

A Suitable Diet

All horses should be fed on a diet that is predominantly, if not entirely, fibre. This is particularly important in horses or ponies with Cushing's Disease because of the increased risk of laminitis. A feed balancer may be used to ensure that the horse is getting all of the nutrients it requires.

It is also key that animals with Cushing's Disease are not allowed to become overweight and their body condition should be monitored closely. More detailed advice can be found in the BHS leaflet 'Advice on Basic Feeding'.

Farriery and Foot Care

All horses should receive regular attention from a qualified farrier, even if they remain unshod. The requirements of each horse will vary, but as a guide, the feet will need to be seen at least every four to eight weeks.

Foot care is of particular importance in horses that have suffered from laminitis and thus must be seen as a priority for animals with Cushing's Disease.



Health Monitoring

As Cushing's Disease can lead to a decreased functioning of the immune system, it is important to keep an eye on affected horses to spot any potential signs of infection. Likewise, it is important to check the horse regularly and thoroughly for cuts or wounds that may become infected.

Prompt attention and treatment, including from a veterinary surgeon if necessary, can prevent or minimise an infection that could otherwise prove extremely dangerous to a horse with Cushing's Disease.

As with any older horse, horses with Cushing's Disease should receive regular attention (ideally every six months) from a BAEDT accredited dental technician.

Other Useful BHS Leaflets:

- Advice on Basic Feeding
- Advice on Essential Health Care
- Advice on Laminitis
- Advice on Worm Control

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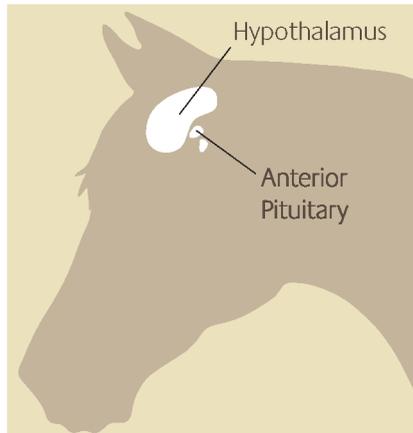
ADVICE ON Cushing's Disease



Equine Cushing's Disease, also known as Pituitary Pars Intermedia Dysfunction (PPID), is a chronic, progressive condition and is the most common endocrine (hormone) disorder of older horses¹. Thanks to advances in husbandry and veterinary care, horses and ponies are now living for longer than ever before, meaning that Cushing's is becoming an increasingly prevalent disease as it mainly affects older animals. Any breed or type of horse or pony may develop Cushing's Disease, although it does seem to affect ponies more frequently than horses. Some estimates suggest that more than 15 percent of horses and ponies above 15 years of age are affected².

The pituitary gland is a small pea-sized gland located at the base of the brain. The gland is crucially important in controlling a range of functions including metabolism, reproduction, growth and lactation. In horses and ponies suffering from Cushing's, age-related degeneration means that an imbalance occurs in the hormones secreted from the pituitary gland, which in turn imbalances the secretion of other hormones produced in the body. It is the consequences of these hormonal changes which result in the clinical signs of Cushing's Disease.

While Cushing's is more common in older horses and ponies, many are still enjoying active lifestyles when the disease is diagnosed.



The hypothalamus and the anterior lobe of the pituitary gland which is divided into three parts – *pars intermedia*, *pars distalis* and *pars tuberalis*

The hypothalamus (section of the brain located next to the pituitary gland) and the anterior lobe of the pituitary gland

References

- 1 Donaldson et al. "Evaluation of suspected pituitary pars intermedia dysfunction in horses with laminitis". JAVMA, Vol 224, No. 7, 1 April 2004
- 2 McGowan. "Diagnostic and Management Protocols for Equine Cushing's Syndrome" In Practice, November/December 2003
- 3 McGowan. "Epidemiology and Clinical Perspectives of Endocrinopathic Laminitis", BEVA Congress 2009

Clinical Signs

New research suggests that more than 80 percent of horses suffering from laminitis may have an underlying endocrine disorder like Cushing's Disease³, and recurring bouts of laminitis and hirsutism (abnormal coat) are two of the most common clinical signs of the condition (see the BHS leaflet 'Advice on Laminitis' for more information).

Hirsutism can range from mild changes in coat shedding right through to a full, long, curly, overgrown coat. In some cases, horses may not moult in the spring and there are often variations in the shedding – for example, a horse may not completely moult. The picture on the cover of this leaflet shows a pony with particularly extreme hirsutism. Not all horses will be affected to this extent.

