



Horses and ponies can be susceptible to a number of conditions that affect the respiratory tract. The causes of these can be very varied - from infections and allergies to anatomical defects. The seriousness of the conditions also varies: some conditions will resolve without veterinary treatment but others are life-threatening. Many respiratory conditions lead to coughing, others result in a nasal discharge from the nose or abnormal respiratory noise. If there is any change in your horse's breathing it is always advisable to contact your vet.

What is meant by 'respiratory tract'?

This is a term used to include all the organs and structures which are related to breathing. They include the nose, the pharynx (or throat), the larynx (or 'voice box'), the trachea (or 'wind pipe') and the lungs. 'Airway' is another term for the respiratory tract.

What are the main causes of respiratory disease in horses?

The main causes of respiratory problems fall into five categories:

1. Bacterial and viral infections

The two most serious diseases that fall into this category are **equine influenza (viral) and Strangles (bacterial)**. The nature of bacteria and viruses means that these diseases are highly contagious and can spread very rapidly between horses. It is therefore essential that they are recognised and treated early. Other infections include **pneumonia, herpesvirus, adenovirus and rhinovirus**. Foals and young growing animals are very susceptible to infectious respiratory conditions so it is essential to monitor them closely and to contact your vet at the first signs of a problem.

2. Parasitic infections

Parasites are organisms that live on or within a host and take nourishment from that host - horses are prone to several parasites, worms being the most common. **Lungworm** spends part of its life-cycle in the lungs and respiratory tract of horses and ponies causing chronic coughing. About 70% of donkeys in the UK are infected with lungworm but they rarely show any signs of infection. Horses and ponies that graze with donkeys are at particular risk of catching this parasite.

3. Allergies

Just as humans can have allergies to pollen and dust resulting in sneezing and breathing problems, horses can too. The term used to describe respiratory allergy in horses is **recurrent airway obstruction (RAO)** (also known as chronic obstructive pulmonary disease (COPD), heaves, asthma). This describes a condition that is very similar to asthma in humans. It may be triggered by an allergic or irritant reaction to the dust or pollen in hay and straw and results in a narrowing of the airways leading to coughing, loss of performance in competitive animals and, in severe cases, wheezing and breathing difficulties. There is also a related condition called **summer pasture-associated obstructive pulmonary disease (SPAOPD)** which may be caused by pollen and is seen during the warmer summer months.

4. Anatomical problems

Horses can develop physical problems within the structures of the respiratory tract (pharynx, larynx, soft palate, epiglottis, trachea) which can cause partial obstruction of the airways. This can result in abnormal respiratory noises ('whistling' and 'roaring') and impaired breathing. Large breeds (such as warmbloods) are most prone to these problems, especially if doing competitive work, but in most cases they can be corrected by surgery.

5. Exercise-induced ('bleeder')

Exercise-induced pulmonary haemorrhage (EIPH) is seen primarily in racehorses but can affect any horse. After strenuous exercise, affected horses will be seen to suffer nosebleeds. It is now known that this bleeding stems from the lungs and is therefore a serious problem. Research continues into the cause of the problem, but it is currently thought to result from the extreme high blood pressures endured by the smallest blood vessels in the lungs during intense exercise.



What are the signs of respiratory disease in my horse?

Initial symptoms of a respiratory problem:

- Coughing when eating or starting exercise or during mucking out.
- Nasal discharge - clear or mucous-like, becoming white/yellow like pus.
- Wheezing sounds.
- Reduced exercise tolerance.
- Increased respiratory rate (normal = 8-20 breaths per minute).
- Swelling of the glands in the throat/lash area (especially seen in strangles).

Other signs that may be present include reluctance to move, and in long-term cases there may be loss of condition and weight. In more severe cases the signs listed above may worsen and additional symptoms may be seen (see below).

Signs of acute (rapid onset) respiratory distress:

- Increased heart rate (normal = 30-50 beats per minute).
- Sweating.
- Flaring nostrils.
- High temperature (normal temperature = 99.5-100.5 degrees F).
- Noticeable abdominal effort when breathing ('heaves').

What should I do if my horse has these symptoms?

