



The Horse Owner's Manual



For owners of horses and ponies prescribed Aservo® EquiHaler®



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Severe equine asthma (previously known as heaves, dust allergy, RAO, COPD and broken wind) is one of the most common equine respiratory diseases. It is estimated that up to 14% of horses and ponies could have the disease, but only a fraction of those cases are recognised and treated³.

Severe equine asthma leads to inflammation of the airways which causes horses to experience coughing, wheezing, difficulty exercising, slow recovery from exercise and sometimes struggling to breathe, even at rest¹. Untreated, asthma holds horses and ponies back from doing what they love and takes away their freedom.

By seeking veterinary attention and treatment for your horse, you have recognised that they need some help to get their freedom back and are giving them the best opportunity to feel like themselves again. With careful treatment and management, your horse can live a comfortable and energetic life.

The aim of this guide is to support you as you care for your horse, by providing information about the disease and the treatment your vet has prescribed: the Aservo® EquiHaler®. It also gives advice on how to manage their environment to reduce the amount of treatment they need in the future and keep them breathing easily.

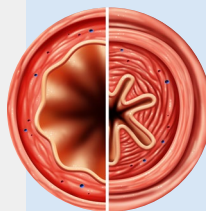
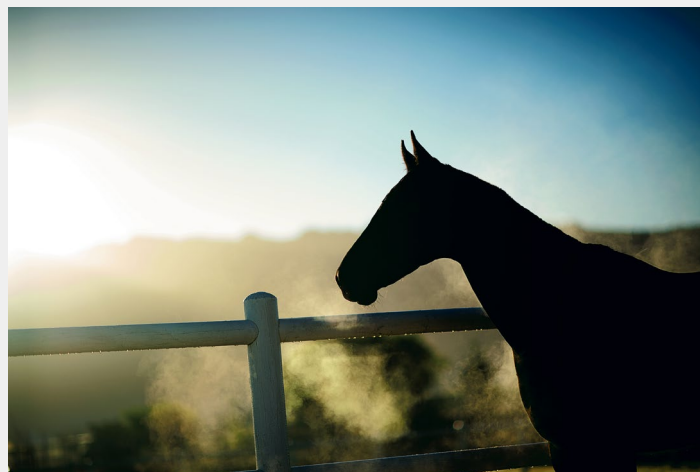


We value your feedback and appreciate if you would complete this user survey to share your experience with the new Aservo® EquiHaler®.
Survey Link: <http://horse.kynetec.com>

What is equine asthma?

Equine asthma is a new term that includes all horses and ponies that have been diagnosed with inflammation of the lower airways. It was decided upon by veterinary scientists who recognised the similarities between equine inflammatory airway diseases and human asthma. Using this term can make communication about the disease easier for everyone to understand.

Severe equine asthma is the best understood type of equine asthma. It used to be called heaves, dust allergy, RAO, COPD or broken wind. Horses and ponies affected by severe equine asthma respond differently to the presence of airborne particles or allergens in their environment than unaffected horses. Being exposed to the particles present, e.g. in straw bedding or dry hay, can cause them to show symptoms such as coughing, wheezing, producing excess mucus, struggling to exercise and recover and even difficulty breathing in extreme situations. Inhaling these allergens causes an inflammatory reaction in the lungs. This leads to the production of excess mucus and causes the airways to become narrowed, resulting in the symptoms that we see. The majority of asthmatic horses are affected by allergens within their stable environment¹. However, a smaller number of horses may be more affected in the summer months when they are turned out on pasture⁴.



This diagram shows a cross-section of a horse's airway. On the left, a normal airway is wide open and allows the air to flow freely. A horse with airway inflammation, as shown on the right, has a thickened and constricted airway, restricting the flow of air and causing coughing, wheezing and breathing difficulties.

How is asthma diagnosed?

In many situations, your vet can make the diagnosis on the basis of the information you give them and a clinical examination of your horse, including listening to their lungs. Some horses have a 'heave' line on their abdomen caused by the increased effort of breathing. However, the diagnosis isn't always straightforward and in milder cases, or when the vet needs to rule out other causes, they may need to perform additional tests. Passing a camera (endoscopy) or a special tube down a patient's windpipe to take a sample of fluid from the lungs can give vital information and confirm the diagnosis¹.



DID YOU KNOW?

As humans we can choose to cough, but it is thought that horses lack this ability². Therefore, if you hear a horse cough, it can indicate that there is something wrong. **Every Cough Means Something** and should be investigated further by a vet.



