



VET MED 517:  
EQUINE MEDICINE

# CUSHING'S DISEASE



***PRESENTED BY: ESTOMATA, IZZY T. 5DVM-A***



# OVERVIEW

Equine Cushing's Disease or Pituitary pars intermedia dysfunction (PPID) is a condition of older horses and typically develops in horses over 15 years of age, although it can develop in younger animals. Up to 30% of aged horses have the condition, and the risk of developing the disease increases directly with age, such that most horses in their late 20s and 30's will have the condition. The disease tends to be seen more commonly in ponies but this may be because ponies tend to live longer rather than because ponies are at greater risk of the disease.





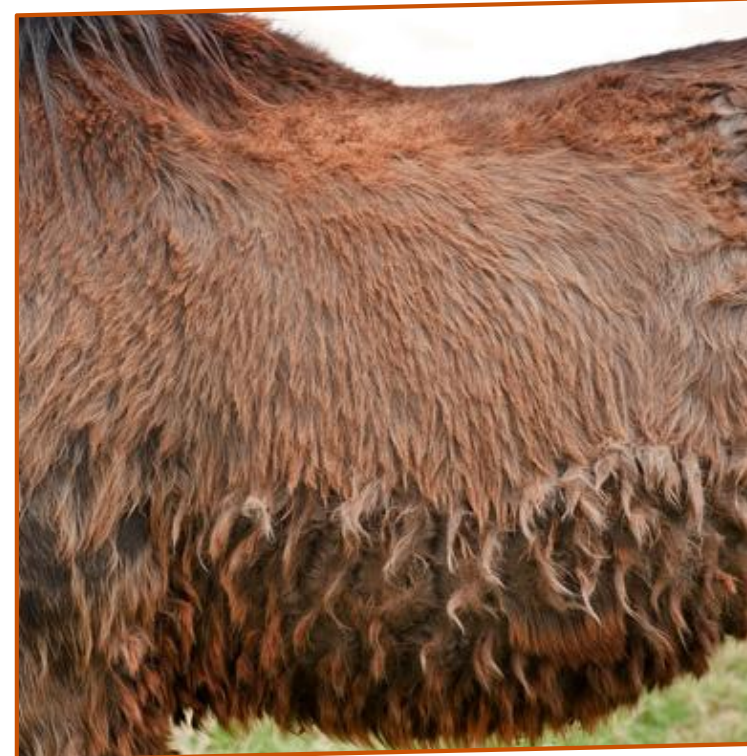
# WHAT CAN CAUSE PPID?

The condition is due to overactivity of one part of the pituitary gland, resulting in the excessive release of certain metabolically active proteins and hormones. The pituitary gland is located beneath the brain and releases its products in response to signals from nerves that originate in another area of the brain. Damage to these nerves causes the pituitary to enlarge and produce excessive quantities of substances, including hormones, such as adrenocorticotrophic hormone (ACTH). The disease progresses gradually as the nerves to the pituitary slowly degenerate.





# CLINICAL SIGNS



- Laminitis
- Hirsutism
- Abnormal fat deposition and insulin resistance
- Increased drinking and urination
- Increased sweating
- Lethargy
- Seizures, weakness, blindness, and collapse
- Infertility
- Infectious disease



# DIAGNOSIS

## ➤ **BASELINE ACTH TEST**

A simple blood test that measures a horse's resting ACTH levels to screen for the condition, with higher-than-normal levels indicating the disease

## ➤ **TRH STIMULATION TEST**

Also a blood test, but it requires two blood draws: a baseline sample and a second sample taken after a hormone called thyrotropin is given to your horse intravenously. The second blood sample is collected 10 minutes after the thyrotropin injection. Both samples will then be sent to the lab to compare the ACTH levels in each.



# DIAGNOSTIC IMAGING



## CT SCAN

Can be used to visualize and measure an enlarged pituitary gland, which is a common feature of PPID, though they are not typically used for initial diagnosis.



# TREATMENT

## DAILY MEDICATION

### Prascend® (pergolide).

- Acts like a synthetic dopamine, which improves the regulation of the pars intermedia's production of ACTH.
- Stimulates receptors in the brain and thereby replaces the activity of the damaged nerve supply to the pituitary gland. This results in a reduction of hormone production to normal levels.
- The most common side effect is reversible loss of appetite when treatment is started. Some horses may need to be started on Prascend® gradually, as it can cause a decreased appetite.