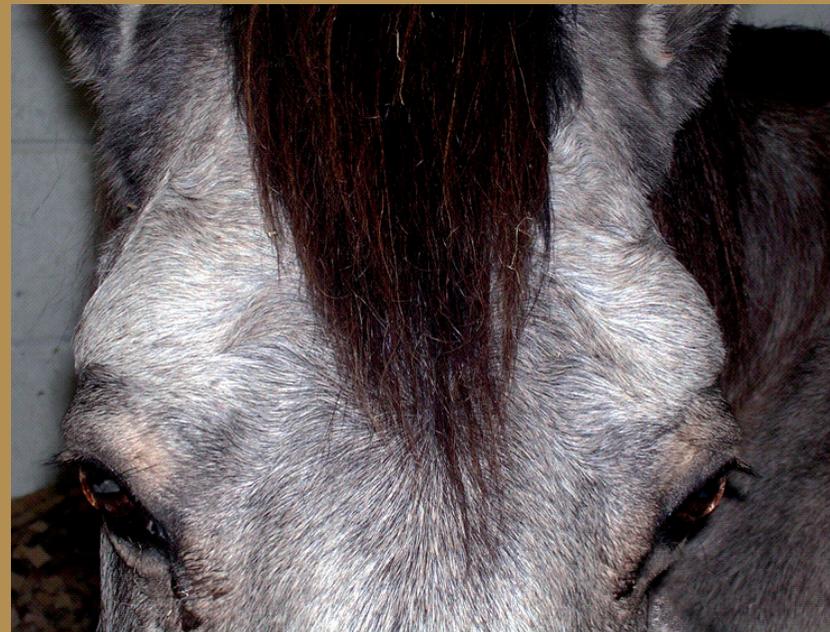
Not all horses will display the same clinical signs. Other signs, which are often variable and not specific to Cushing's, may include:

- excessive sweating
- increased appetite
- increased drinking and urination
- lethargy
- poor performance
- reduced immune function; this can result in recurring skin and respiratory infections including sinusitis, dental disease and an increased susceptibility to worms.

Horses also lose muscle condition and can develop a pot bellied appearance, potentially accompanied by a sunken back and protruding spine. Sometimes an abnormal deposit of fat above the eye may be seen where a horse would normally have a depression.

As the changes are often subtle and not associated with a particular condition, many

early cases are not seen by a veterinary surgeon and remain undiagnosed. It is also worth noting that some signs, for example increased drinking and urination, are easier to spot in a stable kept horse than one that lives out permanently. It is general good practice to monitor the feed and water intake, and urination/defecation patterns of any horse in order to be alert to any abnormalities.



A pony with an abnormal fat deposit above its eye.
Picture courtesy of Liphook Equine Hospital

Diagnosis

Early diagnosis and treatment of horses and ponies affected by Cushing's Disease gives the chance for treatment to deliver the best outcome. However, the initial stages of the condition are often slow to appear and difficult to detect, resulting in a delay before diagnosis and treatment.

A blood test is needed to confirm the diagnosis which can be carried out by your vet. However, many horses with clinical signs, including recurrent laminitis, still go undiagnosed – which makes the awareness of horse and pony owners about the disease critical to early detection.

Treatment and Management

Treatment of affected horses and ponies centres on dealing with any immediate medical problems (for example, laminitis cases generally require a combination of pain relief, foot care and so on), together with addressing the underlying endocrine imbalance.

While there is no cure for Cushing's, an effective licensed medicine is now available from veterinary surgeons which helps normalise the hormone secretion of affected horses and

ponies, and in so doing reduces clinical signs associated with the disease. Although the response to this treatment may vary with different horses, there have been some excellent results achieved.

As most horses and ponies with Cushing's Disease are above 15 years of age, many may be suffering with other conditions associated with increasing age, as well as clinical signs of the disease. It is therefore important to have a good programme of routine preventative healthcare, particularly as the immune system may not be working as well in some of these horses. This should include:

Effective Worming

An effective worming programme is essential because Cushing's Disease may cause suppression of the immune system. Regular faecal egg counts can be used to determine the frequency with which wormers should be given and your veterinary surgeon will be able to advise on the most suitable worm control programme for your horse. The BHS leaflet 'Advice on Worm Control' is another useful source of information.



A horse before and after treatment of Cushing's Disease

