



PITUITARY PARS INTERMEDIA DYSFUNCTION (PPID) OR 'EQUINE CUSHING'S DISEASE'

PPID is an extremely common disorder of middle aged to older horses. Most horses with PPID are over 12 years-old and studies have shown that 1 out of every 5 horses over 15 years of age are affected. PPID results from a benign growth in part of the brain known as the pituitary gland, which causes increased levels of several hormones to be released into the blood stream. The resulting hormonal imbalance cause the symptoms which we associate with PPID. PPID is often referred to as Equine Cushing's Disease, however it is important to note that PPID in horses is very different from Cushing's disease in humans and dogs as a different part of the pituitary gland is affected, resulting in different symptoms.

WHAT ARE THE SYMPTOMS OF PPID?

Laminitis: The most significant symptom of PPID is **Laminitis**, an extremely painful and debilitating condition. Although not all horses with PPID will develop laminitis, the risk of developing laminitis is hugely increased and horses that have developed laminitis and concurrently suffer from PPID will have a much poorer recovery unless PPID is treated. In the UK studies estimate that at least 90% of horses which develop laminitis have either PPID or Equine Metabolic Syndrome (for more information on laminitis and equine metabolic syndrome see our laminitis and EMS fact sheets).

Recurrent infections: PPID affects the horse's immune system making it more likely to pick up infections such as foot abscesses, sinusitis and ringworm. Affected horses are also more likely to have problems with parasites such as worms and may be more likely to suffer from dental problems.

Hypertrichosis/Hirsutism: these terms refer to abnormalities of the hair coat. Horses with PPID will often take longer to shed their coat in summer and those with more advanced forms of the disease can look very hairy indeed!

Muscle loss: often horse with PPID will be poorly muscled, with a poor top-line and a pot belied appearance due to wasting of the abdominal muscles.

Abnormal fat distribution: PPID causes fat to be laid down in abnormal places, this often results in bulging fat pads behind the eyes known as peri-orbital fat pads.

Increased sweating: many horses with PPID will sweat more even when standing at rest.

Polyuria/polydipsia: some horses with PPID will drink more and urinate more.

Lethargy/poor performance: many horses with PPID appear dull or show reduced performance. Some horses show very marked improvements in these symptoms when treated.

Infertility: This is due to altered hormone production.

Seizures/blindness/collapse: These are rare symptoms and are thought to be due to the enlarged pituitary gland putting pressure on the brain.



HOW IS PPID DIAGNOSED?

Most cases of PPID can be diagnosed by means of a simple blood test which measures a hormone called adrenocorticotrophic hormone (ACTH). This hormone is greatly increased in horses with PPID compared to normal horses and the blood test is relatively simple and quick to perform.

A small number of horses with PPID will have negative ACTH levels and may need more in depth blood testing before a diagnosis can be made. In addition some horses which have borderline test results may require repeat testing before a diagnosis can be made.

Vets may also advise blood samples to test whether horses are insulin resistance, as this can give an idea of laminitis risk in PPID affected horses.

HOW IS PPID TREATED?

Currently the most effective available treatment for PPID is the drug pergolide (Prascend) which is administered as a daily tablet. Pergolide works by mimicking a neurotransmitter called dopamine which reduces abnormal hormone secretion from the pituitary gland. Horses will often take 3-4 weeks to respond to treatment although some may take longer than this. A repeat blood sample is usually taken during the second month of treatment in order to monitor the horse's response and check whether any alterations need to be made in the dose of pergolide.

Occasionally pergolide may cause horses to lose their appetite, however this is usually easily resolved by reducing the dose. Other side effects are rare.

Management of Horses with PPID

As PPID is a lifelong condition, however horses that are on treatment and are managed correctly can often have normal quality of life.

Points to pay attention to when looking after a horse with PPID include:

- Regular farriery
- Regular dental checks
- Close attention to parasite control
- Clipping of horses with excessive hair coat