



LIPHOOK
EQUINE HOSPITAL

Inhaler Use On Horses

Respiratory Airway Obstruction (RAO), previously known as Chronic Obstructive Pulmonary Disorder (COPD), Summer Pasture Associated Recurrent Airway Obstruction (SRAO) or as Inflammatory Airway Disease (IAD)



The Liphook Equine Hospital , Forest Mere, Liphook, Hampshire, GU30 7JG
Practice Office: 01428 723594 / Hospital Office: 01428 727200
Email: post@theleh.co.uk Website www.theleh.co.uk

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Why does my horse need an inhaler?

If your horse has been diagnosed with **Respiratory Airway Obstruction** (RAO), previously known as Chronic Obstructive Pulmonary Disorder (COPD), Summer Pasture Associated Recurrent Airway Obstruction (SPAOR) or as Inflammatory Airway Disease (IAD) your vet may advise using an inhaler to deliver the most appropriate drug directly to the affected tissues of the respiratory system. This can reduce the total drug dose needed, and the effects on the rest of the body – thus reducing potential side effects.

What is RAO and IAD and how are they diagnosed?

Current theories suggest that these conditions are as a result of the lung's hypersensitivity to inhaled antigens causing both allergic and inflammatory responses. The exact cause is still not confirmed, but the most common triggers are mould, dust and endotoxins in hay and straw.

This disease can affect any type of horse and of any gender, although the most commonly affected age group are between 9 and 12 years old. There does appear to be a heritable component of this condition.

Diagnosis of RAO can often be made based on the clinical signs and the history but occasionally further tests are needed to confirm the diagnosis. An endoscope may be used to visualise the upper respiratory tract and the windpipe, and samples can be taken from deeper in the lungs for analysis under a microscope.

What drug types can be delivered via inhalers?

- *Glucocorticoids* are the most commonly used drugs to suppress inflammation and mucus production. *e.g.* beclomethasone, fluticasone
- *Bronchodilators* encourage the tubes of the respiratory system to widen, and can therefore be used before other drugs to aid their delivery to the respiratory system. *E.g.* salbutamol, ipratropium bromide
- *Inflammatory cell stabilising agents* can be used to try and prevent RAO. *E.g.* sodium cromoglycate



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How do I give my horse the inhaled drug?

The inhalers are used in combination with a “**spacer**” **device**. This allows you to administer the drug into a chamber, from which the horse inhales. Most horses will adapt well to this method of administering a drug.

There are several spacers manufactured which are suitable. We tend to use a device made for use in children and the elderly called a “baby inhaler”, but other specific equine masks available include the Equine Aeromask (Genitrix), the Equinehaler (Kruuse) and Topex (Boehringer).

Using your inhaler and the care of your Spacer device

The following steps should be adhered to strictly to ensure the effectiveness of this therapy:

- **Warm** the inhaler to body temperature before use
- **Shake** the inhaler for 30 seconds
- Remove the cap from the inhaler
- **Waste** the first spray if it hasn't been used for more than 12 hours
- Attach the inhaler to the spacer device – ensure that the inhaler is **vertical**
- Ensure the mask is firmly in position with an **airtight seal** between it and the spacer device
- Watch the breathing pattern of the horse for a few breaths (this is often easiest if you monitor the valve movement on the spacer device), and **actuate the inhaler once** just before, or immediately after the horse begins to breathe in
- Allow a **full inward breath** to take in all of the spray
- If possible **obstruct both nostrils** after the horse has breathed in to enforce breath-holding for 5-10 seconds, and then allow the horse to breathe normally
- **Wait** at least 30 seconds before shaking the inhaler again and giving the next spray
- **Record** the number of doses used so that you know when the inhaler is empty, as it will continue to sound like it is giving the drug. Most inhalers contain 120 sprays
- Your spacer device should be **washed weekly** in detergent – but **DON'T** rinse with water afterwards, instead your device should be left to drip dry overnight (don't towel dry)



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Dietary and Environmental Management of RAO cases

Managing these cases is a life-long commitment to reduce some of the triggers for your individual horse. This may include:

- Using dust-free bedding *e.g.* paper
- Soaking hay or feeding haylage
- Not storing hay, straw or the muck heap near affected horses
- Only turning out at specific times of the year and into specific fields (SAOPD)

Despite RAO being a chronic condition that will require life-long management and possibly treatment, many horses can continue being ridden to the same level.



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National Animal Disease Information Service - www.NADIS.org.uk
Written by Dave Rendle BVSc Cert EM (Int Med) DipECEIM MRCVS, Medical
Specialist from The Liphook Equine Hospital
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