

## Investigating a Cough: Equine Respiratory Ailments that can Cause Poor Performance

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Our equine athletes have a very complicated upper airway that also makes them highly adapted for exercise. Airflow in the horse's respiratory system is very high when working which results in even a small abnormality leading to a large decrease in performance. Respiratory conditions are the second most common problem limiting performance after lameness therefore a cough is worth investigating!

Though breathing hard, coughing frequently and having large amounts of nasal discharge are common signs that your horse may have some respiratory issues other not as common signs may be:

- In the upper airway (nostrils, nasal passages, pharynx, and part of the larynx): abnormal respiratory noise, exercise intolerance and coughing.
- In the lower airway (affecting everything from the back of the throat to the lungs): nasal discharge (usually from both nostrils) and mucous, exercise intolerance blood in the nostrils after work and labored breathing at rest.



Since most of the symptoms for various conditions are quite similar it is important to bring your horse to a veterinarian for a thorough examination to achieve a diagnosis and develop a proper treatment plan. A respiratory exam starts with a thorough physical exam and history followed by listening to the horse's upper and lower airway at rest and after being worked. From there the veterinarian will determine what diagnostic tests to perform. If an upper airway disease is suspected the veterinarian will often recommend an endoscopic exam of the horse's nasal passage/throat. For this procedure we sedate the horse and pass a small camera up the airway to visualize the nasal passages (looking for masses/obstructions/evidence of bleeding) and the back of the throat (look for evidence of an obstruction that could interfere with breathing). Dramatic respiratory obstructions will be seen at rest but some only present during exercise therefore we may also refer you for a dynamic respiratory scope which involves videotaping the horse's airway with a camera during strenuous exercise. These upper airway obstructions often result in

a noise made from the throat during exercise. A few of the common causes of this are an ethmoid hematoma, dorsal displacement of the soft palate, epiglottic entrapment and laryngeal hemiplegia. Most of the upper airway obstructions often involve surgery to correct.

Lower airway disease is even more common in our equine athletes and involves an abnormality in the lungs of the horse. Once your veterinarian determines the problem is coming from the lower airway there are a few diagnostic tests we will use to further identify the problem. An excellent test that we are performing more commonly now is called a broncho-alveolar lavage (BAL) which involves putting a very long tube down the horse's windpipe into the small airways within the lungs. We then flush a small amount of saline in and out of that area to collect cells in that area of the lungs. The sample is then sent to an equine veterinary respiratory specialist who analyzes the sample and sends us back a report and treatment plan. The BAL helps identify inflammation/asthma in the lungs plus degree of severity as well as if the horse has been bleeding after strenuous exercise. Both of these conditions are very common in our western performance horses, especially barrel racing horses, and this test has been helping us identify respiratory problems much sooner than we used to. A simple cough after a barrel run might be more than you expect and identifying problems early can prevent more severe respiratory problems from developing in the future. If you suspect your horse may have a lower airway problem it is best to bring them in within a week of strenuous work so we have a better chance of identify damage post exercise.



Treatment for lower airway inflammation/allergies has come a long way and besides learning how to modify the horse's environment we have various nebulizers and puffers available now to treat these horse effectively early in the course of the disease process.

Prevention and early diagnosis are key to minimizing long term damage in many of these respiratory conditions therefore if you suspect your horses is having any respiratory problems please contact us at the Dawson Creek Veterinary Clinic.