

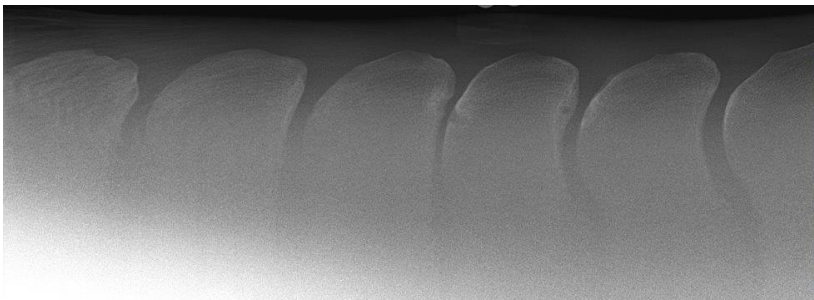


Orthopaedic conditions

Lameness evaluation is a huge part of our caseload, and all our vets have the experience and expertise to carry out thorough investigations and the latest treatments on your yard. Usually, we start with a visual and manual examination of the horse's gait and limbs, either in hand or ridden, followed by the relevant series of nerve or joint blocks with local analgesia to determine the site of pain. Once the site has been identified, imaging of the region with either high definition digital x-ray, ultrasound examination, or both, will allow us to make an accurate diagnosis.

For those cases with a subtle underperformance or a complex lameness affecting multiple limbs, we have the **Equinosis Q Lameness Locator**, a wireless sensor system that enables us to objectively detect and quantify gait asymmetries and lameness. This involves placing sensors on the poll, pastern and pelvis, to allow us to analyse motion data up to 20 times faster than the human eye.

Back and pelvic pain are also common in the horse, and x-rays are commonly used to investigate the underlying cause. We are fortunate to have high powered x-ray equipment that allows us to take excellent quality images at the yard. Once potential sites of pain have been identified, their significance can be determined by blocking the specific region with short acting local anaesthetic, or trial medication with anti-inflammatory steroids.



Our high-definition ultrasound equipment not only produces intricate detail of tendons and ligaments, but has the capacity to image deeper structures. This allows us to assess, and if necessary medicate, injuries at deeper sites such as the pelvis and sacroiliac regions which are not amenable to radiographic assessment. Ultrasonography also enables assessment of the muscles of the back and joints either side of the spine, as underlying back pain and spinal dysfunction can often lead to muscle wasting at these sites.



Treatment

Treatment of tendon and ligament strains and other performance limiting injuries no longer means just box rest; there are a range of regenerative and laser therapies that we now use, sometimes in combination, to speed up healing and aim to repair the original tissue and reduce scarring and inflammation. Similarly, although very effective, steroids and hyaluronate (HA) are not the only medications we have to treat joint disease.

Regenerative therapies use cells or anti-inflammatory agents concentrated from the horse's own blood to help repair damaged tendon, ligament or joints:

IRAP- anti-inflammatory agents from the horse's blood that can be injected into joints or tendon injuries to reduce inflammation.

PRP- stands for platelet rich plasma, where white blood cells and platelets are concentrated from the horse's own blood and injected into joints or tendons to promote healing.

Stem cells- usually harvested from the horses own bone marrow in the sternum or pelvis, cultured for 2-4 weeks before injection into tendon injuries.

Recent advances have led to manufactured preparations of similar 'ready-to-use' horse-side products:

Arti-Cell FORTE is the first licensed stem cell joint medication that targets repair of damaged cartilage in inflamed or arthritic joints. It contains cartilage induced stem cells to harness the body's own regenerative capacities, and injection of the joint can be performed on the yard. Box rest is recommended for 3 days to enable the stem cells to adhere to the cartilage, but most horses can return to work within 3 weeks.

RenuTend is the first licensed stem cell treatment to improve healing of tendon injuries and suspensory ligaments in horses. It contains primed mesenchymal stem cells which are specifically targeted to reduce scar tissue formation so horses can return to the intended level of performance, with a reduced risk of re-injury. It is injected directly into the 'core' lesion within the injured ligament or tendon and a single dose has been found to improve fibre alignment in these healing tissues.

