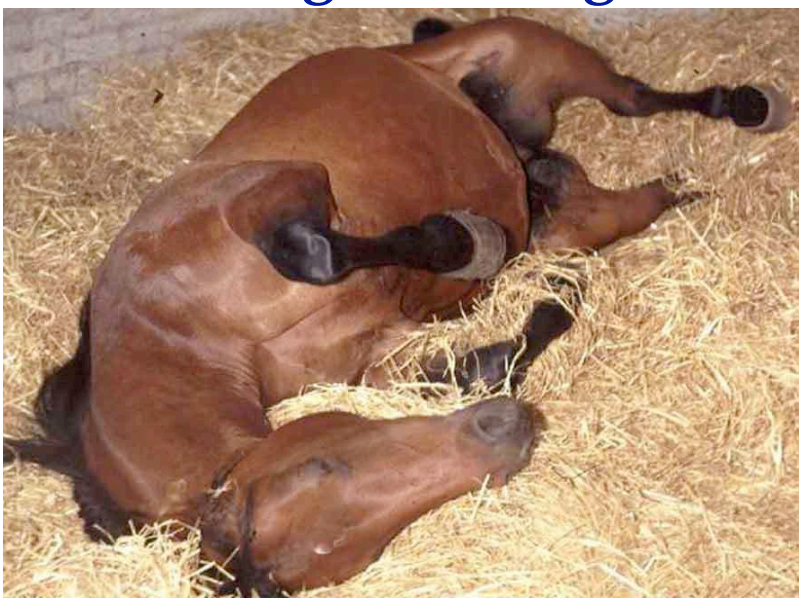
RANDWICK EQUINE CENTRE

NEWSLETTER www.randwickequine.com.au

Colic 1: signs & diagnosis



Colic is the number one killer of horses. Colic is not a disease, but rather a combination of signs that alert us to abdominal pain in the horse. Colic can range from mild to severe, but it should never be ignored. Many of the conditions that cause colic can become life threatening in a relatively short period of time. It is essential to recognise quickly and accurately the signs of colic and seek veterinary attention to maximise the chance for recovery.

Horses are susceptible to colic by nature of their gastrointestinal anatomy. Age, sex, and breed differences in susceptibility seem to be relatively minor. Factors that may predispose your horse to developing colic include:

- Changes in routine – for example feed or water intake, amount of exercise, transportation and changes in housing (sudden stall confinement or pasture).

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Regenerative medicine –the future?

Regenerative medicine is an exciting new field in veterinary medicine which involves harvesting naturally occurring products and using them at a site of damage to promote healing. Examples are IRAP (interleukin 1 (IL-1) receptor antagonist protein), PRP (platelet rich plasma) and stem cell therapies. IRAP neutralises IL-1, a destructive inflammatory mediator involved in the development of arthritis. In a normal joint IRAP and IL-1 exist in equal quantities, but in an arthritic joint there are much higher levels of Il-1 which leads to cartilage destruction. IRAP treatment involves collecting blood from the horse and processing it in the lab to harvest the naturally occurring IRAP, which is injected into the affected joint. This helps to reduce inflammation and prevent further cartilage damage, promoting healing and reducing associated lameness. Treatment may have to be repeated for the best results.

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Drawing up stem cells

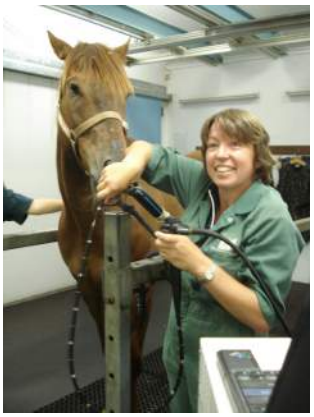
Does your horse suffer from gastric ulcers?

Gastric ulcers occur when the mucosa (lining) of the stomach becomes damaged. They result when the protective mechanisms of the stomach are unable to cope with the acidic environment. Approximately 90% of racehorses and 60% of show horses have some degree of gastric ulceration. Despite ulcers being present in such a large number of horses, only a small proportion will be clinically affected by them.

Stress, both environmental and physical, increases the likelihood of gastric ulceration. Stall confinement alone can lead to the development of ulcers. Strenuous exercise can decrease the emptying of the stomach and also reduce blood flow to the stomach, thus contributing to the problem. Feeding regimes are also critical. Feeding horses just twice daily increases the risk of ulcers as the stomach is subjected to prolonged periods without feed to neutralize its naturally produced acid. In addition, high-grain diets produce volatile fatty acids which can contribute to the development of ulcers.

