

# Equines Cushing Syndrom (ECS)

# Causes

- PPID (Equine Pars Pituitary Intermedia Dysfunction)

- Degeneration of dopaminergic neurons leading to nonmalignant tumor comprised of melanotropes of the pars intermedia of the pituitary gland.
- Loss of inhibitory effect dopamine and hypertrophy of melanotropes cause increased secretion of proopiomelanocortin and excessive quantities adrenocorticotropin hormone- ACTH
- There is loss of normal circadian rhythm of serum concentration of cortisol



- The age of onset is 7-32 years of age. Over 85% of the horses are > than 15 years of age
- Ponies have a high incidence of the disease but all breeds can be affected



# Sign

- A long and curly hair coat
- increased water consumption and urination
- Lethargy
- Weight loss/muscle wasting
- Loss productivity
- Regional adiposity
- Excessive sweating
- Affected horses are prone to chronic infections such as sinusitis, dental disease, and sole abscesses. These conditions are caused by immuno-suppression that follows prolonged exposure to elevated levels of cortisol.
- Horses with Cushing's disease may experience recurrent episodes of laminitis (founder) with no other known predisposing causes.



# Diagnosis

- Diagnosis of Cushing's disease is usually based on clinical signs and blood tests.
  - Affected horses may have elevated levels of glucose, insulin, cortisol and ACTH in their blood.
- Additional diagnostic tests include:
- Dexamethasone suppression test
  - Injection of dexamethasone given, measure cortisol on 19 hours
  - Administration of dexamethasone (a synthetic type of cortisol) to normal horses causes marked suppression of blood cortisol, whereas horses with Cushing's disease have little to no change in cortisol levels in response to dexamethasone.
- Measurement of serum concentration of ACTH

# treatment

- Pergolide- dopamine agonist
- Cyproheptadine – serotonin antagonist
- Inhibition of steroid production- trilostan
- Treatment for a life of horse
- Medical management of affected horses is usually a long-term or life-long commitment.
  - excellent management practices, including routine foot care, deworming, vaccinations, dentistry, and nutrition.