HorStem contains equine umbilical cord mesenchymal stem cells and can be used to treat lameness associated with osteoarthritis in horses, as well as certain soft tissue injuries like tendon core lesions or stifle meniscus damage. Rather than speeding up healing, it aims to improve the quality of the regenerating tissue and can also be used after arthroscopic surgery.

Arthramid is a polyacrylamide hydrogel that is similar in consistency to hyaluronic acid, a component of joint fluid, and one commonly found in joint supplements. It has a long-lasting effect, integrating into the lining of the joint by providing lubrication and cushioning reducing joint inflammation and its harmful effects. It is a great long-term alternative to steroids in certain cases of advanced joints disease, such as those that are no longer responding to steroids, or in laminitis-prone horses.

Deciding what medication to use depends on many factors such as the degree of lameness, the severity of the condition of the joint, the vet and owner's preferences, past experiences and cost.





Other treatment modalities

Laser therapy- The development of the class 4 laser provides a portable, non-invasive treatment method for a variety of tissues and injuries e.g. skin wounds, tendon and ligament injuries, muscle and joint pain.

Laser therapy involves directing specific wavelengths of infra-red light into the target tissues at specific frequencies. The infra-red light then interacts with cells in the tissue to increase their cellular energy and metabolism which has several effects including:

- Reduction in inflammation and swelling
- Reduction in pain
- Increased blood supply to the area which in turn promotes an optimum healing environment
- Increased tissue regeneration

Laser therapy, therefore, has many clinical applications in veterinary sports medicine from shortening the healing time of wounds to improving the prognosis of flexor tendon and suspensory ligament injuries. Laser Therapy is also a safe and pain free technique which is well tolerated by patients so in the vast majority of cases sedation is not required. The length and frequency of treatments varies with the condition being treated but a typical programme consists of multiple treatments in a short time space e.g. twice a week for the first month, followed by a period of maintenance treatments e.g. once a month.

Extracorporeal Shockwave Therapy- Shockwaves are high energy sound waves transferred via a handheld machine, alternating between high and fast pressure to zero pressure. This sounds and feels like a repeated tapping on the skin. These energy waves travel through the skin to deeper structures and can stimulate healing, especially in the case of ligament injury.

Extracorporeal shockwave therapy was developed and is widely used in human medicine for the treatment of painful orthopaedic injuries. We now use it in equine sports medicine to stimulate and improve healing and decrease pain associated with soft tissue and back injuries.



Acupuncture- Acupuncture is a form of complementary medicine in which fine needles are inserted in the skin at specific points along, what are considered to be, lines of energy. Acupuncture has been practiced for over 3000 years in China and is now used worldwide in veterinary and human medicine.

Acupuncture works by stimulating nerve endings in the skin and muscles. This results in the release of pain-relieving endorphins local to this site and also in the central nervous system (brain and spinal cord).

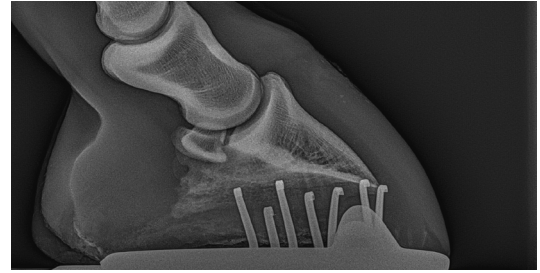
Electroacupuncture involves the use of a mild electric current connected to the acupuncture needles to amplify the effect - in equine medicine, this is most commonly used in the treatment of trigeminal nerve mediated headshaking.

A treatment course tends to run weekly to every other week for 4-6 weeks and is most commonly used in the management of conditions such as arthritis and muscular conditions - particularly those affecting the back/pelvis.

The treatment of animals with acupuncture is an act of veterinary surgery and should therefore only be performed by a qualified veterinary surgeon. Two of our vets have undertaken additional certification in order that they may practice acupuncture safely and effectively.

