



## SPRING 2019 NEWSLETTER

The HEVC TEAM hope everyone had a lovely winter and are looking forward to spring.

Foals have started arriving and mares are already being rebred. Our office staff has put together "foaling kits" which have all the essentials for foaling down your mare. Contact reception for price and details.

For all of those with pregnant mares, we just wanted to remind you that they should have their tetanus vaccination booster 4 weeks and dewormed 2 weeks prior to their due date.

### FIRST EMBRYO FOR 2019 POSITIVE 😊

Breeding season has arrived and we have just confirmed our first positive embryo transfer for the year from frozen semen. The recipient herd have all had their teeth done and hendra vaccine boosters performed and are cycling well, ready to receive some embryos!

Embryo transfer is performed for many reasons, the 3 main reasons to perform embryo transfer with your mare are; To allow competition mares to keep competing and while you can get offspring from them; To have multiple

foals from the same mare in the one season and finally for mares that have a history of aborting or an injury that would prevent them from carrying a pregnancy to term.

For more information please contact our receptionists and they can put you in contact with our main repro vets Dr Kylie Hardwicke & Dr Cris Clark.

Pregnant mares should also be checked for a caslick. Caslicks should be opened 3-4 weeks prior to the mares due date.

With the recent rain we would like to advise our clients with horses that have laminitis (or are overweight) to restrict access to this spring grass which will be very high in sugar content.

**Just a reminder to all our clients, it is illegal for the office staff to dispense S4 medications for horses that are not on our records and not under the direct care of one of our vets. Please understand that you will be refused if you require medications not prescribed to you.**



### POP QUIZ



The horse above is exhibiting the classic signs of a common and debilitating syndrome in horses. What is this syndrome?

What can be the effects of this syndrome on your horses health?

What treatment options are available for horses with this syndrome?

See over for fact sheet on this disease/syndrome →

HEVC sends out quarterly newsletters. To receive these by email please call the office on (02) 4577 4611 or check our facebook page.

## SPOTLIGHT ON EQUINE METABOLIC SYNDROME

**What is Equine Metabolic Syndrome?** (EMS) is similar to type II diabetes mellitus in humans. Type II diabetes usually affects obese adults and is characterized by elevated blood glucose concentration resulting from impaired insulin utilization and an inability to compensate with increased insulin production. EMS usually occurs in overweight younger horses that have abnormal fat deposits. Affected horses are often described as easy keepers that maintain or gain weight despite being fed relatively small amounts. Insulin resistance with EMS is theorized to occur because abnormal fat can secrete hormones (cytokines and adipokines) that down-regulate pathways involved with how insulin acts on cells. The accumulation of fat in tissues such as skeletal muscle is also believed to have some toxic effects on cells and their response to insulin (lipotoxicity). Fat can convert inactive cortisone to its active form cortisol, which can further add to IR. It is important to realize that not all overweight or obese horses are affected with EMS or IR.



### **How is Equine Metabolic Syndrome diagnosed?**

*History & Exam* While it is true that many horses and ponies with EMS are obese, not all are, so obesity alone cannot be used to confirm the condition. In addition to regional adiposity in the neck, other common locations of lumpy fat pads are behind the shoulder, around the tail head and rump, and in the sheath of geldings or udder of mares. A history of laminitis is also a common sign of EMS. It may have been so subtle as to have gone unnoticed in the past -- while leaving evidence such as rings in the hoof wall or rotation on X-rays -- or may be the current cause of severe pain while walking or standing.

*Bloodwork* - Horses with these signs – obesity, fat pads, and/or laminitis – have one thing in common, and that is an abnormal insulin response to sugars and starches in the diet (non-structural carbohydrates or NSC). Insulin, a hormone produced by the pancreas in response to a meal, assists glucose (blood sugar) into cells for use or for storage. The failure of the body to respond properly to insulin is known as insulin resistance or IR, while an abnormally high level of insulin in the blood is called hyperinsulinemia. Together, these abnormal insulin responses to sugar are referred to as insulin dysregulation, considered the hallmark of EMS. Fortunately, today there are simple blood tests that can quickly measure a horse's insulin response to sugar. Your veterinarian can discuss these blood test options with you.

### **How is EMS treated?**

Veterinarians recommend a combination of diet, exercise, and medical therapy to achieve a healthy weight, enhance the response of insulin, and reduce the risk of laminitis.

*Diet:* Nutritional recommendations for EMS depend on whether the horse is obese or lean and therefore whether calories *and* non-structural carbohydrates (NSC) need to be restricted.



Because all horses and ponies with EMS can have an abnormal glucose and insulin response to sugars and starches in the diet, it is important to keep the levels of these non-structural carbohydrates below approximately 10%. This means: Removing grain from the diet and replacing it with either a ration balancer or a vitamin/mineral supplement so that the horse's daily protein, vitamin, and mineral requirements are met; Restricting pasture or even

completely eliminating grazing, especially when NSC levels are high such as spring and fall; **And finally soaking hay for 60 minutes in warm water before draining and feeding** . Providing low-NSC hay in either a slow-feeder or small-hole hay net slows the rate of intake, making the hay last longer while prolonging the time spent eating. This is especially helpful for the obese horse who may also have the daily amount of hay restricted to 1.5% of body weight until weight loss occurs.

*Exercise:* Exercise recommendations for EMS must take into account whether the horse or pony is currently suffering from laminitis or is sound and pain free. Also just like in people, early research in horses suggests that exercise not only helps reduce weight, it also helps improve insulin sensitivity in those affected with metabolic syndrome. While all levels of exercise help burn calories, intense exercise (such as cantering) may be required to affect insulin resistance.

*Medication:* there are some medications available to help horses with IR. Speak to your veterinarian about potential medications available if your horse is not responding to diet and exercise alone.