

# Cushing's Disease (PPID)

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**E**quine pars pituitary intermedia dysfunction (PPID) is a slowly progressive endocrine (hormonal) disease affecting many horses and ponies. The condition is most commonly seen in older animals with the average age being between 18-23 years of age but can affect equines that are much younger. A recent survey showed that 21% of all equines over the age of 15 had endocrine changes consistent with PPID.



Horse with the classic long-haired coat associated with PPID

It is a very important disease that needs to be investigated and managed if you or your vet suspects that your horse may have PPID.

The clinical signs are outlined, right, but the most significant of these is laminitis that, in severe cases, can be life threatening.

To diagnose PPID, vets measure the levels of adrenocorticotrophic hormone (ACTH), either as a one off blood test or in response to another hormone called thyrotropin-releasing hormone (TRH). The TRH stimulation test is a more accurate test providing a correct result in 80% of cases compared to basal levels of ACTH providing a correct result 66% of the time.

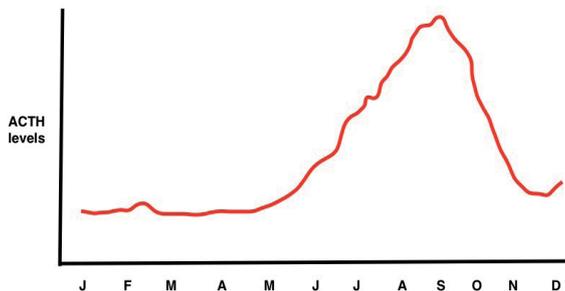


Figure 1: showing variation in ACTH levels

ACTH levels vary at different times of the year and thus so do the reference ranges that the vet uses to determine if your horse has PPID changes. There is still some scientific debate as to what the reference levels should be but for now, the reference range changes in autumn from 29nl/ml to 50ng/ml. Figure 1 shows how the levels change over a year.

This seasonal change in reference range is one of the reasons why it can be difficult to diagnose PPID correctly in all horses. Another reason is that the disease is also progressive and these tests seem more accurate in the more advanced cases and finally, we are not actually measuring the main

hormone that comes from the pituitary pars intermedia (PPI). Greater accuracy in testing will occur when we eventually determine and test the hormones that are actually secreted in greater concentrations from the PPI.

Many horses that have PPID also suffer from some form of equine diabetes. Vets call this insulin dysregulation (ID) and this may need investigation if your horse comes back with a positive result for PPID.

The only licensed product for the treatment of Cushing's Disease in the horse is the dopamine agonist, pergolide mesylate, which initially should be used at a dose of 2µg/kg/day orally which equates to 1 x 1mg tablet per day per 500kg horse.

Repeat examination and blood sampling should be performed after around four weeks to assess response to treatment and then every six months to ensure that adequate treatment continues. If an inadequate response to treatment is noted, which may occur as the pony ages, then the dose of pergolide can be gradually increased by 1-2µg/kg

increments up to a total of 10µg/kg (five times the original dose). Pergolide is a very safe treatment for Cushing's Disease.

As well as using pergolide tablets to manage the condition, it is important to remember that horses suffering from Cushing's Disease are more prone to infections and, as such, they should have regular preventative health care such as vaccinations and dental treatment.

## A horse with PPID may have one or more of the following clinical signs:

### Early PPID:

- Reduced athletic performance
- Areas of long hair over body
- Areas of fat deposition e.g. cresty neck
- Change in body shape
- Change in attitude e.g. dullness or lethargy
- Laminitis

### Advanced PPID:

- All of the above plus;
- Muscle wastage
- Excessive drinking and urination
- Rounded abdomen
- Recurrent infections
- Neurological deficit/blindness
- Hyperglycaemia (excessive sugar in blood)
- Abnormal sweating

For any information regarding PPID or if you would like Central Equine Vets to give a free talk to your group, please give us a call on 0131 6645606



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