



# FACTSHEET

## Upper Airway Endoscopy

Airway endoscopy is a very useful tool when investigating respiratory disease in horses. Endoscopy involves passing a fibre optic camera up the nostril of a horse and into the trachea (windpipe). This camera displays an image on a computer screen allowing you to see 'inside the horse'. Along the way we are able to assess the back of the horse's throat (the nasopharynx), the entrance to the windpipe (larynx) and the trachea (windpipe) as well as the beginning of the horse's lung. The camera is not small enough or long enough to reach the terminal portion of the horses lungs and so we use a sampling technique called a broncho-alveolar lavage (BAL) to sample the hard to reach portion of the lungs.

Assessing a horse's airway may be necessary for a number of reasons; the most common are listed below:

- <sup>35</sup>/<sub>17</sub> **Recurrent Airway Obstruction (RAO/COPD)** narrowing of the airways causing increased respiratory effort and wheezes
- <sup>35</sup>/<sub>17</sub> **Inflammatory Airway Disease (IAD)** acute symptoms of increased respiratory effort and wheezing, often viral or allergic in origin.
- <sup>35</sup>/<sub>17</sub> **Laryngeal Hemiplegia / 'Roaring'** – Horses that make noise at exercise will have their larynx assessed endoscopically.
- <sup>35</sup>/<sub>17</sub> **Exercise Induced Pulmonary Haemorrhage** - Horse's with poor performance can be assessed for any sign of bleeding within the airways.
- <sup>35</sup>/<sub>17</sub> **Epistaxis** Horse's that demonstrate nose bleeds are likely to be assessed endoscopically
- <sup>35</sup>/<sub>17</sub> **Guttural pouch examination** – this is often performed as a test for strangles carriers and other diseases of the guttural pouch.
- <sup>35</sup>/<sub>17</sub> **Sinus/tooth root infection** – Examining the drainage angle of the sinuses for pus is helpful in cases of sinusitis/tooth root problems.

Once inside the airway we can visualise all of these structures, it is also possible for us to perform further diagnostic tests. These further tests are discussed below:

- <sup>35</sup>/<sub>17</sub> **Tracheal Wash** – This involves taking a sample of fluid that pools at the thoracic inlet. This is a natural bend in the trachea that forms a small pool of fluid; this fluid is coughed up from the lungs and can therefore be an accurate representation of the cells within the lungs. It is useful when looking at cases of RAO/IAD and also infectious causes of lung disease such as bacterial infection.
- <sup>35</sup>/<sub>17</sub> **Broncho-alveolar lavage (BAL)**- This can be performed with or without an endoscope. A longer tube is placed all the way to the terminal portion of the lungs, fluid is then instilled and drawn back. This fluid is then looked at under a microscope and the different cell types in the lungs are categorised. This technique is not useful for diagnosing infection.

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