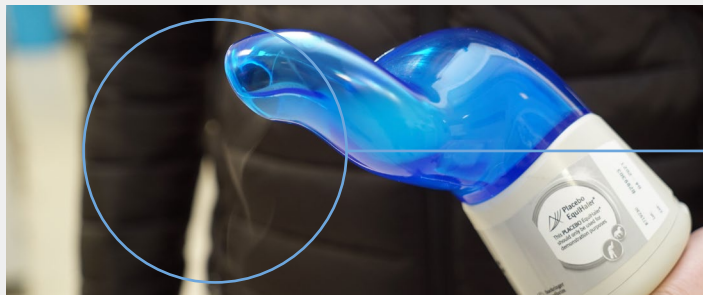
Can asthma be cured?

Like human asthma patients, a horse or pony with severe equine asthma has the condition for life. With careful treatment of any flare-ups and making changes to the environment to reduce exposure to allergens, the condition can be managed and horses can enjoy a relatively normal life. However, if the disease goes untreated, there can be long lasting changes to the lung which could impact them in the future and make the condition more difficult to control⁵.

About my horse's treatment

Your vet has prescribed the Aservo® EquiHaler® to treat the inflammation in your horse's lungs and relieve their symptoms. It can take several days before you notice a difference, so they may have also prescribed a treatment to open up the airways and give fast relief if required.

The Aservo® EquiHaler® is a new development for equine medicine and is the only inhaled treatment specifically indicated for horses with severe equine asthma. This means that it has been tested for efficacy and safety and registered with the veterinary medicine authorities. The product contains an anti-inflammatory medicine called ciclesonide which is a type of corticosteroid that is activated when it reaches the lung. This means that it is unlikely to have the effects on other parts of the body that you may have associated with giving steroids in the past¹⁰.



The Aservo® EquiHaler® creates a Soft Mist™ which is inhaled through the nostril of the horse. This Soft Mist™ contains microscopic particles of the medicine in a slow moving mist, allowing it to reach the lower airways, just where it is needed, when the horse inhales with a normal breath.

Aservo® EquiHaler® is an all-in-one product, so you do not need to purchase any additional equipment to administer it. The nostril adapter fits inside the horse's left nostril and the lever is used to release each actuation (dose) of medication. The product is administered with your left hand, leaving your right hand free to hold your horse.

Before using the treatment, make sure that you have read the product leaflet inside the box carefully and follow the instructions on how to activate, prime and administer the product safely.

The information in the product leaflet can also be found as a digital leaflet, along with an instructional video.

Go to www.info.equi-haler.com or scan the QR code on the product packaging to access.



Introducing the Aservo® EquiHaler® for the first time

In studies performed by the manufacturer, over 95% of horses accepted the treatment when administered by an owner who had been instructed by their vet.⁶ The Aservo® EquiHaler® should not cause your horse any pain and administration is not unpleasant, however, introducing something new and unfamiliar can be more unsettling for some horses and extra care should be taken to make sure that they can receive their treatment safely. Like many of the things we introduce to horses, a good first experience will make subsequent treatments easier for both you and your horse.



Tips for the successful introduction of Aservo® EquiHaler®

① Take time to reassure your horse



Some horses may find the introduction of new objects alarming. Without rushing, let them get used to the presence of the Aservo® EquiHaler® and show them it is nothing to be worried about. Offer praise when they investigate it – if appropriate, giving a treat can help them to associate their treatment with something positive.

② Get them used to the 'click'

The 'click' made from the Aservo® EquiHaler® means an actuation (dose) of treatment has been delivered. If your horse is sensitive to new noises, they may react when they hear it. Before first use, the product needs to be primed with three actuations. Use this opportunity to desensitise your horse to the sound of the Aservo® EquiHaler®. Again, if appropriate, offer a treat after each click.

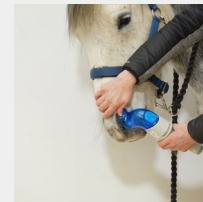
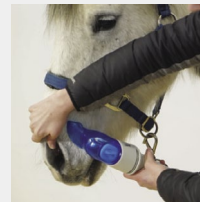
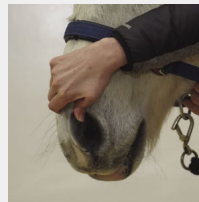
For a 'how to' video guide on introducing the Aservo® EquiHaler®, visit www.equihaler.uk

③ Reward them when they stay calm

Let your horse know, by way of praise or a treat, that standing still and allowing you to give their treatment is the behaviour that you want.

④ Build up gradually

If you sense that your horse is hesitant, let them get used to the administration of the product gradually. Start by touching their nostril and rewarding them with praise or a treat and removing your hand when they stay still. Progress to touching their nose with the Aservo® EquiHaler® and repeat for longer durations until you can calmly insert the product and administer the medication. This may take a few minutes to achieve in the first session but will result in straightforward treatments moving forward.



Changing your horse's environment

Human asthma patients often require lifelong daily treatment to keep their symptoms under control.

