

COPD...HEAVES...IAD...RAO... EQUINE ASTHMA...? EQUINE RESPIRATORY DISORDERS EXPLAINED

Everyone's heard of the horse with Chronic Obstructive Pulmonary Disorder (COPD) or heaves but more recently the phrases Recurrent Airway Obstruction (RAO) and Inflammatory Airway Disease (IAD) are being used sometimes...are these all the same thing?

In this article we aim to explain what all these terms that describe common lower respiratory tract disorders are, the differences between them, and to introduce you to possibly the latest term, Equine Asthma.

Let's start with RAO. This was previously called COPD and is also known as heaves. COPD is actually an old term that we try to steer away from now as the disease in horses is very different to that of COPD in humans which is linked to smoking. RAO is the more up to date term as this better describes the disease process.

RAO is caused by a hypersensitivity to inhaled particles (antigens) which is why the effects of this hypersensitivity reaction is seen specifically in the lungs. The reaction leads to the airways within the lungs becoming inflamed as well as causing extra mucus to be produced and also makes the muscle surrounding the airways constrict (known as bronchoconstriction). This inflammation, extra mucus and bronchoconstriction cause obstruction within the airways obviously making it harder for the horse to breathe.

Horses can have a very sudden attack of RAO when we see them becoming distressed due to rapid onset of the obstruction. More commonly however we see the milder more chronic form where there is less obstruction of the airways. This obstruction however still means the horse has to use greater muscular effort to breathe. The phrase 'heaves' describes this increase in respiratory effort and in time we start to see a so called 'heave line' across the abdomen which is as a result of the respiratory muscles increasing in size with the extra work.

The clinical signs of RAO are often seen when the horse is at rest in the stable as this is when they are exposed to a greater concentration of the antigens. This is why



we often see the disease more in winter. The main inhaled particles that cause the hypersensitivity reaction are dust from hay and bedding, mould spores, and other endotoxins found in feeds. However the disease is also seen in the summer when the horse has a hypersensitivity to pollens, this is known as Summer Pasture Associated Obstructive Pulmonary Disease (SPAOPD)

Clinical signs that we often see include:

- Cough
- Exercise intolerance
- Increase respiratory rate
- Increased respiratory effort
- Nasal discharge

Because the disease process involves a hypersensitivity reaction we usually see it in middle aged horses and generally the disease does progress with age. However it is important to remember that if the horse is managed well then they can remain in remission for a long period of time but will always remain susceptible.

So then what's the difference to IAD?

Inflammatory airway disease (IAD) used to be mainly seen in young racehorses but is now recognised across all disciplines and all ages. It quite simply is when there is inflammation with the airways.

The cause of this inflammation is however less defined as compared to RAO. It has been suggested that infectious agents may be involved but their role remains unclear; however there is definitely a recognised link to environmental conditions, similar to

RAO. These agents lead to a disruption of the inflammatory cells within the lungs and lead to airway inflammation and excess mucous production, again similar to RAO. Generally the clinical signs associated with IAD are however milder to that seen with RAO as the changes in the lungs do not lead to an obstruction to breathing and a crucial difference to RAO is that IAD horses will show no signs of respiratory distress at rest.

The main sign we see with IAD is exercise intolerance or poor performance with slower recovery times after exercise. Nasal discharge again is unlikely to be seen at rest but may be seen after exercise.

Another key difference to RAO is that often we are able to treat IAD effectively and recurrence is low, however we cannot cure RAO currently as the horse will always retain a hypersensitivity to the antigens.

Are these disorders similar to human asthma?

The disease processes of both RAO and IAD are similar to that of human asthma, in fact it has been proposed that we include RAO and IAD under the umbrella term Equine Asthma with RAO being more severe and IAD milder. It is important to point out that this does not mean there is a definite progression from IAD to RAO.

Does all this terminology matter?

It is important to clarify specifically what disease process is going on in your horse to allow us to treat your horse appropriately, explain to you how you can best manage the disorder, and give you an accurate prognosis.

