**Classic case:** Weanling foal with slowly progressive ataxia and weakness of all four limbs

**Presentation:**

- **General**
  - Neurodegenerative disorder-causes ataxia and in severe cases, paresis, in young horses.
  - Appears to have a **genetic basis**
  - **Vitamin E deficiency is also common finding,**
    - BUT low serum vit. E can also occur in apparently UNaffected related individuals.
  - Equine degenerative myeloencephalopathy (EDM) is thought to be a more severe manifestation of equine neuroaxonal dystrophy (NAD)
  - **Second most common** equine neuro disease (EPM is #1)

**History and signalment**

- **Suckling and weanling foals**
  - Usually less than 6 months
  - Never over 2 y of age
- **Lack of access to vitamin E-rich forage**
  - Dirt lots
  - Heated, pelleted feed
  - Sun-baked forage
- Insidious onset of clinical signs
- Closer inspection of other foals on the farm may reveal further cases
- Hereditary basis in Appaloosa, Standardbred, Paso Fino

**Clinical signs**

- Symmetric ataxia and weakness in the pelvic limbs or all four limbs
  - Usually pelvic limbs are more profoundly affected than thoracic limbs
  - Clumsiness
  - Places limbs in strange positions while standing
- Rarely progresses to recumbency - usually will plateau
- Hypometria
- Falls while running
- Hyporeflexia over the neck and trunk
  - Slap test (thoracolaryngeal reflex)
  - Cutaneous trunci reflex
  - Cervicofacial reflex

**DDX:**

Vertebral malformation/malarticulation, equine protozoal myelitis, discospondylitis
Test(s) of choice:
   Serum vitamin E concentration
   - Young animals in early disease – very low to undetectable
   - Older animal far into the disease may have normal levels
CSF vitamin E concentration

Rx of choice:
   Vitamin E supplementation may result in stabilization but is not curative

Prognosis:
   Poor for recovery – although a few have recovered with 2 years of vitamin E supplementation
   Good for plateau of clinical signs and normal lifespan

Prevention:
   Rich green forage
   Vitamin E supplementation in groups where disease is prevalent

Pearls:
   - Thought to be due to vitamin E deficiency with familial (genetic) component in horses
     o Possibly a disorder of vitamin E metabolism
     o Much less common than it was a decade ago
   - NAD also occurs in humans, dogs, cats and sheep.
   - Genetic basis proven in humans, suspected in dogs, cats and sheep.