

Fact Sheet

Equine Cushing's Disease (PPID)

What is PPID?

Pituitary pars intermedia dysfunction (PPID), or Equine Cushing's Disease) is a common endocrine disorder in older horses.

The pituitary gland is located at the base of the brain and plays a major role in the release of hormones which act to control many different processes around the body. Horses with PPID develop enlargement of a part of the pituitary gland known as the pars intermedia. This results in the production of excessive quantities of hormones that creates an abnormal metabolic state. The exact causes of PPID isn't fully understood. However, is thought to be associated with oxidative stress leading to neurodegeneration, and therefore loss of inhibition within the control centres.



How is PPID recognised?



PPID may affect more than 20% of horses over 15 years of age and has been reported in occasional horses as young as 6 years old. In the early stages of development there may be no external signs of PPID but as the condition slowly progresses various signs may develop. Laminitis is probably the most serious complication of uncontrolled PPID. Not all cases develop laminitis but those which do require special care with their treatment and management.

Signs of PPID

Some horses might develop a full spectrum of signs whereas others might only demonstrate 1 or 2 of these signs. They include:

- Laminitis
- Delayed seasonal hair shedding or excessive hair growth (hypertrichosis)
- Abnormal fat deposition (especially round the eyes)
- Poor muscling including a loss of top line
- Increased drinking and urination
- Mild lethargy/dullness
- Susceptibility to infections such as hoof, skin and dental infections.
- Increased sweating
- Infertility



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How is PPID diagnosed?

Initial suspicion of PPID is usually when a horse develops any of the signs listed overleaf, especially when they reach their teens or 20s, although it can be seen in younger horses.

Measuring the blood concentration of a hormone called ACTH is the simplest approach as this hormone tends to increase in the majority of PPID cases. There are other possible influences on ACTH levels including stress, anxiety, pain or the time of year which need to be accounted for when interpreting the test result.

There is also a slightly more sensitive test for PPID known as a TRH stimulation test, which can be used if the results of the initial diagnostic investigation are not clear. This involves taking 2 blood samples before and after a stimulation hormone is given.

It can also be valuable to measure insulin and glucose levels in suspected PPID cases as this is a better indicator of the risk of laminitis. Approximately one third of horses with PPID are thought to have insulin resistance (IR). This can occur secondary to PPID, or may be associated with concurrent equine metabolic syndrome. The presence of IR significantly increases the risk of laminitis; therefore it is important that this is detected to allow appropriate management.

Further information:

www.careaboutcushings.co.uk
sites.tufts.edu/equineendogroup

How is PPID treated and managed?

The only licensed treatment for PPID is a drug called pergolide, which reduces hormone secretion from the abnormal pituitary gland. Most horses respond well to the initial dose although sometimes a higher dose is needed.

In addition to medication with pergolide, horses with PPID do benefit from being owners being vigilant about their general health management especially with respect to dental care, parasite control and hoof care and watching carefully for any signs of laminitis.

Lifelong treatment is generally required and as PPID can keep progressing, ongoing monitoring is important and possible dose increases might be needed in the future.

Horses with well managed PPID can still live a long and normal life and continue normal work.

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This factsheet was created by the VetPartners Equine Team, with assistance from our Marketing Team and Veterinary Regulatory Advisors.

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