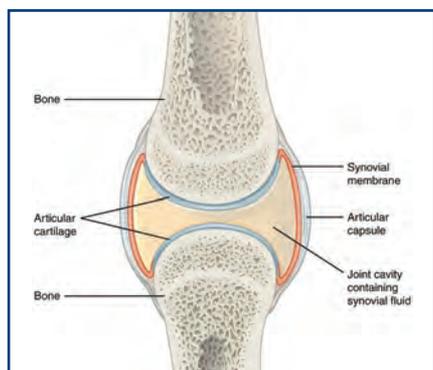
From a research point of view, it helps to separate disorders as much as possible so that processes involved can be explored to greater detail. For example with RAO if we can understand the specifics of the hypersensitivity reaction then we might be able to alter this response in the horse and therefore cure them from RAO. However it is useful to still keep these diseases closely grouped together as there are clearly links between them and that is why the term Equine Asthma has been proposed.

MANAGING JOINT DISEASE

Degenerative joint disease (DJD), also otherwise known as osteoarthritis, is a very common cause of lameness. Typically DJD is associated with the older horse or pony, however is also very common in the younger performance horse.

What is a normal joint?

A normal synovial joint is composed of two bones – each covered by smooth cartilage within the joint. Cartilage is designed to be resilient to forces within the joint and also to enable frictionless movement of the joint. Thick synovial fluid (produced by the synovial membrane) helps with lubrication. Each joint is surrounded by a fibrous articular capsule, collateral ligaments and soft tissues which provide stability to joints.



Why does degenerative joint disease occur in horses?

DJD occurs as a result of loss of cartilage and is accompanied by changes to the bone and soft tissues of the joint.

Deterioration of cartilage can result from:

- **Abnormal or defective articular cartilage (such as osteochondrosis/OCD in young horses)**
- **An unstable joint often due to soft tissue injury.**
- **Repeated overuse of a joint**
- **Trauma to the joint (such as wounds resulting in a bacterial joint infection)**
- **Age**

What signs will a horse show if they are affected by degenerative joint disease?

Competition horses often show signs of poor or reduced performance initially however other horses may have joint swelling or effusion (increased joint fluid within a joint) depending on the stage and severity of disease. DJD is painful and so is often accompanied by lameness during exercise or stiffness after a period of rest.

How is degenerative joint disease diagnosed in horses?

Your vet will initially carry out a full physical examination of your horse, which will include palpating the limbs to feel for any swollen, effused or painful joints. Sometimes pain is only obvious when the joints are flexed and extended. Your vet will then observe the horse at walk and trot in a straight line as well as on the lunge. Nerve or joint blocks may then be required to further identify the cause of lameness. Once an area of the limb(s) is suspected then radiographs (X-rays) are usually taken to investigate further. Ultrasound, scintigraphy (bone scan), MRI and CT can also be used to identify abnormalities if required in certain cases.



Pastern X-ray showing new bone growth due to degenerative joint disease.

What treatments are available to treat degenerative joint disease?

The main aim of treatment is to reduce pain and minimise further deterioration. Medical treatments include oral supplements (ie St David's Mobility Aid, Intra-articular corticosteroids or Hyaluron or systemic anti-inflammatories such as Equipalazone™).

Surgery (arthroscopy) is undertaken if there is a fragment of loose cartilage within the joint and the joint is then (flushed) to remove the substances responsible for inflammation within the joint. A surgery known as arthrodesis may also be required for advanced cases of DJD in non-competition horses to immobilise the joint.



Surgery being carried out in the operating theatre at St David's Equine Practice to remove loose articular cartilage fragments from affected hock joints.

Often a rehabilitation programme is also recommended alongside medical or surgical treatment and may include a controlled exercise programme, adequate foot balance and hoof care and physical therapy as appropriate.

AN EXCITING NEW MUD FEVER PRODUCT...



Our vets have been using Equi-Med's new wound dressing for treating stubborn non-healing wounds with great success. They have launched some stable boots which utilise the same technology and claim to be proven 99.9% effective against mud fever

and many other types of bacterial infection. Insert picture: heel-boot

The features of the boots and the silver and carbon dressings are:

- **Unique dual action technology no need for creams or lotions**
- **Aids with the symptoms of Leukocytoclastic Vasculitis (LV)**
- **Treat and prevent wound infection**
- **Cuts down healing time by 40-50% in**

most cases

- **Minimises scar tissue**
- **Helps reduce swelling**
- **Treatment is competition legal in all disciplines**
- **Can be accepted on insurance claim with vet recommendation**

We are hoping to trial some of the boots on our staff horses so watch this space for how we get on!

