

Trouble ahead

Having a horse that headshakes can be hugely frustrating. As equine vet Colin Mitchell explains, some may be helped with a simple solution such as a nose net, but for others there is no cure



OUR EXPERT

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Headshaking syndrome, which is thought to affect between 10,000 and 20,000 equines in the UK, is when a horse shakes or jerks the head violently and uncontrollably for no apparent reason.

Headshaking is a predominantly vertical movement and can be accompanied by sharp, vertical twitches and nasal irritation. It can occur at rest, but is usually worse at exercise. The condition is often seasonal, with about one third of sufferers only affected during the spring and summer months.

All horses shake their head occasionally. However, it's not normal to shake the head so frequently and violently that it interferes with normal activities. Often, affected horses are impossible to ride, dangerous to handle, and this can result in euthanasia.

Unfortunately, there is no universally effective treatment that immediately and completely relieves signs with consistent, long-term results and without side effects.



Pollen is believed to trigger headshaking in some horses

Photo: www.shutterstock.com/isihure

As the condition is a significant welfare issue, treatment in selected cases, even though the failure rate is significant, remains justified.

Common findings

Horses usually develop the condition between the ages of five and 12 and it may be slightly more common in geldings.

Headshaking can develop gradually but more often comes on extremely suddenly, with owners describing how the horse has reacted as if a wasp has flown up the nose.

All equestrian disciplines are affected, but dressage horses appear to be slightly over-represented. This may be due to the need for these horses to be very responsive and work with their heads still. Therefore, headshaking may be noticed in its more subtle form and becomes apparent sooner than in other ridden disciplines.

Interestingly, there are some categories of equines that do not appear to be affected:-

- Wild horses;
- Horses in hot/dry countries;
- Mules and donkeys.

Signs of a problem

Signs of headshaking are subdivided:-

1. Reflex responses: such as the twitching or movement of ears.
2. Pain responses: rubbing the nose, sweating, rearing or striking at the face.

Commonly seen signs are:-

- Vertical twitching of the head – the movement varies from mild to severe. A few affected horses may show side-to-side or rotatory head movements. The key point is that it is involuntary movement.
- A very high or very low head carriage.
- Snorting.
- Nostril clamping after exercise – if the horse breathes normally he may experience pain.
- Loss of action, such as a reduced stride, stopping, rearing and striking at the face

Latest research

A study by the University of Bristol School of Veterinary Sciences found a treatment called percutaneous electrical nerve stimulation (PENS) can reduce signs of headshaking in horses. PENS therapy is used in people to manage neuropathic pain.

The horses are sedated and a probe placed just under the skin, adjacent to the infraorbital nerve. The nerve is then stimulated for 20–30 minutes before the procedure is repeated on the other side. Three or four treatments are usually given over a two week period.

Horses generally tolerate the procedure well. Early results have been positive and the risk of side effects appears to be low.

PENS therapy is a safe, minimally invasive, repeatable management option for trigeminal-mediated headshaking, with encouraging results for reduction of clinical signs in the short- to medium term.

during exercise, even at a canter or gallop.

- Face rubbing is a common sign that probably corresponds to areas of perceived pain or numbness.

True headshaking signs are usually shown in different circumstances, such as free exercise or lungeing, and with different riders.

The disease can be classified according to:

- Seasonality;
- Intermittent nature;
- Severity.

Seasonality: Many headshaking horses show signs only during a particular time of year, most commonly spring and summer.

Seasonality can be explained by the occurrence of trigger factors such as pollen, insects, dust, warmth, rain or wind.



A headshaker may jerk the head violently and uncontrollably

Intermittent nature: Most headshaking horses show signs under defined conditions, where a trigger factor is present such as exercise, rain, wind, cold, warmth or when exposed to pollen or insects. The presence or absence of the specific trigger factor is a plausible explanation for this variation.

Severity: Some cases are very mild (grade one), where the movement of the head is slight and the horse is not distressed.

Grade four cases are severely distressed and may be uncontrollable. Any attempt to restrain the horse is resented. Ridden work is impossible and even being close to the horse is dangerous for the handler

Veterinary investigation

A typical history and observation of sharp, vertical head shaking with nasal irritation would raise the possibility of headshaking.

There are several things an owner can do to assist in diagnosis, and separate the signs from other behaviour/training related problems:-

- Lunge the horse, both with and without a bit and with and without a saddle.
- Ride in different bits and a bitless bridle.
- Try a different saddle, and ride without one.
- Ask a different rider to work the horse.

If there is a change in the headshaking behaviour, there may be a reason for the ▶

Vet report

signs the horse has been demonstrating, which is unrelated to nerve pain. However, it is believed the majority of headshakers are suffering from bouts of severe facial pain.

A vet may perform a nerve block on the infraorbital nerve, which carries signals of feeling and pain from the face to the brain.