# WHAT NOT TO FEED A HORSE WITH CUSHING'S DISEASE

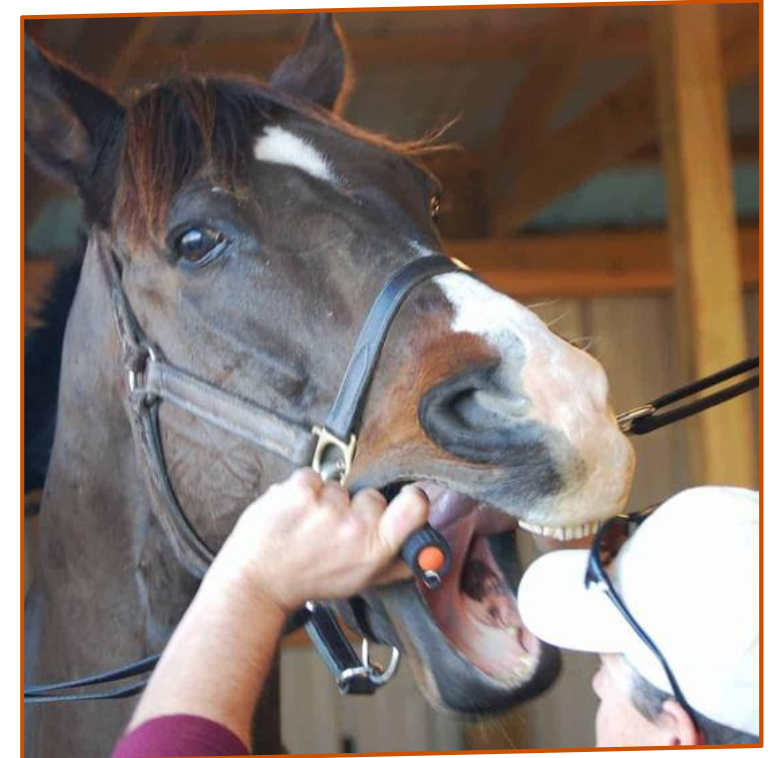
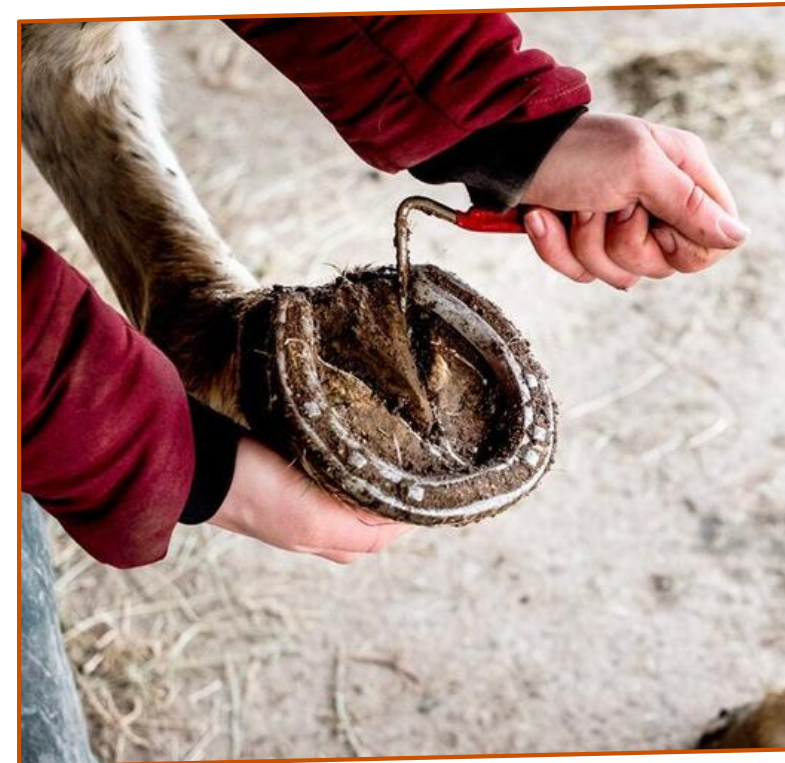
- Horses with Cushing's disease should usually not be fed any diet high in sugar. Grain should contain less than 10% sugar and starch, and your horse's hay may need to be analyzed. If the hay sugar and starch level analysis comes back high, their forage will need to be changed or hay must be soaked.
- Restricting grass intake is also recommended, especially in the spring and fall when the sugar in grass is at the highest level.





# MANAGING OTHER SYMPTOMS OF EQUINE CUSHING'S SYNDROME

- Maintaining an ideal [body weight](#)
- [Routine hoof care](#)
- [Routine dental care](#)
- [Routine parasite control](#)
- Regular body clipping





# PREVENTION AND CONTROL



- PPID is a natural degenerative condition, and therefore, there is nothing that can be done to prevent it. Early treatment with pergolide may slow the progression of the disease, but this is unproven.
- **Good management**, there is no reason why horses with PPID cannot live a long and normal life and continue in normal work.



# KEY TAKEAWAYS

- Cushing's disease is a progressive disorder in horses that affects the pituitary gland.
- Cushing's in horses ultimately causes the adrenal glands to produce more cortisol.
- Horses with Cushing's disease may have underlying conditions such as equine metabolic syndrome.
- Treatment for Cushing's disease in horses is an FDA-approved tablet called Prascend® (pergolide).

# REFERENCES

Cushing's disease in horses (PPID). PetMD. (n.d.).  
<https://www.petmd.com/horse/conditions/endocrine/cushings-disease-horses-ppid>

Liphookequinehospital. (n.d.). <https://liphookequinehospital.co.uk/wp-content/uploads/cushings.pdf>





**VET MED 517:  
EQUINE MEDICINE**

# **THANK YOU**



***PRESENTED BY: ESTOMATA, IZZY T. 5 DVM-A***