- If you suspect that your horse may be allergic to something in its environment, move it to a clean, open dust-free space (preferably outside), away from all potential sources of allergens, eg dust, pollen.
- Try to isolate your horse from other horses as some conditions, eg strangles, equine influenza and equine herpesvirus, are very contagious.
- Take the temperature, pulse rate and respiration rate of your horse and write this information down.
- Phone your vet (even if it is outside normal surgery hours) and be prepared to give a detailed history of the events leading up to the problem. Relay the information you collected on temperature, pulse and respiration to your vet.
- Do not exercise or feed your horse until advised to do so by your vet.
- Offer your horse fresh clean water at all times to prevent dehydration.

What will my vet do?

Your vet will want to know about the days and events before your horse developed the signs. He/she may ask about:

- Your horse's living environment.
- Your horse's exercise regime.
- Your horse's diet.
- Your horse's vaccination programme.
- Contact with other horses and their health.
- Any recent stressful situations, eg long horsebox journey.
- Whether the condition worsens in different seasons or situations.

Your vet will conduct a physical examination of your horse and he/she may want to examine your horse after exercise too. The examination will include:

- Taking the temperature, pulse rate and respiration rate.
- Looking for nasal discharge (Is it only on one side? Is it like mucous? Does it smell?)
- Listening to your horse cough to determine the type of cough, ie harsh, dry, hacking, deep, or productive.
- Listening to your horse's trachea and both sides of its lungs with a stethoscope (NB don't talk to your vet when they are doing this!) This enables them to listen for abnormal sounds, eg harshness, wheezes, crackles, absence or decrease of airflow. A plastic bag, called a rebreathing bag, may be temporarily placed over the horse's nose and muzzle to make it increase the depth of respiration.
- A flexible fiberoptic endoscope may be inserted into your horse's nose and down into its trachea. This enables your vet to get a good look at the upper airway to determine if there are any obstructions or anatomical disorders.

Respiratory problems in your horse - not a good wheeze!



- A fluid sample can be collected at this time from the trachea. This will be examined by a laboratory and can determine if specific cells are present that indicate infection or inflammation.
- A blood test may also be taken.
- Chest x-rays may be helpful in foals.

As described above, there are many different conditions of the respiratory tract. Through the procedures listed above your vet will be able to determine which part of the respiratory tract is affected. They will then advise you on the most appropriate treatment for your horse.

How can I prevent further episodes of respiratory distress?

Some respiratory conditions are very easy to prevent, but for others simply keeping your horse in top condition so that it is less susceptible to any form of disease is the only preventative measure you can make.

Influenza and infections

Vaccination is available for equine influenza infection. Ensure that your horse is fully protected against this condition and has regular booster vaccinations as recommended by your vet.

Lungworm

Lungworm is not very common in horses, but for those grazed alongside donkeys, implementing a regular and effective worming programme will reduce the risk of your horse contracting this parasite. Ask your vet for advice on an appropriate worming programme for your horse.

Allergies

If your vet diagnosed an allergy problem you will need to implement changes in the management of your horse. The purpose of these changes is to reduce your horse's exposure to the allergens that cause the problem. These are known as the rules for 'dust-free management' and they need to be strictly adhered to:

- Bed your horse on shavings, shredded paper, rubber mats etc. Do not use straw!
- Avoid deep litter beds. Keep the stable scrupulously clean.
- Do not muck out the stable with your horse still in it, turn it out until at least 1 hour after you have finished.
- Make sure the stable has the best possible ventilation. Do not close the stable up even in the coldest weather.
- Ensure that any horses sharing the stabling with your horse are managed in exactly the same way.
- Keep the muck heap as far away as possible from the stable.
- Always groom your horse outside.
- Feed dampened hard mixes and a hay alternative, such as 'horsehage' or grass, or complete diet nuts. However, always check with your vet before switching to a hay or feed additive that comes with claims that it is dust-free or aids breathing. Alternatively, soak hay completely in water overnight and always feed the best quality hay available.

Remember to liaise closely with your vet and keep him/her informed of any change in your horse's condition.

If you want any other information on health issues concerning your horse please contact Dalehead Veterinary Group on (01729) 823538 and we will be happy to advise you.