



Equine Cushing's Disease

What is PPID?

The pituitary gland is situated at the base of the brain and is an important controller of many different processes around the body. It is divided into 3 parts called the pars nervosa, the pars distalis and the pars intermedia. In Equine Cushing's Disease the pars intermedia enlarges and produces excessive quantities of hormones that may have multiple effects around the body. Thus, the condition is also known as pituitary pars intermedia dysfunction, or PPID. The cause of the condition is cumulative oxidative damage that occurs to cells which normally control the pars intermedia by secreting dopamine into it and therefore the condition is much more common in older horses.



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



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.





Kings Bounty Equine Practice Client Fact Sheet

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 accurate 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. There is also no reason why horses cannot be affected by PPID and Equine Metabolic Syndrome (EMS) at the same time.

How is PPID treated and managed?

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



How can I prevent PPID?

We do not currently know how to prevent PPID, although it is possible that good dietary and weight management in younger horses might decrease the likelihood of the condition developing later in life. 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.