

Horse allergies



Artuvetrin[®]
Therapy

What is allergy and how
can it be treated?

What is allergy?

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

Allergy is a disease in which your horse's immune system reacts abnormally to everyday harmless substances.

Your horse 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 agents that initiate the allergic reaction.

How does my horse 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 6 years of age.

Types of allergies

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

Insect Bite Hyper- sensitivity

Sensitivity to saliva proteins of insects like biting midges

Atopy

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

Food allergy

Sensitivity to components of the diet such as oats

Contact allergy

Sensitivity to materials such as leather, metal and fabrics

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 mane and tail region, rump, face, neck, shoulders and legs. Airway problems, laminitis and head tossing are not very common, but can be associated with allergy as well.

Allergy symptoms can be present the whole year or only during a season, depending on the allergens that trigger the allergic reaction, for example biting midges and pollen are seasonal, while food allergy is present the whole year.

- Scratching, biting and rubbing
- Broken hairs and hair loss
- Red or hard bumps
- Hives (urticaria)
- Wounds
- Thickened skin



How do I know if my horse has allergies?

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

Your veterinarian will exclude parasites, 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 and if the symptoms are not caused by a food, contact or drug allergy, the next step is to diagnose **Insect Bite Hypersensitivity** and **Atopy**.



What if my horse has insect bite hypersensitivity?

Insect bite hypersensitivity is the most common allergy in horses.

Horses are allergic to saliva proteins of insects, especially biting midges (*Culicoides* spp.). Biting midges feed on the blood of horses and other farm animals. They typically attack near water at dusk and dawn.

The symptoms are seasonal and occur in the warmer months of the year. Itching, broken hairs and crusts are first noticed at the mane and tail

region, which then progresses to the rump. Also the face, neck and shoulders may be involved.

Certain horse breeds appear to be at a higher risk of developing insect bite hypersensitivity, such as welsh, Shetland and Connemara ponies, Friesian, German Shire, Arabian, Quarter and imported Icelandic horses.



What if my horse has Atopy?

Atopy is a hereditary allergy to substances from the horse's environment such as pollen of plants (grasses, weeds, trees), house dust mites and storage mites, molds and dander.



Symptoms of atopy present themselves on the face, legs and torso. Horses that are allergic to indoor allergens (e.g. house dust mites, storage mites, dander and molds) show symptoms mainly when they are stabled.

Seasonal symptoms are mainly a result of an allergy to pollen (outdoor allergens). It often happens that a horse is allergic to more than one of these allergens.

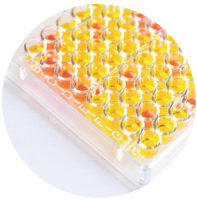


Certain horse breeds appear to be at higher risk of developing atopy: Thoroughbreds, Quarter horses, Warmbloods, Arabians and Morgans. Males seem to be almost twice as likely to have atopy as mares.



How can insect bite hypersensitivity or atopy be diagnosed?

Your horse is diagnosed with insect bite hypersensitivity and/or atopy, if all other skin diseases with similar symptoms 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 horse and send it 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 horse be treated?

The most effective treatment for insect bite hypersensitivity and atopy is to completely avoid the responsible allergens. However, this is not an option in most cases. Not only are many allergens like house dust mites, grass, and tree pollen difficult to avoid, allergy to multiple allergens is challenging to address through avoidance.

Short-term medications such as antihistamines and corticosteroids 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 horse will continue to be allergic and its immune system will still react to the allergens. In addition, most of them come with side effects such as laminitis. Horses treated with these medications are also limited in competitive sport, which makes allergen-specific immunotherapy the preferred treatment choice¹.

Allergen-specific immunotherapy is the only causal treatment available and has been used

successfully for insect bite hypersensitivity and atopy. It is a medical treatment where allergens (insects, pollen, mites, molds, etc.) to which your horse is allergic 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.

When the responsible allergens are known after identifying the responsible allergens through allergy tests, a specific custom-made immunotherapy can be produced.



Why Immunotherapy?

A personalised allergen-specific immunotherapy can be prepared with the allergen extracts that are responsible for your horse's allergy. It is completely custom-made, safe and can be given for long periods.

What to expect?

Most patients see improvements within a few months, but can take up to 12 months before the treatment gives noticeable results.