When managing equine asthma, we can modify our horse's environment to keep them healthy once their initial treatment has been completed.

The aim of environmental modification is to reduce a horse's exposure to particles which cause lung inflammation. These include:

- mould spores
- dust particles
- bacterial toxins
- ammonia (from urine).

All animals benefit from a cleaner airspace but for asthma-affected horses it is critical to prevent distressing long term symptoms and reduce the amount of medical treatments they will need.

Most horses with asthma are sensitive to these inhaled allergens which they are exposed to inside the stable. However, some patients have a pasture-associated form of asthma which is at its worst in the summer months. It is unclear whether their sensitivity is due to pollens themselves or organisms associated with vegetation, but they require different management⁷. Consult your veterinary surgeon for further information.



Turnout

The best place for a horse or pony with asthma is outside. Complete paddock turnout without preserved forage (such as hay) or bedding should be the aim. If you can find premises with all year turnout, this is likely to be the most cost effective way to keep your horse or pony free of symptoms. Beware of forage fed outside and field shelters with straw bedding, as even short periods of time spent in these areas can undo the benefits gained from this type of management. In situations where this management system is not possible or practical, there are several measures that you can take to reduce the quantity of allergens that your horse inhales when stabled.

Feeding and forage

Horses naturally spend most of their time eating forage. If they are in the stable, this means having their noses close to a source of inhaled particles for long periods. Therefore, this is the most important consideration when trying to control asthma.

Dry hay, even when good quality, contains large amounts of mould spores and bacterial toxins, which can be inhaled and cause an inflammatory response⁴. Replacing the hay portion of the diet with commercially sealed haylage or pelleted forage replacer can be beneficial, but may not be nutritionally suitable for your horse.

Soaking hay by immersing it completely in water has been shown to reduce the amount of particles that can be inhaled. Soaking for several hours does not give further reductions and can lead to the leaching of nutrition from the

forage; soaking for up to 30 minutes is sufficient⁸. Steaming hay in a commercial steamer has also been shown to achieve this¹¹ aim; however, beware of home-made steamers as they can actually encourage the growth of bacteria in the hay. Finally, feed from the floor rather than raised in a net or a rack, to prevent dust from falling into your horse's breathing zone⁹.



✓ DO	✗ DON'T
Feed good quality soaked or steamed hay or haylage	Feed any forage that has visible mould within the bale or appears dusty
Keep commercial hay steamers cleaned and maintained and follow operator instructions	Use home-made steamers or dustbins to steam hay
Keep forage storage areas clean and sweep up before opening a new bale	Feed big bale haylage if it has been punctured or open for more than three days
Soak loose hay in a hay net in clean water for up to 30 minutes	Soak whole bales at one time as the water doesn't penetrate all the hay
Feed forage from a clean, dry floor or manger	Allow soaked hay to dry out before feeding or feed from a height
Keep feed in the bag when storing unless the bin is cleaned thoroughly between bags	Feed on top of old forage or tip new feed on top of old in a feed bin
Store hay and made up haynets well away from your horse's stable	Move bales or shake up hay near your horse's stable

Bedding

Straw is not recommended for horses and ponies with asthma and should be changed⁴. Rubber matting reduces the total amount of bedding required – shredded paper, cardboard and dust-extracted, large flake wood shavings are suitable options for bedding.

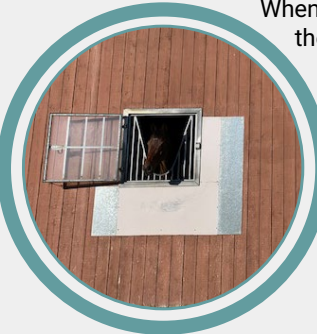
There are increasing numbers of ‘dust free’ bedding on the market but there is no data to suggest which might be best for asthmatic patients. Trying them carefully might be the best way to see if they suit your horse. Frequently removing wet bedding from the stable is very important. It might seem that a deep or semi-deep litter system could reduce dust but urine soaked stables are breeding grounds for moulds and bacteria and produce higher volumes of ammonia. Make sure your horse is not in the stable when it or neighbouring stables are being mucked out, as moving around bedding and waste causes a surge in the number of inhalable particles in the airspace.