NEW YEAR NEW WEBSITE!

We will be launching our new website in the New Year – it has had a complete overhaul and will feature latest news as well as increased functionality. We want

our website to work for you so please contact Eleanor on eleanor@stdavids-equine.co.uk with any features you would like to see on the new site.

ST DAVID'S EQUINE SUPPLEMENTS



Our Mobility Aid is based on Glucosamine (99% purity) which is a naturally occurring non-toxic molecule which is essential in the production of cartilage, joint fluid, tendons and ligaments.

In addition it includes MSN (Bioavailable Sulphur), Hyaluronic Acid and Chondroitin Sulphate. When fed as recommended it will enhance the level of glycosaminoglycans in the joint. These are the building blocks of the cartilage matrix. High levels of Chondroitin Sulphate act as a 'water magnet' in the joint helping it to withstand constant compression and concussion.

Performance horses are pre-disposed to increased wear and tear on their joints. When the rate of production is exceeded by the rate of breakdown cartilage tissue will break up potentially leading to degenerative joint disease such as arthritis. St David's Mobility Aid provides the components necessary for the nutritional maintenance of a healthy cartilage matrix and is provided in 1kg pots.

ORDERING PRESCRIPTION MEDICATION

When ordering routine prescription medication please call us at least 1 full working day in advance of needing to collect the medication. Many medications have to be ordered in and may require even longer so please call beforehand to save a wasted trip.

We are getting many clients turning up for medication that has not been pre-ordered which means the nurses leaving the in-patients or the office staff leaving the telephones, often at busy times, to try to accommodate these clients (which we would prefer not to have to do if possible!). **Please help us to provide a better service by giving us the time to prepare your medication.**

INTRODUCING OUR SPONSORED RIDERS...

This quarter we introduce Matthew Hall, based near Okehampton, who runs a successful livery and competition yard.



Situated on the edge of Dartmoor, Matthew's yard is a perfect and quiet location for producing a variety of horses. He competes all levels of horses in the showjumping ring, and has many years' experience of starting youngsters, schooling, and preparing horses to sell. Backed up by his wife, Lisa, a qualified Equine Massage Therapist, Matthew offers Training Livery with complimentary coaching for his clients as well as providing instruction to their standard livery clients in their large outdoor school. Their facilities also boast an indoor yard surrounded by 28 acres of year round turnout which Matthew and Lisa feel is vital to producing horses to a high standard.

St David's are hugely excited by Matthew's new project 'Fitz the Bill' who is sponsored by the practice. Fitz is a 9 year old warmblood with huge talent and a great sense of humour! St David's have supported Matthew for a number of years and this joint ownership recognises the contribution that Tony and St David's have made to keeping Matthew's competition horses fit and healthy. Tony Kaye runs regular clinics at Matthew's yard enabling those in East Cornwall and West Devon access to the expertise and state of the art kit that the St David's Team is backed up by.

For further information on the Livery packages offered by Matthew and Lisa Hall please call: 01837 840454.

If you are interested in booking onto the next St David's clinic at Matthew's yard please contact the office on 01392 876622 Ext 2.

Look out for our brand new website launching in the New Year which will feature all of St David's sponsored riders along with their latest news and successes!

LONGTERM OFFERS

Our standard visit fees are all now only £25 regardless of the location of the horse as long as you are in our catchment area and registered with the practice.

Receive £10 off if your Routine Dental and Annual Vaccination are performed at the same time.

If 3 horses are each having a routine dental on the same yard at the same time a £10 discount will be applied to each horse. Please note this offer applies to routine dental work only – not dental checks or remedial dentistry.

STAFF NEWS ZOE SATSIAS



Zoe joined the team last Spring after spending some time working in South Molton after deciding to settle in the South West. Zoe grew up in Cyprus and spent most of her spare time riding horses, volunteering for local animal charities or enjoying the Mediterranean Sea! After completing secondary school, she went straight to vet school, spending the next 5 years in the beautiful city of Edinburgh.

After graduating in 2012, Zoe decided to invest in a one-way ticket to Australia. She had a brief 4month stint in a mixed practice in rural Queensland, before spending the next two years on the Sunshine Coast in an equine practice, gaining experience in the thoroughbred racing industry. She especially enjoys anaesthesia, as well as practicing preventative medicine to the highest standard.

