

Bitten by the bug

Sweet itch is distressing for your horse and frustrating for you. Vet Danny Chambers from Ardene House Veterinary practice, a member of XLEquine, looks at the condition in more detail

Sweet itch affects more than 50,000 horses and ponies in the UK. It is caused by an allergy to the bite of any of the several hundred species of *Culicoides* midge. Although most horses will feel itchy when being bitten by midges or flies, some exhibit an extreme reaction, which is sweet itch.

The condition occurs as the result of the immune system over-reacting to the saliva of the midges when they bite the horse. It is known as a hypersensitivity reaction because the immune system is hypersensitive to the midge saliva. The resulting skin reaction causes an intense feeling of itchiness, known as pruritis. This causes the horse to bite, scratch and rub himself on any available surface, causing further trauma to his skin. The urge to scratch is so overwhelming that he will continue to scratch even when the skin is damaged, oozing and bleeding. This drives animals to distraction, causing untold suffering.

Spotting the signs

Midges tend to bite along the mane, around the rump and tail, and sometimes along the belly. Most of the skin reaction, swelling and trauma is seen along the mane and around the head of the tail.

Just like humans who suffer from allergies such as hay fever, the over-reaction that results in sweet itch is due to the genetic make-up of the horse's immune system. Members of the same extended family are more susceptible to developing certain allergies, but it is not directly inherited from a horse's parents. Native breeds of pony, Icelandic ponies and cob types are more prone to developing sweet itch than Thoroughbred types are.

The technical information

The immune system can mount different types of hypersensitivity reaction. Sweet itch is known as a type 1 hypersensitivity reaction. Common examples of this type of reaction in humans include hay fever and penicillin allergies. Once the body has been exposed to an allergen, in this case a midge bite, the immune system is sensitised, meaning subsequent exposure will result in an immediate allergic response. This means that the horse has to have been exposed to midge bites to become sensitised, even though the first bite might have been many years ago.

It is not unusual for your horse to develop sweet itch for the first time when he moves to a new premises with a larger population of midges. If he hasn't encountered many midges before, his immune system is unlikely to be sensitised, so the first year living among midges may result in very little or no reaction. The following year, once the midge season starts and the horse is re-exposed to midge bites, a severe hypersensitivity reaction can occur.

When performing a pre-purchase exam on a horse for a prospective buyer, a vet will flag up sweet itch lesions as a possible issue. However, if a horse prone to sweet itch has not been exposed to midges for many months or years, or has been well-managed, there may be no evidence of this allergy. When the horse arrives at his new home, if there is a large midge population, sweet itch can flare up within days. This can be frustrating for the new owner, but goes to illustrate that the condition can be controlled and managed to the point where the horse is perfectly happy and there is no skin damage whatsoever.

Our expert



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Managing sweet itch

Getting on top of this condition can take a lot of effort to begin with. But don't lose heart – once it is under control and a routine is established, it requires relatively minimal effort on a daily basis, and the transformation in your horse's quality of life is very satisfying. There are three overall strategies to manage sweet itch...

- Reduce the number of midges in your horse's environment.
- Prevent midges from coming into direct contact with your horse.
- Treat the sweet itch if it flares up.

Often a combination of all these strategies is required. Ideally, the first two will prevent the need to treat flare-ups, or at least reduce the amount of treatment required should they occur.

STEP 1 Reduce the number of midges

Midges breed successfully on wet land with still water – for example, marshes, waterlogged fields, and near streams and ponds. They also like the shelter of woodland areas, so a pond surrounded by trees is the ideal midge breeding ground. Avoiding land with these characteristics is essential if you are to successfully manage sweet itch.

For severe cases of sweet itch, the most practical, successful and cheapest long-term management strategy may be to relocate the horse. A windy hillside is ideal, but look for somewhere exposed to the prevailing wind, with few trees and no standing water. While it may seem like an extreme solution, in the long run it will avoid many years of struggling to control the condition, with the associated cost, time and stress. Indeed, anyone who has struggled for

Start early

The midge season depends on the weather and temperature, so it varies slightly from year to year.

As a general rule, a mild, wet winter will result in a greater number of midges the following spring and summer. Most years, midges are active from mid-April until the end of September.

It is of paramount importance that the measures to prevent your horse from being bitten are put in place before the first midges of the year emerge. If they are only put in place after the horse starts to feel itchy, there is already an uphill battle to fight, probably involving prescription medication to rescue the situation. If the horse is not bitten at all, he will not require any treatment because sweet itch lesions will not develop.

years to cope with a horse suffering from severe sweet itch will tell you that this solution actually requires the least long-term effort.

