BUFFALO EQUINE
Comprehensive Veterinary Services

Fall / Winter 2016 Equine Newsletter

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Seasonal Pasture Myopathy

Seasonal Pasture Myopathy (SPM), also known as Atypical Myopathy (AM) is a muscle disease affecting horses that is fatal in over 90% of cases. Fall is the most common time for cases to occur, although a few cases can be seen in spring and summer. The disease occurs following ingestion of Box Elder tree seeds. The seeds contain a toxin that causes the breakdown of muscles. Symptoms of SPM include: stiffness, difficulty walking or standing, dark urine, respiratory distress, recumbency, and death. Clinically, the symptoms may be confused with colic or laminitis. When one horse in a herd develops the disease, other herd-mates are at high risk.

Box Elder tree leaves and seed pods

Not all horses exposed to Box Elder trees/seeds will develop SPM. It is still unknown why certain individuals are affected and others are not. It is suspected that the length of time horses are exposed to seeds, the amount of toxin in the seeds, the number of seeds on the pasture, and the presence of additional feed/hay all play a role in the development of SPM in some horses.

Certain factors have been associated with increased risk for SPM: autumn, lack of supplemental hay while on pasture, sparse pasture, 12 hours or more per day on pasture, recent wind or rain, recent introduction to pasture, presence of Box Elder trees near/in the pasture, dead trees on the ground. Removing all Box Elder trees in and around your pasture is the best possible prevention for SPM. If it is not possible to remove all trees you should remove dead trees and branches immediately, supplement pasture with hay, avoid pasture (in the fall) in the days following a heavy rain or wind storm.

Ehrlichia Alert

News reports have said we will have a bumper crop of ticks this year, which instantly brings Ehrlichia to the mind of your friendly neighborhood equine vet. *Anaplasma phagocytophila*, formerly known as *Ehrlichia equi*, is carried by ticks and is commonly confused with Potomac Horse Fever. Potomac Horse Fever is most frequently found in areas near water. Ehrlichiosis, however, can occur anywhere ticks are found. In Minnesota, this means pretty much ANYWHERE! This summer we have already diagnosed quite a number of horses with this disease and feel you should be aware of some of the signs associated with it. The incubation period is 1-2 weeks, and horses are typically lethargic, quit eating, may show signs of mild colic, and can have a high fever. A complete blood count following a physical exam helps us to diagnose Ehrlichiosis so that early treatment can be implemented. Ticks carry this bacteria from one animal to another so it is important to maintain good tick control by administering insecticides (Buzz Off and Equi-Spot are two products we have found to be helpful) and by minimizing exposure when possible. There is no vaccine available at this time.

Equine Odontoclastic Tooth Resorption and Hypercementosis

An emerging dental problem in older horses

Equine Odontoclastic Tooth Resorption and Hypercementosis (EOTRH) is a relatively recently identified dental issue in older horses that causes resorption of the roots of the incisor teeth, and sometimes the canine teeth. We most commonly see this disease in horses in their late teens and twenties, but can see it as early as 13 years old.

Resorption of the tooth roots is an inflammatory and painful process. The soft tissues around the teeth, including the gums and ligaments that hold the teeth in place, become inflamed and commonly also become infected. This inflammation and infection causes loosening of the teeth, which is painful. Affected horses may become reluctant to accept treats such as carrots and apples due to the pressure on the incisors when biting them. Diagnosis of EOTRH is made with radiographs of the incisor teeth to determine the extent of involvement and which teeth are involved. Typically the outside incisors are affected first, and the disease gradually moves towards the middle to include all of the incisors. No known cause of the disease has been determined. This disease has likely been around for a long time, but has only recently been officially identified and named. As our equine population ages due to better nutrition, deworming, and dentistry, we are seeing a lot more older horses and therefore are seeing more issues in senior horses which were previously thought to be uncommon.

There is currently no known prevention or treatment to keep the disease from progressing that will prevent eventual loss of the teeth. Antibiotics and anti-inflammatories may slow the disease, but the only true treatment is removal of the affected teeth. The incisors may be removed individually as they become loose, fractured or infected, or all at once to more quickly alleviate the pain, inflammation, and infection. Regardless of whether the extractions are done all at once or one at a time, horses do fine without their incisors and continue to eat normal forages such as grass and hay.

The Science Behind Equine Metabolic Syndrome:

Why do fat and foundered tend to go hand in hand?

Insulin resistance was recognized in ponies over 20 years ago. Overweight horses have commonly been misdiagnosed as having hypothyroidism, which is actually extremely rare in horses. It has just been within the last 7 years that we have actually recognized this fat and foundered scenario as Equine Metabolic Syndrome.

Insulin resistance in horses is similar to type-2 diabetes in humans. When horses don't respond normally to insulin, we see an abnormally high insulin level in the blood. Insulin should normally be inside cells, where it regulates glucose metabolism. Studies have shown that insulin sensitivity decreases as the body fat percentage in horses increases. We also see increased inflammatory proteins with decreased insulin sensitivity, which subjects our horses to many other negative side effects.

Note the cresty neck and the fat deposits at the top of the tail

Besides a tendency to obesity and obvious fat deposits, horses with EMS are at risk of laminitis. The equine foot does not respond well to the high blood insulin. The lamellae of the equine foot have a very high demand for glucose. Laminitis in these situations occurs when the lamellae are starved of their required nutrients due to the insulin not promoting the uptake of glucose. It is also theorized that insulin itself could be toxic to the lamellae by affecting the blood supply to the small vessels in the foot.

So who is at risk of this syndrome? Easy keepers are definite suspects. Common physical signs of EMS are cresty necks and fat deposits above the tail head. Ponies and mares in general are commonly affected, but specific breeds such as Morgans, Saddlebreds, Spanish Mustangs, Paso Finos, and Arabians are also at higher risk.

EMS is typically diagnosed with a simple blood test. If the results come back suggesting EMS, we will recommend medication along with management changes. Dietary restriction is important! With some horses this will involve removing the grain from their diet completely, and others it may be pasture restriction through dry lots or grazing limitation. Exercise is also important as it improves insulin sensitivity within the tissues. Finally, insulin sensitivity is also improved through the use of prescription medications such as thyroxin and metformin, and supplements containing chromium.

If you suspect that your horse may have signs of equine metabolic syndrome, please give us a call! Preventing the laminitis that is so common in these horses is so much better than treating it!

How Can We Help You?

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- Reproduction
- Dentistry
- 24-Hour Emergency Care
- Preventative Medicine
- In-House Coggins testing
- Microchip Placement