Physiotherapy and rehabilitation- Rehabilitation after injury requires a collaborative, multidisciplinary approach and we are keen to liaise with and support your physiotherapist to develop a holistic rehabilitation plan, as well as monitoring progression to prevent reinjury. The use of the name physiotherapist is not protected so checking the qualifications of any physiotherapist you are planning to use is vital; please feel free to call us for recommendations of registered veterinary physiotherapists that are either ACPAT Physiotherapists (have completed a 3-4 year degree in human physiotherapy and then completed an additional 2 year specialisation in animals in order to register with The Association of Chartered Physiotherapists in Animal Therapy) or MVetPhys Veterinary Physiotherapists (complete a 4 year course allowing them to register with RAMP (Animal Health Professions register)).

Farriery- Rather than having a practice farrier, we are keen to work with and support your own farrier, whether this be to take radiographs or to discuss foot balance, remedial trimming and shoeing for specific conditions.



Advanced diagnostics or surgical referral- When more advanced imaging like MRI or nuclear scintigraphy, or surgery is needed, we have many options for referral hospitals. This may be to the closest hospital in an emergency situation, or to see the best specialist for your situation. Nevertheless, we will always refer you to a highly qualified, board-certified diplomat, some of whom are also happy to carry out procedures where appropriate under sedation, assisted by us, at your yard.

Other causes of poor performance

Myopathies - Muscle diseases such as exertional rhabdomyolysis (azoturia or 'tying-up') can be investigated by taking a blood sample to measure muscle enzymes. This may be done either at rest or to compare levels before and after exercise in the more subtle performance related myopathies. Some breeds are genetically predisposed to muscle disease such as polysaccharide storage myopathy PSSM, and this can be evaluated by a DNA test from blood.

Gastrointestinal disease - Whether you've had cause to suspect gastric ulceration for a while, or you're treating concurrent orthopaedic disease which can be an inciting cause of ulcers, we are finding Equine Gastric Ulcer Syndrome increasingly frequently. We perform gastroscopy at the yard, using a flexible 3.5m video-endoscope, to visualise and grade gastric ulceration of the two main parts of the stomach. Diagnosing which parts of the stomach are affected enables us to treat the condition most effectively with the right medications, and images can be captured for comparisons of treatment progression and success.

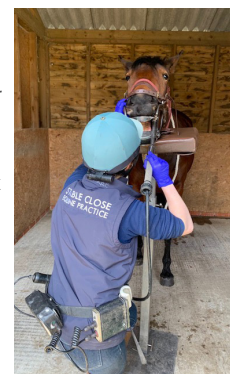


Respiratory disease - Poor performance doesn't always have an orthopaedic cause; upper respiratory dysfunction, such as laryngeal or soft palate issues, or lower respiratory tract issues such as allergies/asthma/low grade infections, can cause a reduction in performance. We can quickly diagnose many conditions using an endoscope, taking samples where needed and then targeting appropriate therapy.

Dental Disease - Horses can cope remarkably well with dental disease and many will show few clinical signs - instead they adjust the way they eat. It is therefore crucial that all horses have a routine dental assessment every six to twelve months to identify any areas that may be causing discomfort such as sharp enamel points, diastema (gaps between teeth) and fractured teeth or caries (decay).

Performance horses are no different. We cannot expect a horse to work well and take a consistent contact if there are areas of potential discomfort or asymmetry in their mouth. Compensating for oral pain may lead to changes in head and neck carriage and in turn lead to asymmetrical development of musculature.

Our vets are all equipped with the diagnostic equipment and modern motorised rasps to be able to support your horse in having a healthy mouth. If you are unsure if your horse requires annual or six monthly dental examinations, please speak to one of our vets and they will be able to offer you advice. For more complex dental procedures we have a regular monthly clinic at the practice with Rob Pascoe an RCVS recognised specialist in equine dentistry.



If you have any concerns regarding any of these conditions please do not hesitate to get in touch with us to discuss it further.