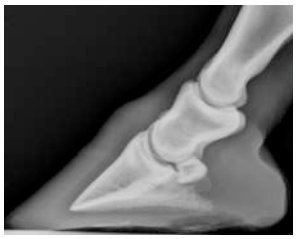
Clinical signs of gastric ulcers are non-specific, and include poor performance, loss of appetite, mild abdominal pain (mild colic signs), weight loss, teeth grinding and a rough hair coat. A diagnosis of gastric ulcers can only be made by performing an endoscopic examination of the stomach (called gastroscopy).

For treatment and prevention, try to allow free access to grass or hay throughout the day to buffer the acid in the stomach. For stall confined horses, reduce stress by including regular grass picks and ensuring there are other horses nearby. Medications are also available to reduce the acidity of the stomach contents. These include omeprazole and ranitidine. At Randwick Equine Centre, we have a variety of anti-ulcer medication and are happy to advise you on ways to help prevent gastric ulcers in your horse.



Dr Leanne Begg checking for gastric ulcers

Recognising the signs of laminitis



An x-ray of a normal foot.

What is laminitis?

Laminitis is inflammation of the sensitive laminae which connect the pedal bone to the inside of the hoof wall. The laminae are two sets of very small leaf-like structures which lock together like Velcro to support the entire weight of the horse. In laminitis this Velcro fails, allowing the pedal bone to rotate downwards within the hoof capsule and in severe cases penetrate through the sole.

What causes laminitis?

There are several known causes of laminitis; the most common is excessive food intake, usually grain or lush grass. Other causes include toxins which may be released into the blood when horses are sick, excessive weight bearing (e.g. a horse with severe lameness in another limb) and, much less commonly, some hormonal conditions (e.g. Cushing's syndrome)

What are the signs?

Affected horses may be reluctant or even unable to move. Severe cases may adopt an unusual stance leaning back to try and take weight off the painful toe region. Increased digital pulses and heat in the feet may be felt. In less severe or chronic cases a short, 'pottery' gait is seen with horses often finding it very painful to turn in tight circles. Horses with chronic laminitis may also have dished hooves due to unequal rates of hoof growth.

How is laminitis diagnosed?

If you suspect your horse may have laminitis, call your vet straight away. They will be able to diagnose laminitis based on the history and a full clinical examination. In some cases x-rays may be taken to assess the changes within the foot, most notably whether there is any rotation or sinking of the pedal bone within the hoof.

How is laminitis treated?

Emergency treatment consists of pain relief, cold treatment and foot support to make the horse more comfortable. Affected horses should be confined to a box. Diet control is a crucial factor in managing laminitis, preventing access to grass and removing grain from the diet. Your vet will also work in conjunction with your farrier to trim and shoe in order to provide sufficient support to the feet. The outcome depends on the duration and severity of the condition but generally once a horse or pony has had laminitis it will require careful management to prevent further episodes.

An x-ray of a horse with laminitis.

Colic – signs & diagnosis cont…

- Vices – cribbing, windsucking, indiscriminate appetite (for example eating lead ropes!).
- Parasite burden.

The most common signs associated with colic are rolling, pawing, recumbency (lying down) and flank watching but less obvious signs such as dullness, depression, loss of appetite and teeth grinding should not be ignored. If you think your horse has colic you should contact your vet immediately. While you are waiting take any food away from your horse and try hand walking to stop further rolling which could lead to injury. A physical examination by your vet may reveal an elevated heart rate and respiratory rate, fever (temperature above 38.5°C), reduced gut sounds and abnormally coloured mucous membranes (the gums should normally be pale pink and moist). A more extensive investigation to try and find out the source of the pain may include blood work, passing a stomach tube, a rectal examination, abdominal ultrasound and a belly tap (where a needle is inserted into the lower abdomen to obtain a fluid sample). Over 70 causes of colic in the horse have been identified. A few of those seen more commonly are:

- Impaction – ingesta or faecal material becomes impacted, usually in the large intestine.
- Obstruction – sand, enteroliths or foreign bodies.
- Spasmodic – hypermotility.
- Intussusception – telescoping of bowel.
- Displacement and/or twisting of the small intestine or bowel, with possible strangulation.
- Colitis/enteritis.
- Swim colic – seen shortly after swimming.
- Other causes such as parasites, uterine torsion, cervical tears, bladder rupture or cystitis.

Treatment, prognosis and ways to reduce the risk of colic will be discussed in the autumn newsletter

Regenerative medicine cont…

Needles positioned in an injured tendon ready for stem cell injection

PRP (platelet rich plasma) involves taking a sample of the horse's blood and processing it in the lab to retrieve the platelet rich portion which is full of various growth factors. These are potent chemical messengers which are involved in tissue regeneration. The platelet rich portion is then injected into tendon or ligament lesions under ultrasound guidance to stimulate and improve healing. PRP can also be used in joint disease.