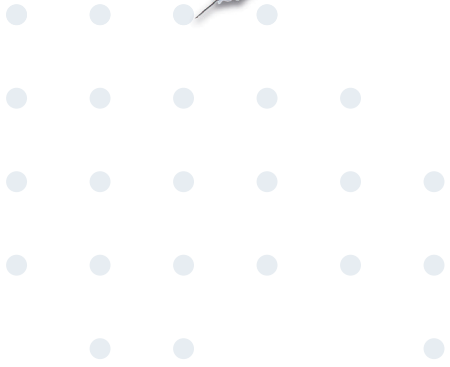
At the beginning of the treatment, it might be necessary to give short-term symptomatic medications in combination with immunotherapy to ensure your horse is comfortable and its symptoms are under control. Consult with your veterinarian how to control your horse's itchiness in the meantime.

It's recommended to order refill vials at least 30 days before needed. Compliance with the treatment plan is key.

Immunotherapy is one of the safest and the best treatment option for long-term management of allergy. Although very rare, there is always a chance of an allergic reaction to the injection. Your horse should always be observed for a minimum of 30 minutes after an injection.

Artuvetrin® Therapy is the only licensed immunotherapy in Europe*, therefore under the European veterinary medicines regulations (directive 2004/28/EC), the product of choice for horses.

*Licensed in the Netherlands



Understanding immunotherapy results

While every horse responds differently to any given medication, Immunotherapy has proven to have a successful efficacy rate, with 60-84% 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 horse's allergy.

A small percentage of animals may not improve significantly enough. If your horse turns to be one of these cases, it is critical that you work closely with your veterinarian. Parasites, 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 horse has developed new allergies.

Every horse's allergy condition is unique. Therefore, the dose and interval between injections should be tailored according to your horse'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 horse's allergy?

Although it is every difficult to completely avoid allergens, there are some recommendations that may help reduce allergen exposure.

Antiparasitic sprays, bath oils and lotions can be used to avoid contact with insects. Regular grooming and bathing may help relieve itching and remove environmental allergens from the horse's skin. It is key to pick the right shampoo, as frequent bathing with the wrong product can dry out the skin.

Insect bite hypersensitivity

Reduce exposure to insects by moving horses away from standing water, manure piles, compost and cattle. Stable the horse before dusk and until after dawn. Use fly sheets or masks sprayed with permethrin repellent and place box fans within the stall³.

House dust mites and storage mites

Mites thrive best in a damp and warm environment. Therefore it is important to maintain a low temperature and humidity (< 45%) in the stable. Consider using a dehumidifier.

For house dust mites, minimise dust in the stable and consider purchasing rubber mats to replace stall bedding. Consider keeping the horse outside or restrict stabling³. Wash blankets, saddle pads and leg bandages regularly with 60°C hot water. Treat blankets, saddle pads and leg bandages with Pet's Relief® ALLERGONE allergen neutralizing spray.



For storage mites, use airtight containers to keep food tightly closed. Store food in a cool, dark and dry environment. Throw food packages away immediately, do not keep them in a bin indoors. Reduce food stockpiles by buying smaller amounts, the maximum storage time should be less than 30 days. Wipe the face with a damp cloth to remove food remains and keep food buckets, bins and tubs clean.

Pollen

Restrict outdoor activity and only put the horse to pasture in the morning, evening or after rainfall when pollen numbers are low. Keep windows and doors of the stable closed on warm and windy days. Dry blankets, saddle pads and leg bandages inside.

Molds

Remove molds from damp environments and surfaces with a fungi cleaner. Consider keeping the horse outside or restrict stabling³. Avoid forest walks in autumn or in humid weather. Dry blankets, saddle pads and leg bandages indoors instead of outdoors. Lower the humidity and increase ventilation in the stable.



References

- 1 Stepnik et al. 2011: Equine atopic skin disease and response to allergen-specific immunotherapy: a retrospective study at the University of California-Davis (1991-2008)
- 2 White S.D., 2005: Advances in Equine Atopic Dermatitis, Serologic and Intradermal Allergy. Clin Tech Equine Pract. 4:311-313
- 3 Yu A. A., 2006: Atopy. AAEP Proceedings. Vol. 52, 469-475

