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## Equine Asthma Management

Equine Asthma is a common respiratory disease caused by hypersensitivity in the lungs to airborne dusts and molds leading to chronic progressive inflammation. While it cannot be cured, it can be effectively managed in many horses with a combination of environmental management changes and medications. Treating flare-ups quickly and effectively will help decrease the amount of irreversible damage to the airways.

### Environmental Management

Making appropriate changes to the environment is essential to managing asthma. The primary goal is to decrease exposure to dust, pollen and mold, primarily from hay, feed, and bedding.

Start housing your horse outdoors as much as possible. If there is a 3-sided shelter (best facing south) within the pasture, house them outdoors 24 hours a day. If your horse cannot tolerate grazing for other medical reasons, create a low-dust "dry lot" with options such as hoof grid and pea gravel.

Bedding for horses housed indoors:

- Recommended options: pelleted bedding, shredded paper, large curl shavings or commercial dust-free bedding
- Do not use straw bedding or sawdust.
- Wet bedding down lightly each time new bedding is added.
- Remove your horse from the barn when stalls and aisles are being cleaned.
- Urine odors accumulate quickly and can be very irritating to lungs
  - Clean stalls at least once daily
  - Use an ammonia-eliminating stall product such as Sweet PDZ Stall Refresher
  - Do not use no bedding/only rubber mats if there is not an attached outside run with an area for the horse to sleep and urinate/defecate.

Barn Structures

- Good ventilation is most important to remove dusts, ammonia, and moisture.
  - Keep windows and doors open. If a fine hair coat is desired, use blankets rather than closing/heating the barn.
  - Natural ventilation – Air enters through well-spaced out sidewall vents or eave openings and exits through ridge vents or roof chimney openings
  - Mechanical ventilation systems
- Sprinkle aisles with water or a humectant before sweeping.
- Do not use blowers to clean aisles
- Ideally store hay and bedding outside of the barn or in another building. Especially avoid storing hay above stalls – if you must, use a tarp to avoid the dust falling down
- Routinely remove cobwebs and settled dust in the barn, especially above the stalls.
- Choose a stall near the end of the barn aisle near open doors.
- Avoid stalls close to bedding/hay storage, arena entrance, or high traffic areas

### Feeding Management

- Commercial hay steamers such as Haygain can make a big difference in removing dust and mold spores.
- Submerging the hay in a bucket of water for 5 to 30 minutes will also significantly decrease dust. Feed soaked hay right away and do not let uneaten soaked hay sit for long periods to avoid fermentation, especially in hot weather.
- Feed outside if possible so the wind can carry dust away.
- Avoid feeding hay in containers or large hole haynets that horses can bury their noses in.
- Feed low to the ground, away from dusty bedding. This decreases dust inhaled and allows particles already inhaled to be cleared from the airways while the head is down.
- Horses with severe hypersensitivities to hay (regardless of soaking/steaming) may need to transition to hay cubes or hay pellets/complete pelleted feeds. These still need to be soaked to decrease dust and minimize risk of choke.
- Supplements containing omega-3 fatty acids can be used for their anti-inflammatory properties. A product that has been shown to have some beneficial effects specifically for asthma, is Aleira, made by Arenus. Other omega-3 options include Purina Omega Match Ahiflower Oil Supplement, KER's EO-3, SmartOmega 3 & E, SmartBreathe Ultra, Platinum Healthy Weight, and Equine Omega Complete.

### Medical Treatment Options

There are several medications available for managing clinical signs and decreasing inflammation and airway damage, but these will not help unless you first control the environment.

- Bronchodilators – Open and relax the airways to provide temporary relief. These can be given with an inhaler (albuterol or ipratropium bromide) or orally (Ventipulmin)
- Corticosteroids – Anti-inflammatory medication given for a couple weeks to months during a flare up or in severe cases given daily at the lowest effective dose. These can also be inhaled or given by mouth.
  - » Steroids are the most effective medications for asthma but can have serious side effects including suppressing the immune system and causing laminitis. Horses with Cushing's Disease, Equine Metabolic Syndrome, or a history of laminitis are not good candidates for this treatment.
- Aservo Equihaler – This inhaler contains a 10 course of a specific type of steroid that treats the lungs with minimal effect on the rest of the body. This is a good option during flare-ups for horses with an increased risk of laminitis.
- Nebulizers such as Flexineb can be used as needed to administer steroids, bronchodilators, or even plain saline to help break up mucous in the airways.