



# Winter, Cold Weather and Respiratory Problems

Winter is quickly approaching us and it is now time to consider the effects that winter stabling and cold weather can cause to your horse's respiratory system.

- 01** The movement from outdoors to indoors reduces the air quality by greatly increasing the number of airborne particles that your horse inhales with every breath and this can bring an array of issues that can worsen already existing or trigger off respiratory issues such as Equine Asthma and Respiratory Infections (Bacterial and Fungal).
- 02** Signs of Equine Asthma include chronic coughing, decreased performance, difficulty breathing and abnormal lung sounds. Signs do not become apparent until a large number of airways are affected and, therefore, many more horses may be affected than is realized. [1]
- 03** When evaluating air quality, airborne particles in numbers greater than 2.4 mg/cubic meter of air have been shown to increase the incidence of airway disease. In a study by Clements and Pirie (2007) [2], that measured air quality in horse barns, most barns measured 40–60 mg/cubic meter, 16-25 times higher than what can increase the incidence of airway disease. The breathing zone of the horse during feeding time was often 30–40 times higher again. Irritants included dust, endotoxin, mould spores and ammonia. Hay has been measured to contain 19.3 mg/cubic meter and bedding, especially straw bedding, can be in that range or higher, making hay and bedding major contributors. All these airborne particles can begin to wreak havoc on respiratory function in stabled horses.
- 04** But it is not just winter stabling that can affect your horse's respiratory system but also the inhaling of cold air. Research by Elfman, Pringle, Raine, and Riihimäki (2008) [3] has shown that cold weather exercise can cause Equine Asthma in performance horses. Repeated work in cold temperatures can lead to chronic airway inflammation.

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## How you can benefit from using Flexineb during the winter months:

- 01** When the indoor environment cannot be successfully managed to help reduce airborne irritants, then the only option for your horses' respiratory issues is medical treatment and airway maintenance.
- 02** Flexineb allows you to directly and efficiently target these lower airways diseases, such as equine asthma and respiratory infections, to help treat and maintain lower airway conditions with an array of drugs and natural therapy solutions.
- 03** Equine Asthma's immediate treatment is by using medication such as corticosteroids and bronchodilators. Flexineb can directly deliver corticosteroids and bronchodilators to the lower airways with a lower chance of side effects associated with systemic drug treatments..
- 04** Nebulised drugs and solutions are generally cheaper than their MDI (Inhaler) counterparts allowing for cost saving.
- 05** Respiratory infections can be directly targeted by nebulising antibiotics via Flexineb at a lower dose than systemically.
- 06** Natural, FEI non-doping, therapy solutions such as Immuno San and SilvaPlex can be used with Flexineb to help maintain lower airway conditions during training running up to winter competitions,
- 07** The better condition and maintenance of your horses' airways throughout the winter months will lead to a quicker turn out in the springtime.

## REFERENCES:

1. Winter Means Increased Respiratory Problems for Some Horses, Dr. Karen E Davison
2. Respirable dust concentrations in equine stables, Clements and Pirie (2007)
3. Markers of respiratory inflammation in horses in relation to seasonal changes in air quality in a conventional racing stable, Miia Riihimäki, Amanda Raine, Lena Elfman, John Pringle

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