spp.), horse flies (*Tabanus* spp.), stable flies (*Stomoxys* spp.) and house flies (*Musca* spp.).

3. **Food hypersensitivity:** oats, maize, supplements, caraway oil, etc.

All these allergens are found not only in our own homes, but also in horse stables. Most horses react to house dust and storage mites (found in muesli, grain, but also in hay/straw and stable dust), to various insects (black flies, midges, etc.), pollen (from various grasses, trees and weeds) and also to mould.

Therefore, it is not surprising that many allergic horses show health problems **throughout the year**. Pet owners often notice a worsening of symptoms in summer. This can be explained by the fact that allergies generally follow a threshold phenomenon. If the animal is allergic to certain insects, pollen and mites, for example, the allergen concentration in summer is much higher than in winter due to the additional presence of insects and pollen. As a result, symptoms can become significantly worse in summer. Conversely, horses allergic only to mites or mould can experience worsening symptoms in winter, because many animals are stabled more during this season, and the concentration of these allergens is usually significantly higher in the stable.

First indication of an allergy

1. **Relationship of symptoms in regard of place and time** is the most important point. If the symptoms are strongest in **spring and summer, pollen and/or insects** may be the triggers.

2. A **house dust mite allergy**, on the other hand, can occur **throughout the year**. However, the symptoms usually get better when the horse is put out to pasture.

3. **Adverse reactions to food** can indicate an allergy against certain ingredients used in the food. Symptoms occur directly after intake or hours or even days later, that may make it difficult to detect a direct correlation between feeding and clinical signs. Very often a change in food flavour or brand does not help, because the basic ingredients used in horse food are the same. Common triggers are so-called „treats“ and food supplements/ additives.

Confirmation of a suspected allergy

Your veterinarian starts with a thorough analysis of the horse's environment. Using various tests, your vet will then try to identify other possible causes of the itching, the existing skin changes or the respiratory symptoms. For skin diagnostics, submitted sample material may include swabs, hair samples, skin scrapings or skin punch biopsies. In some cases analysing blood samples rules out other differential diagnosis. **Once all other possible conditions have been ruled out**, your veterinarian will perform specific tests to **identify the allergens** that cause the allergy in your horse.

Allergy tests

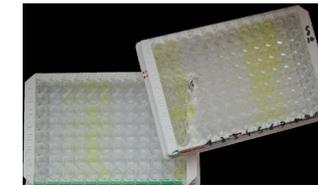
There are basically two types of test procedures:

Intradermal test/skin test



Several different allergens (pollen, house dust mites, a. s. o.) are injected directly into the skin of your horse. The reaction of the skin (wheal) is evaluated and indicative for an allergy to the respective substance.

Serological test/blood test



Some allergies induce allergen-specific **antibodies** that can be detected in a serological blood test. These antibodies can be detected in the horse's blood, so for this type of test your veterinarian will take a blood sample and submit it to a specialised laboratory for analysis. Not every test is feasible for every case, and your veterinarian will have to decide which test is suitable for your animal.

A special case: Food hypersensitivity

Diagnosis of food hypersensitivity can be **very challenging**, because the reactions of the digestive tract can vary greatly. A reliable diagnosis is only possible through a so-called **„elimination diet.“** In this process, the animal is fed a strict diet selected by the veterinarian for a period of up to three months. If the clinical signs disappear during the diet, it is highly likely that a component of the previous food was responsible for the condition. Afterwards, the original feed or one of its components must be reintroduced (provocation diet). If the symptoms reappear, this definitively confirms the presence of a food allergy. This diet, however, requires a **high level of discipline** on the part of the owner and is difficult, if not impossible, to carry out in many stable situations. By means of a **blood test**, the **antibodies** formed against various food items can be determined.

This **testing** is very helpful, especially if you and your veterinarian are trying to **compose a new diet**. We recommend feeding those ingredients which have shown negative reactions in both antibody classes. However, there are also adverse reactions to food that are not based on antibody reaction; therefore, blood tests are not suitable to determine these types of food

intolerance. In such cases only an elimination diet – based on ingredients that have never been fed before – can lead to a correct diagnosis.

Allergens have been identified: what now?

The best treatment is complete **avoidance** of the allergens. In cases of **short lasting seasonal allergies (approx. 3- 4 months)**, certain **medications** can be taken to alleviate the severity of clinical signs. In cases of prolonged or year-round symptoms, however, the side effects of long-term drug therapy are often too severe. Therefore, an **allergen-specific immunotherapy (ASIT, hyposensitization)** should be considered for a long-term treatment. Attention: This form of therapy is not possible in the case of a food allergy; only the targeted avoidance of the triggering allergens proves to be effective.