

Sweet Itch Factsheet

Update April 2020



In the summer months, it is estimated that over 50,000 horses suffer from skin allergies. This can be a management nightmare for owners. Some breeds of horse are genetically more prone to allergies, including Icelandic ponies and Cob types. Allergic skin disease may be caused by a number of allergens, including feed hypersensitivity. However, the most common allergen is the saliva from insect bites, in particular from the *Culicoides* midge.



Culicoides midge

What causes Sweet Itch?

After exposure to the allergen (saliva from the midge bite), the horse develops a Type 1 hypersensitivity reaction. The allergen binds to mast cells in the skin and causes histamine release. This is an exaggerated immune response to the bite and results in the clinical signs of intense itchiness or pruritus, and swelling. Clinical signs are characteristically seasonal (April to October).

Culicoides midges prefer to land and bite along the mane, back and tail root which corresponds with the most severely affected areas, although the face, belly and groin area can also be affected. Most allergic conditions require repeated exposure to the causal factor before symptoms develop. Therefore sweet itch can take 2-3 summers of exposure to biting flies before clinical signs develop. Hence the condition is very uncommon in horses under the age of 3 years and itchiness in these horses is more likely due to another cause.

Clinical Signs

Sweet itch usually presents as a constant severe itchiness with multiple crusts and scaling, broken hairs, hair loss and skin thickening. The lesions are normally isolated to mane and tail, and sometimes on the underside of belly, but can occur anywhere on the body that is in possible contact with the allergen. Skin abrasions/wounds can occur from self trauma, when the horse or pony rubs on surrounding available surfaces e.g. fencing/trees. Horses may show irritability, restfulness and weight loss.



Bald tailhead due to intense itching

Diagnosis

Diagnosis is frequently made based on season and clinical signs. However, other allergies can have a similar appearance. Further test may therefore be necessary to determine whether the cause is insect bites or other environmental factors. The best method is to perform an intradermal skin test, where a panel of substances are injected into the skin to see whether there is a reaction. Numerous blood tests are marketed in the horse press for detecting allergies in horses. However, these have very little evidence to support their use in horses.

Management

The most important part of management is prevention. The most successful way to prevent sweet itch is to stop your horse/pony from being bitten by insects. There are no reliable and entirely safe treatment alternatives so bite avoidance can be very successful.

Change environment

- Midges can be found in high numbers near wet breeding grounds (eg. ponds, ditches, troughs and muck heaps) and when the weather is warm and still. Activity is highest at dawn and dusk. Susceptible horses should be removed from these locations. A windy hillside is ideal for keeping away from midges.

Protect the horse from midges

- Use of full body 'fly blankets' with belly straps and hoods when out at grass
- Stabling at times of peak activity (e.g. 4pm-7am)
- Improving the conditions of the stable with the use of fine mesh screens over doorways and windows. Mosquito nets are not suitable and ultrafine meshes (60 squares/inch) should be used.
- Use of fly catchers
- Careful use of a mounted box fan in front of a non-screened opening to create wind flow and prevent midges entering the stable. Midges cannot fly against winds greater than 5mph!

Use of fly repellents

- Applied in particular to mane, back and tail root, but can also be applied to fly sheets or hung in stables.
- There are many different fly repellents available and some seem to work in certain cases but not in others. Products range from natural, citronella based repellents to products containing permethrin, fipronil or diethyl toluamide (DEET, care: can cause

soreness in some horses). It is advisable if trying a new fly repellent to do a test patch on a smaller area before applied to the whole body to ensure no adverse reaction will occur. The fly repellent we find most effective is Deosect, which provides protection against biting flies for approximately 14 days. Cattle ear tags containing permethrins, tied to rugs, can be effective.

Oils/Creams:

- Midges do not like to land on oily/greasy surfaces and cannot bite through them. Certain oils like citronella or tea tree oil can provide a barrier. We have found 'Avon So Softly' applied to the mane and tail a useful protective barrier!
- Topical anti-itch shampoos, such as oatmeal shampoos can assist in reducing pruritis.
- Omega 6/3 fatty acids, such as evening primrose oil, can help to reduce itching.

Antihistamines

- Whilst these can be used, on their own, the results are very variable, and at correct doses in horses, they can cause sedation and drowsiness. They do not always stop the intense itching and you should therefore seek advice from your vet. They are rarely effective.

Corticosteroids

- In some cases where the horse is suffering with intense itching and causing severe trauma, rescue therapy with corticosteroids, prescribed by your vet, is necessary. This can be administered by injection or tablet or applied topically. Corticosteroids dampen down the immune reaction and decrease the itching associated with sweet itch. We try to use the lowest doses necessary to be effective as, at high doses, this medication has been associated with an increased risk

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of laminitis. They are therefore not suitable for long term management.

Fidavet Cavalesse (Janssen Animal Health)

- This is a supplement that can be administered orally and topically
- It contains Nicotinamide (a form of Vitamin B3), which is shown to have an effect on the skin's immune system by reducing production of histamine, and improving the skin lipid barrier by increasing natural fats in the skin's surface. • You need to start using this product prior to allergy season for best effects and continue throughout the risk period

Summary

Sweet itch can be frustrating and challenging for the horse owner. There is no quick fix and these horses and ponies are usually affected for the rest of their life. The disease can cause immense distress to horses and be severely debilitating. It is therefore a major welfare concern.

Management requires constant and considerable time and effort from owners and should not be relaxed even briefly through the sweet itch season, as it can result in relapses. Patience is also needed when monitoring the response to management changes. Having said this, satisfactory control can be achieved in most cases without the need for medication. Prevention by midge avoidance is the best treatment option.



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