



Respiratory Issues: How to Best Control Inflammation in the Lungs

The equine lungs and chest are designed to bring oxygen into the blood stream and to release heat and carbon dioxide. Small amounts of inflammation have large impacts on the amount of oxygen that can be absorbed and a large impact on the blood pressure in the lungs. Being tuned in to your horse's respiratory health can help you know when the lungs are not functioning at their peak. The athletic horse is a fine-tuned machine and clogging up the air intake shuts down the engine. Higher pressure increases the risk for Exercise Induced Pulmonary Hemorrhage (EIPH) or bleeding.

Other common ailments that impact respiratory health are viral infections. Hauling horses is stressful and may weaken their immune system. Inadequately vaccinated horses are more at risk to pick up influenza or other respiratory viruses. A vaccination strategy for respiratory viruses in competitive performance horses should include a minimum of twice a year influenza and rhinopneumonitis vaccines. Having a conversation with your veterinarian about a vaccination strategy that is best for your horse may do more to prevent disease. If the vaccine is administered by a veterinarian, vaccine manufacturers guarantee its efficacy and may contribute to cost for diagnostics and some treatments if your horse gets sick.

There are many tests to evaluate the health of the lungs. The best test to look for lower airway inflammation is a Broncho-Alveolar Lavage (BAL). This involves flushing fluid into the airway through an endoscope or BAL tube and collecting it back. Looking

at the fluid under a microscope, this lavage of the air sacs will show what type of inflammatory cells are present. This procedure can also show if a horse has had a bleeding episode in the past 6 weeks.

Additionally, the collection of an arterial blood sample allows for the measurement of oxygen in the blood immediately after passing through the lungs. Use of a venous sample, which is what most veterinarians use for routine blood testing, does not help. In the arterial blood analysis (called an arterial blood gas) we look at the amount of oxygen and carbon dioxide in the blood, which indicates how well the lung is functioning.

If an infection is suspected, cultures of the nasal passage and/or fluid from the trachea can be valuable to identify the culprit and determine the best treatment.

There are things you can do. One is knowing your horse's typical temperature. Buy a thermometer to leave in your trailer and at your barn. Pay attention to your horse's eating habits. Is he/she cleaning up his/her grain like normal? Is he/she coughing when he/she eats? The first performance indicator you will notice is a longer recovery time. After a run you will think that it seems like it is taking longer than normal for your horse to cool down. Some coughing at the beginning of exercise can be normal, but during or after can be signs of airway inflammation. Any little abnormality may be an indicator of poor respiratory health.

Performance problems related to respiratory health are not limited to the lungs and trachea. Occasionally,



there can be functional abnormalities of the upper airway. These problems can be diagnosed during an endoscopic examination (placing a flexible camera up the nostril to examine the airway). Occasionally upper airway problems cannot be diagnosed with the horse resting, such cases, dynamic endoscopy may be required.

If your horse has a history of bleeding or has a respiratory problem, all is not lost, many management and treatment options exist. Talk to your veterinarian about ways to reduce inflammation and exposure to irritants at home. Soaking your hay to reduce dust can help. Additionally, some medications can help to reduce inflammation and others help to open the airway and reduce pressure. Anti-inflammatory medications can range from steroid injections to a variety of nebulized solutions. Initially the use of drugs to dilate the airway is also helpful. The use of albuterol, clenbuterol and similar drugs in the beta-agonist family dilate the airways. If used chronically, they reduce the ability for the heart to pump blood and can impair performance. Talk to your veterinarian and use drugs as they are prescribed. Also, make sure to review the WPRAs medication policy regarding the usage of drugs and timing.

For questions, regarding equine respiratory issues please feel free to call one of Brazos Valley Equine Hospitals locations or visit bveh.com.