In her spare time, Zoe enjoys running and hiking with her Catahoula Skye, attempting to surf and travelling.

ELLIE RETURNS FROM MATERNITY LEAVE



Ellie is enjoying being back at work after the birth of Harriet Matilda Storey in May. She has left her husband with the no-so-easy job of doing the childcare!.

BE COLIC AWARE!

Thankfully good management and awareness of colic risk factors keeps the amount of colic cases we see down to a minimum but we do tend to get a flurry of cases around this time of year for various reasons. Cyathostomes (red worms) have a tendency to emerge at the end of the Winter after a period of hibernation causing massive amounts of inflammation in the gut wall. This inflammation leads to pain and often a rise in body temperature resulting in a very sick horse requiring urgent medical attention.

Other predisposing factors of colic at this time of year include:

- Sudden changes in management (less grazing and more hay without a chance for the gut to adjust)
- Reduced water intake (as water becomes colder fussy horses can refuse to drink – this leads to ingesta becoming dry and more prone to impaction)
- Increased straw intake (some horses turn to snacking on their beds if their turnout has been reduced – this can also lead to impaction).
- Idiopathic (no cause identified).

Occasionally the cause of the colic is not known and just seems to be 'bad luck'. The vast majority of cases respond to medication but for those that don't there is often an underlying cause such as a tumour or historic but undetected damage to the gut wall. By dealing with all the other potential causes the chances of this happening are kept to a bare



DEALING WITH COLIC – THE BASIC FACTS

Signs which indicate colic:

- Pawing at the ground
- Kicking at belly with back legs
- Looking around at their belly
- Restlessness, repeatedly getting up and getting down
- Rolling
- Not interested in food

The signs are very variable and each horse will behave differently. Usually the sooner colic is noticed and treated the more likely it is to respond to medical treatment. Some types of colic will appear very severe from the outset and these may require urgent surgical treatment.

What to do:

- Remove food from the stable
- Call the vet
- Whilst waiting for the vet:
 - Mild cases may respond to walking but do not walk the horse if it looks like it may roll – put it in a stable



- Ensure the stable is well bedded
- Do not attempt to stop the horses from rolling – it will not increase the risk of gut twisting. The gut will twist spontaneously, whether it is rolling or not – the rolling is merely a reflection of the pain the horse is in
- If a stable is not available take the horse into a school or a paddock but ensure they are not able to get caught in fencing if they roll
- Locate the horse's passport
- Arrange transport in case the horse requires surgery
- Inform your insurance company that your horse is being seen by a vet for colic and may require surgery

IN THE ROSETTES!

WE'VE HAD SOME GREAT SUCCESS STORIES RECENTLY – PLEASE KEEP SENDING THEM IN TO US!

MASSIVE CONGRATULATIONS TO ROCKBURY PRIDE

Rockbury Pride (Rocky) is a 7 year old Welsh Section B pure bred gelding owned by Christine Roberts and shown by her daughter Melanie Coleman. This summer he won his class at the South Western Association of the Welsh Pony & Cob Society annual bronze medal show and then went on to stand Reserve Section B champion. Rocky then continued his winning ways and went on to take the overall Welsh gelding championship, and then the Overall Reserve Supreme Championship of the show. At the same time he also was awarded the NPS Silver medal rosette and qualified for the National Welsh Championship final and NPS Silver Medal in hand finals.

Rocky is a big favourite in the Roberts/Coleman household and has been

owned by them since a foal. His success this year continued having recently been awarded 6th place at the prestigious Royal Welsh Show. Photo credit: Elswood Equine Photography

We love hearing updates on how our client's horses are getting on so please send us your stories to claire@stdavids-equine.co.uk



LADY MATILDA

Lady Matilda came into the practice for Tony Kaye to investigate back issues. Tilly is a Welsh section D that had her back investigated by Tony earlier this year. By the Summer she was back competing and was winning Mountain and Moorland classes at Nutwell!

ST DAVID'S EQUINE PRACTICE LTD

Nutwell Estate, Lympstone, Exmouth, Devon EX8 5AN TEL: 01392 876622 • FAX: 01392 875335
equine@stdavids-equine.co.uk www.stdavids-equine.co.uk