
EQUINE CUSHING'S DISEASE

(PPID)

The facts



WHAT IS EQUINE CUSHING'S DISEASE?

Equine Cushing's Disease, also known as Pituitary Pars Intermedia Dysfunction (PPID), is a common condition affecting older horses and ponies. It is related to problems in the functioning of the pituitary gland, which is found just beneath the brain. This gland plays a vital part in the production and regulation of hormones.

In a healthy horse, a particular hormone named ACTH is released into the blood from the pituitary gland and in turn stimulates the adrenal glands near to the kidneys in order to produce another hormone named cortisol. This has a wide range of functions around the body including:

- Maintaining blood pressure and heart function.
- Modulating the immune system's response to infection and inflammation.
- Regulating normal nerve tissue function and connective tissue repair.

- Balancing the effects of insulin and regulating the breakdown (metabolism) of carbohydrates, proteins and fats.
- Helping the body respond to stress.

Once the body detects that there is enough cortisol in the blood, specific nerves tell the pituitary gland to switch off.

Research suggests that these nerves can deteriorate with age, so the pituitary gland continues to run at full speed leading to overproduction of cortisol.

Humans and dogs can also suffer from a form of Cushing's Disease. However, it is not the exactly the same as it is in horses, which is why it is specifically known as *Equine Cushing's Disease*.



Both horses and ponies can be affected by PPID. Redwings resident Rai Lady (pictured here) has PPID.

WHAT ARE THE SIGNS?

The signs of PPID are the result of excess cortisol in the body. They include one or more of the following:

- A thick, often curly coat, even in Summer (in the majority of cases, but not in all cases).
- Weight loss or muscle wastage.
- Abnormal fat distribution, such as a pot belly or fatty pads around the eyes.
- Susceptibility to laminitis.
- Excessive drinking and urination.
- Sweating, caused by the thick coat or the hormonal imbalance.
- Recurring infections because of a less effective immune system, such as sinusitis, dermatitis, or conjunctivitis.
- A sleepy demeanour.

The early stages of PPID are subtle. It could be as simple as a delay in your horse shedding its Winter coat. Early stages could also include mild weight loss, or a single episode of laminitis. Weight loss and laminitis need prompt investigation and treatment, so consult a vet straight away.

Vets can diagnose PPID through several routes. They can measure the levels of ACTH in the blood by running a blood test, or can challenge the body with steroids to test the functionality of the pituitary gland's 'switching off' mechanism. In some cases, the horse's appearance alone is enough for a vet to make a confident diagnosis without the need for tests.



30-year-old Beauty has had her coat clipped to help her feel more comfortable.

TREATMENT AND PREVENTION

PPID is a progressive disease that sadly cannot be cured. However, its symptoms can be successfully controlled through treatment and careful management, meaning PPID sufferers can enjoy a good quality of life for many years after diagnosis.

There are several medications available to help manage hormone production, but only one is licensed and available through veterinary prescription. It contains pergolide, which tries to restore the balance of hormones in the body by mimicking the nerves that control the pituitary gland.

The medication is in tablet form and is usually given once a day. This long-term treatment can be costly – but if the horse responds well, it is possible to reduce the daily dose over time. A vet will give specific advice on which medication is suitable based on the horse's individual needs.

Prevention of PPID symptoms should be factored into the horse's routine management. Clipping the long, thick coat – especially the underbelly and upper limbs – will ensure the horse feels cooler and more comfortable. Regular baths will be appreciated as they help with skin care (and eliminate odour from excess sweating!).

Preventative health care is particularly important because of the horse's poor immune system. Worming, farriery, dentistry and all vaccinations should be kept up to date. Even normally minor problems such as nasal discharge should be investigated as a matter of urgency. Be vigilant for any signs of upper respiratory tract disease and dermatitis – and bathe the eyes with warm water regularly to help prevent conjunctivitis.



Ben enjoyed a good quality of life at Redwings for six years after being diagnosed with PPID.



An increase in drinking and urination is caused by the body's need to flush out excess cortisol.

Regularly monitor the horse's weight using a weigh tape. Although results from a weigh tape may not be completely accurate, weekly use will still help to gauge any relative weight loss or gain. Your vet can advise you on the right diet for your horse and if any supplements are needed.

There is a delicate balance between maintaining the weight of horses with PPID and preventing episodes of laminitis. If the horse is prone to laminitis, make simple changes such as reducing or eliminating short feeds and replacing them with forage (preferably hay). However, if your horse has poor teeth and cannot cope with forage, consider chopped fibre feed or soaked high fibre cubes as the main part of its diet.

Restrict access to rich grass by strip grazing or reducing turn-out time. Your vet may advise a supplement containing B vitamins and Vitamin C if grazing is especially restricted, as these are helpful in supporting the immune system.

Always contact your vet at the first sign of laminitis. Treatment in its early phase means pain is resolved quickly and there will be less risk of long term changes within the hoof.

See our laminitis leaflet for more information.

Availability of fresh and clean water is vital, as horses with PPID may drink over 80 litres a day. Also ensure that stabling has enough bedding to soak up the resulting amounts of urine! Soiled bedding must be removed every day to prevent breathing problems or hoof problems. A salt lick or supplementary electrolytes may help horses that sweat excessively, as sweat contains many essential salts.

Donkeys and Equine Cushing's Disease

Donkeys can suffer from PPID as well as horses and ponies. They will display similar symptoms, but it can be more difficult to spot them. For example, donkeys have a permanently thick and hairy coat all year round! Knowing your donkey well and monitoring him carefully should be a natural part of his management. Make sure you take note of even small unexplained differences in your donkey's physique or behaviour. Seeking veterinary advice sooner rather than later will help with the early diagnosis and treatment of conditions such as PPID.

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If you need more information, the Redwings welfare team would be happy to help. Please call us on 01508 481008 or email us at welfare@redwings.co.uk

Redwings Horse Sanctuary was established in 1984 and has grown to become the largest horse sanctuary in the UK, working to save horses, ponies, donkeys and mules whose future would otherwise be bleak. Its work has three themes: rescue and rehabilitation, specialist sanctuary care and prevention through education. The sanctuary currently provides more than 1250 horses, ponies, donkeys and mules with specialist sanctuary care and has 500 horses out on loan in Guardian homes.