Stem cells are special cells which have the potential to grow into any kind of tissue. They can be harvested from bone marrow (from the sternum (chest) or hip) or from fat tissue (usually at the top of the hamstrings as in picture below). Isolation and culture of the stem cells takes between 4 hours and 3 weeks depending on the technique chosen. The stem cells can then be injected into tendon lesions under ultrasound guidance and are thought to encourage regeneration of healthy tendon, therefore enhancing the chances of recovery. Since they can become any kind of cell, stem cells can also be injected into damaged ligaments and joints to encourage healing.

Fat removed from around the hamstrings for stem cell harvest

Nurses Natter

LEFT: Emma. ABOVE: Kayla (right) and Nikki preparing a horse for joint surgery

Kayla Brewer started working at REC in December 2009 after completing her Certificate III in equine nursing at Richmond Tafe. Kayla has progressed to become REC's head surgery nurse and works closely with Chris and Jonathan co-ordinating all aspects of surgery. She has worked with horses since the age of 4 and represented Australia at the world equestrian games in 2006 in Equestrian Vaulting, at which time she was ranked 3rd in the country! She has now retired from the sport but helps train young vaulters.

Emma Trillo, from Hamilton in New Zealand, joined the team in July. After a year at Waikato University in New Zealand, Emma followed her heart to Sydney in March and spent a few months riding track work at the Waterhouse stable before joining REC. Back at home she is a well known and popular show rider. She has many years equestrian experience in both the showing and racing fields.

The fight against parasites

Internal parasites are silent killers. They can cause extensive internal damage, and you may not even realise your horse is heavily infected. At the very least, parasites can lower resistance, rob the horse of valuable nutrients, and cause gastrointestinal irritation and weight loss. At their worst, they can lead to colic, intestinal ruptures, and death. Early Summer is an ideal time to protect your horse against red worms, roundworms, tapeworms and bot fly larvae, which commonly affect paddock and stalled horses.

Red worms (stongyles and cyatho-stomes) are a serious parasite that can result in severe colic and even death. Large white roundworms (ascarids) can cause intestinal obstruction, diarrhoea, poor growth and coughing (as the larvae migrate through the lungs on their way to the intestine) with young horses being particularly susceptible. Tapeworms are often associated with few clinical signs but can cause weight loss, diarrhoea and colic.

Bot flies lay their sticky eggs on your horse's coat during Summer and Autumn. Although they are not actually worms, they are often grouped with this family due to the larvae that hatch from the eggs when licked by the horse. These migrate to your horse's stomach causing itching and irritation along the way. Large numbers of larvae in the stomach can cause weight loss or colic.

To get rid of parasites before they attack your horse, follow these suggestions:

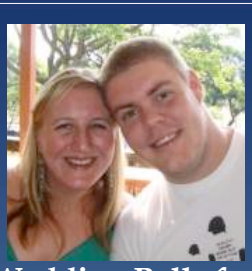
1. De-worm your horse every 6-8 weeks using a broad-spectrum drench administered by your vet or an oral paste. A wormer drench is the most effective method as it ensures the horse receives exactly the right dose for its weight. It is a good idea to rotate the type of wormer used to reduce the risk of resistant parasites developing.
2. Pick up and dispose of manure droppings in the pasture at least twice weekly.
3. Rotate pastures by allowing other livestock, such as sheep or cattle, to graze them, thereby interrupting the life cycles of parasites.
4. Group horses by age to reduce exposure to certain parasites and maximize the de-worming program geared to that group.
5. Keep the number of horses per acre to a minimum to prevent overgrazing and reduce the fecal contamination per acre.
6. Use a feeder for hay and grain rather than feeding on the ground.
7. Remove bot eggs quickly and regularly from the horse's haircoat to prevent ingestion.

A good parasite control program will go a long way towards maximizing your horse's appearance, performance and comfort. The net result will be an animal that is as healthy on the inside as it appears on the outside. Contact your vet and implement a control strategy today.

LEFT: Small red worms in a horse's intestine.
MIDDLE: Bot fly larvae in a horse's stomach.

BELOW: The horse bot fly which lays eggs on the horse's coat, mostly on the front legs.

REC NEWS



Wedding Bells for Emetia

Many of you will know Dr Emetia Nel (soon to be Cull) who is one of the vets at our Warwick Farm branch. Emetia and fiancé Warren have recently gone back home to South Africa for 6 weeks to get married. Meanwhile Dr Rachel Lambeth will be back at the practice part time after having had a few months off with her new daughter.

On the road…where does REC go?

Along with our main hospital in Randwick, we have a smaller cinic at Warwick farm with 6 vets including partners Greg Nash and James Whitfeld. The team covers Warwick Farm and Rosehill, as well as visiting Terry Hills, Dural, Cobbity, Richmond and Windsor. Please call the clinic for further information.

Editor: Dr Rachel Salz