

Equine Cushing's Disease

(PPID: Pituitary Pars Intermedia Dysfunction)

What is Cushing's Disease?:

Equine Cushing's Disease is the most common disease in horses over 20, but has been diagnosed in horses as young as 7 years old. It is caused by a tumour in the pituitary gland (within the brain), which is responsible for the production and regulation of hormones. While the tumour itself is benign, the cells within the tumour produce excess hormones, creating an imbalance in the horse's body. There is an increase in cortisol, a "stress" hormone that causes immune system suppression, which leads to chronic, non-healing infections and laminitis.

Clinical signs of Cushing's Disease:

*Shaggy hair coat. Horse does not shed out in the summer.

- Laminitis
- Chronic Infections
- Excessive or inappropriate sweating
- Excessive drinking and urination
- Lethargy
- Loss of muscle mass, usually on the back and hindquarters
- "Pot-bellied" appearance
- Infertility/lack of estrous cycles
- Abnormal mammary gland development

Treatment for Cushing's Disease:

Pergolide is the treatment of choice for Cushing's Disease. While managing the diet and environment are crucial, pergolide helps lessen the clinical signs of the disease and improves the quality of life of the affected horses. Chasteberry extract was thought to help with the disease, but in a 2002 study, 13/14 horses deteriorated on the same product.

Hoof Care:

Horses with Cushing's Disease are more prone to laminitis, therefore appropriate farriery work is essential. Horses with active laminitis should not have shoes nailed onto their feet. These horses should be shod by taking off as much toe as possible and leaving the heel long. Horses prone to laminitis, but need shoes, can benefit from backwards placed shoes to help ease breakover. (The point where the heel lifts off the ground) This helps to minimize the pull from the deep digital flexor tendon on the coffin bone. Front feet x rays help the farrier to determine how much toe can be taken off and are very informative as to the degree of laminitis your horse is experiencing. (See laminitis handout for more info on the disease)

Feeding Recommendations:

Horses with Cushing's disease can greatly benefit from a change in feeding. The amount of sugars and carbohydrates in their diet worsens their condition. Hay is the foundation for the diet. Feeding these horses bland hay with low sugar content is important. Soaking the hay in water prior to feeding (approximately 30 minutes or more) helps to decrease the sugar content of the hay. Limiting the amount of pasture grazing will help to minimize the horse's sugar intake from the grass. The grass that is produced after the drought has a very high sugar concentration. When the grass is lush and green, either confine your horse or place a grazing muzzle on the horse. Grazing muzzles are a great way to limit grass consumption while allowing the horse to stay with the herd and exercise. Also, feeding a grain or concentrate is not necessary, as they are usually loaded with sugar. Horses on a bland hay diet may benefit from supplements such as Kentucky Equine Research's Equi-Jewel. Equine senior feeds are also beneficial. Horses that are losing weight and have a poor hair coat will benefit from vegetable oil. (any kind you can buy at the grocery store). This helps to add a good fat to the diet without adding bulk. Remember, it is not all about caloric intake-it's the type of calories they consume.