If moving premises is not an option, adapting the environment by draining marshes or waterlogged pastures will prevent the midges from breeding, hugely reducing the burden.

It's also worth exploring all the pasture you have available, because different paddocks on the same premises will often have a significant difference in the number of midges.



MIDGE FACT

Midges cannot fly against winds greater than five miles per hour, so placing a fan in the stable will prevent them from flying in.

STEP 2 Prevent contact with midges

➤ Keep affected horses stabled from 4pm until 8am to avoid times of peak midge activity.

➤ Place fly screens or insecticide-impregnated mosquito nets at stable doors to prevent the midges from entering the stables.

➤ A good-quality, full-body rug that completely covers up the head, neck and belly will prevent the midges from coming into contact with the skin and biting. Many owners are reluctant to purchase an expensive rug because their itchy horse has destroyed a new rug in hours. But the aim of the rug is to prevent midges biting the horse in the first place, so it only works well if it is used well before the midge season starts. If your horse is already scratching, before you buy an expensive rug speak to your vet about tablets or injections that will stop your horse from feeling itchy. In theory, if these drugs are given, your horse will not be feeling itchy and will not destroy the rug.

➤ Insect repellents make horses less attractive to midges and flies in general. Speak to your vet to find one that is most effective and suits your situation. I usually recommend applying products that contain permethrin or cypermethrin. It is common for owners to rely too heavily on insect repellents, believing that if they could find the right one, the horse would be cured. It cannot be stressed enough that these repellents work alongside other control measures and used alone will be ineffective.

➤ Oils and greases can provide a protective barrier as midges struggle to bite through them. Tea tree oil, citronella oil and garlic oil are suitable. As with insect repellents, oils and greases can help as part of a control strategy, but used alone won't be effective.

➤ A natural food supplement available from your vet, containing a specific type of Vitamin B3 called nicotinamide, can help to improve the skin's natural oil barrier by increasing the amount of fats on the skin surface, making it harder for the midges to bite. It can also help to reduce the feeling of itchiness. This comes in both oral and topical forms, which should be used together starting a month before midge season. Once again, this is only useful when administered alongside all the other management factors discussed.



STEP 3 Treating a flare-up

Horses who have full-blown sweet itch will require veterinary intervention to quickly stop the severe itchiness so the various management factors can be instigated.

Even if your horse is well-managed, despite all your best efforts he may have an occasional flare-up of sweet itch and need rescue therapy in the form of drugs from your vet. This typically happens because a rug is removed, or your horse accidentally gets turned out overnight, allowing exposure to midges. In very sensitive horses, just a few hours of exposure to a high density of active midges can result in full-blown sweet itch. It is important to begin treatment quickly before the skin gets inflamed and the horse self-mutilates. Timely and aggressive treatment will result in a very short term blip until the routine management can resume.

The only truly effective drugs are steroids. These work by reducing the immune system response to midge saliva, preventing the hypersensitivity reaction. They can be injected or administered orally as tablets. Steroids provide the horse with fast, effective relief from the intense itchiness, so they are very useful at getting sweet itch under control. This allows the horse to be stabled without destroying the rugs and stables by aggressively scratching himself. There are steroid creams available from your vet to treat very localised lesions, but usually the area affected is too large to treat with cream.

Despite the success of steroids in treating sweet itch, vets try to avoid using them long-term because there are side effects, including an increased risk of laminitis.

Antihistamines such as piriton are popular among horse owners, but their effectiveness is disputed and they do not normally stop the horse from feeling itchy. They require very high doses and can sometimes make horses feel drowsy.

There is no cure for type 1 hypersensitisation, so a horse who develops sweet itch one year will be at risk for the rest of his life. However, with appropriate care and attention, and a good management regime, it is possible to prevent flare-ups from happening.

I still can't stop my horse from scratching!

If all these management suggestions have been put in place and your horse is still scratching, it's time to have a discussion with your vet. Your horse may need to remain on a low dose of steroids during the midge season to keep the condition under control.

There are other allergies and skin infections that look similar to sweet itch but have a different cause, so will need different treatments...

➤ Mites and other parasites that live in the skin can cause the horse to feel itchy all over.

➤ Pinworms that live in the horse's intestine can cause the rectum to be so itchy that the horse self-mutilates the tail by constantly scratching.

Both of these conditions can be easily and successfully treated if they are not confused with sweet itch. Remember, a horse with sweet itch could potentially be suffering from more than one condition!