

Endoscopy



A VET USING AN ENDOSCOPE

Endoscopes are instruments which can be used to look inside a horse's body. They are long, tubular, and generally flexible. They have a light and a camera at their far end. The tip is manipulated by dials on a hand piece. Your vet will be able to view the image either through an eyepiece, or on a computer screen.

Endoscopes have many uses in equine practice, but the most common endoscopes are between one and 1.5 metres in length and are used to view the horse's respiratory tract.

Common reasons to endoscope a horse

Generally we will recommend endoscopy for horses with respiratory problems. This may be a cough, a snotty or bleeding nose, or for a horse which makes an abnormal noise at exercise. Endoscopy is also really useful for investigating horses which are performing poorly or who are getting breathless at exercise.

The endoscopy procedure

The procedure is not painful, although some horses find insertion of the scope momentarily irritating. We may sedate your horse to make the experience more pleasant. For viewing the larynx we might prefer your horse to be un-sedated so we can properly assess function and movement. In those cases we may use a twitch.

Anatomical considerations

The horse's airway is composed of the **upper respiratory tract**, the nostrils, nasal cavities, pharynx and larynx at the back of the throat, and the **lower respiratory tract**, the windpipe (trachea) and the smaller airways into the lungs.

Recurrent Airway Obstruction (RAO)

This condition, formerly called COPD results in large amounts of mucus and pus within the small airways of the horse's lungs.



THE WINDPIPE WITH EXCESSIVE MUCUS AND PUS SITTING IN A POOL, INDICATIVE OF RAO

An endoscope can visualise this material within the windpipe. We can also take samples for analysis which will give us a better idea of the cause of the problem and how to manage it.

THERE ARE SEVERAL DIFFERENT SCOPES USED IN EQUINE PRACTICE

- Endoscopes are used for looking at a horse's respiratory tract.
- Gastrosopes are very long (usually 3 metres), and are used for looking into horses' stomachs.
- Arthroscopes are very small and thin. They are used for looking into horses' joints under general anaesthetic.
- Orosopes are used for looking into horse's mouths for dental diseases.

Overland Endoscopy

One of the most exciting advances in recent years has been the development of over land endoscopy. This has allowed us to view images of the horse's larynx in real time whilst the horse is exercising.

The endoscope is placed up the horse's nose and secured with a head collar. This scope is particularly small and thin and very well tolerated. The horse can then be ridden, either in a school or on the gallops.

The great advantage of overland endoscopy is it brings us much closer to the cause of any problem than just seeing the horse at rest. We can view live images of the tissues at the back of the horse's throat. This is giving vets a much more accurate understanding of the causes of abnormal breathing noises and the subtle problems that some of our equine patients may have.

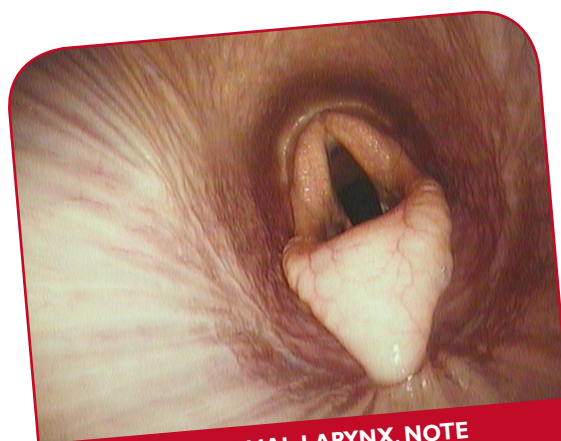
There are very few overland endoscopes in the country. At present they are generally found at the Veterinary Universities. Your vet will be able to give you accurate information about your nearest facility.



AN OVERLAND ENDOSCOPE FITTED TO A HORSE.

Recurrent Laryngeal Neuropathy (RLN)

The most common condition of the larynx is **RLN** – known as a roarer. In this condition the nerves to the left hand cartilage of the larynx don't function meaning the larynx doesn't open fully during exercise. This causes an obstruction to airflow. This is characterised by an abnormal noise as the horse breathes in at canter. This condition can be treated with a surgery called a **tie back**.



THE NORMAL LARYNX. NOTE THE CARTILAGES ARE PULLED BACK AWAY FROM THE AIRWAY.



A ROARER - THE LEFT CARTILAGE IS FLACCID AND OBSTRUCTING THE AIRWAY



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