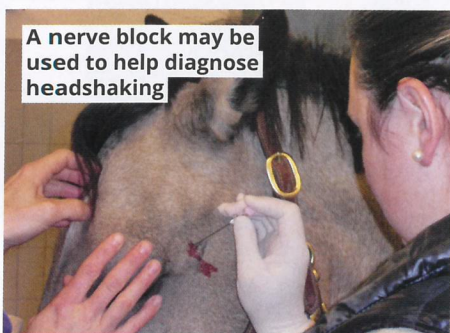
A positive response – where head shaking stops until the anaesthetic wears off – would confirm the cause is facial pain. However, diagnostic local analgesia can give a false negative result.

Any possible underlying disease should be looked for using X-rays of the head; upper respiratory tract and guttural pouch endoscopy and careful eye and oral examinations.

Where no disease process is found and a diagnosis of facial pain is reached, the likely cause of that pain is that it emanates from



Another diagnostic test is to scan the head, brain and neck



A nerve block may be used to help diagnose headshaking

the nerve itself. This is called a 'neuropathy', which means nerve disease. The accurate name for this form of headshaking is trigeminal-mediated headshaking.

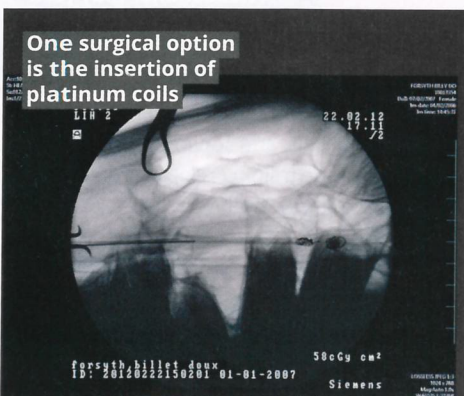
How nerve pain occurs

A stimulus on a sensory nerve ending – for example, touch, heat, cold, air particles – sends a message to the brain.

A minor signal may be ignored by the brain – it knows the stimulus is there, but it is below the threshold to trigger a pain response.

A much larger signal will result in an involuntary pain response, such as sneezing, snorting or face rubbing.

In horses that headshake, it's believed minor trigger factors result in a disproportionate response and the horse perceives pain – like an electric shock across the face.



One surgical option is the insertion of platinum coils

Treatment and management

Headshaking cannot usually be cured. The signs can be managed if the trigger factor can be avoided, such as by using nose, ear or face masks. Most trigger factors act within the nose, so changing the airflow pattern and the air content may help.

Use of a nose net or face mask is an economical, non-invasive and risk free treatment that is expected to provide up to 70 per cent relief, in 25 per cent of cases.

Medical treatment can be used to treat potential trigger factors. If allergic rhinitis is the trigger, appropriate treatment (such as a nasal spray) will benefit the horse.

Some drugs can modify the sensitivity of the nerves, but they are not targeted at the damaged areas, so there may be some side effects. Certain drugs have been used alone or together with varying success. However, long-term treatment with them can be expensive and drowsiness is a side effect.

Surgical options

Surgical techniques have been used to help horses that headshake.

An infra-orbital nerve neurectomy involves the nerve being cut, to avoid it causing the horse pain. The long-term success of the technique is limited.

Another option is the placement of a platinum coil adjacent to the infra-orbital nerve, to compress the nerve and change the way it sends a message to the brain.

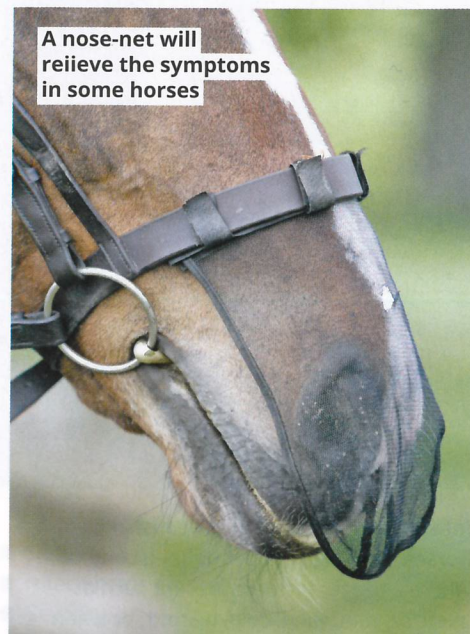
The initial short-term success of this technique was promising (60 per cent) but cases can relapse and the overall long term success rate is approximately 50 per cent.

Many of the difficulties of treating this condition surgically are related to gaining access to the nerve in the horse. The base of the nerve in question lies directly under the brain.

Other possible causes

Causes of headshaking unrelated to nerve pain usually account for less than five per cent of all cases. In these instances, possible causes include:-

- Bit and tack problems;
- Rhinitis (inflammation of the lining of the nostrils);
- Sinus disease;
- Ear disease: mites/foreign bodies;
- Guttural pouch disease;
- Neck/back pain and lameness;
- Dental issues: such as periodontal disease, a periapical abscess or a cheek injury.



A nose-net will relieve the symptoms in some horses

● To view a webinar on headshaking by Veronica Roberts, a senior clinical fellow in equine medicine at the University of Bristol, visit: <http://www.langfordvets.co.uk/CPD/CPD-events/online-cpd>