✓ DO	✗ DON'T
Change straw for low dust alternatives	Use any bedding if it appears dusty, even if it is labelled as ‘dust extracted’
Use rubber matting to reduce the amount of bedding required	Allow urine, mould and bacteria to build up underneath mats. Inspect and clean regularly
Clean out wet bedding daily including banks and corners	Muck out and sweep while your horse is in their stable
Make changes for every horse that shares the airspace if possible	Forget to apply the same changes to your horsebox or trailer

Housing

Many stables have poor ventilation, which means that the air inside is not moving and becomes stale, with a higher number of inhalable particles in every breath. We often worry about keeping horses 'cosy' in winter and shut doors and windows for warmth, but horses are comfortable at much lower temperatures than humans and benefit much more from having good airflow in their stables than a higher ambient temperature. They can always wear an extra rug if needed. The presence of dust, cobwebs, birds nests and rust or mould in stables indicates inadequate airflow and that the atmosphere is too warm and damp. Stables should have two open air inlets on the front: a door and window or vent, and two air outlets: one at the back of the stable and a vent in the roof. This allows old air to move out and fresh air to come in.



When it's windy, it is tempting to close the doors of American barns but keeping them open enough to let air circulate safely is really important. Stable ventilation can be improved by opening up windows and doors and creating extra outlets in the rear wall above head height if necessary.

✓ DO	✗ DON'T
Keep top doors open and open up windows where present	Close up sources of fresh air, even when it is cold outside
Create extra openings in stable roof or back wall above head height	Store forage or bedding in the same airspace as an asthmatic horse
Consider moving your horse to a stable nearest the door of a barn system	Leave dust and mould on walls or window grilles, clean them regularly



Exercise

Exercise, if your horse can manage it comfortably, should be encouraged as it promotes the movement of airway mucus and improves the circulation of blood to the lungs. It is always recommended that you check with your vet first whether it is appropriate to exercise your horse.



Notes

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Notes

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For 'How To' video guides, visit
www.equihaler.uk



An educational service from Boehringer Ingelheim Animal Health Ltd, makers of 

References: 1. Couetil, L.L., Cardwell, J.M., Gerber, V., Lavoie, J.P., Leguillette, R., Richard, E.A. (2016) 'Inflammatory Airway Disease of Horses – Revised Consensus Statement', *Journal of Veterinary Internal Medicine*, 30, pp. 503-515. 2. Pirie, R. S. (2018) 'Practical diagnostic approach to the coughing horse', *UK Vet Equine*, 2(6), pp. 181-187. 3. Hotchkiss, J.W., Reid, S.W. and Christley, R.M. (2007) 'A survey of horse owners in Great Britain regarding horses in their care. Part 2: risk factors for recurrent airway obstruction', *Equine Veterinary Journal*, 39(4), pp. 301-308. 4. Pirie, R.S. (2014) 'Recurrent airway obstruction: A review', *Equine Veterinary Journal*, 46, pp. 276-288. 5. Leclerc, M., Lavoie-Lamoureux, A. and Lavoie, J.P. (2011) 'Heaves, an asthma-like disease of horses', *Respirology*, 16, pp. 1027-1046. 6. AEH Study Report 1. 7. Costa, L.R.R., Johnson, J.R., Baur, M.E. and Beadle, R.E. (2006) 'Temporal clinical exacerbation of summer-pasture associated recurrent airway obstruction and relationship with climate and aeroallergens in horses', *American Journal of Veterinary Research*, 67(9), pp. 1635-1642. 8. Clements, J.M. and Pirie, R.S. (2007) 'Respirable dust concentrations in equine stables. Part 2: The benefits of soaking hay and optimising the environment in a neighbouring stable', *Research in Veterinary Science*, 83, pp. 263-268. 9. Ivester, K.M., Smith, K., Moore, G.E., Zimmerman, N.J., Couetil, L.L. (2012) 'Variability in particulate concentrations in a horse training barn over time', *Equine Veterinary Journal*, 44, pp. 51-56. 10. CVMP assessment for Aservo® EquiHaler®. 11. Moore-Colyer, M.J.S., Taylor, J.L.E. and James, R. (2016) 'The effects of steaming and soaking on the respirable particle, mould and nutrient content in hay for horses', *Journal of Equine Veterinary Science*, 39, pp. 62-68.

Aservo® EquiHaler® 343 micrograms/actuation inhalation solution for horses contains ciclesonide. For the alleviation of clinical signs of severe equine asthma (formerly known as Recurrent Airway Obstruction – (RAO), Summer Pasture Associated Recurrent Airway Obstruction – (SPA-RAO)). UK: POM-V IE: POM. Further information available in the SPC or from Boehringer Ingelheim Animal Health UK Ltd., RG12 8YS, UK. UK Tel: 01344 746960 (sales) or 01344 746957 (technical), IE Tel: 01 291 3985 (all queries). Email: vetenquiries@boehringer-ingelheim.com. Aservo® EquiHaler® is a registered trademark of Boehringer Ingelheim Vetmedica GmbH, used under licence. ©2020 Boehringer Ingelheim Animal Health UK Ltd. All rights reserved. Date of preparation: March 2020. UI-EQU-0042-2020. Use Medicines Responsibly.

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