



**ELKHORN VETERINARY  
CLINIC LTD.**

205 E. O'Connor Dr.  
Elkhorn, WI 53147  
262-723-2644  
www.elkhornvet.com

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Save the date for our  
Spring Seminar

# The Lead Line

January, 2011

## Equine Metabolic Syndrome

Obesity has become a major human health concern in the United States. Unfortunately, it has also become a problem for our equine friends, as well. Let's face it, most of our horses have a pretty easy life - most of it being spent standing in a stall with ample hay and feed or grazing on lush pasture. This "good life" can contribute to the disease known as Equine Metabolic Syndrome (EMS).

Equine Metabolic Syndrome (EMS) is usually characterized by three main features in horses and ponies:

- Obesity or regional adiposity
- Insulin resistance
- Laminitis

Breeds that were adapted to survive in harsh winter conditions and do well on sparse, poor quality grasses appear to have a predisposition to EMS. Common breeds affected are Morgans, Mustangs, Peruvian Pasos, Paso Finos, and some Warmbloods, but all breeds can be affected.

Many of the horses affected by EMS are considered by their owners to be "easy keepers." Horses with regional adiposity are characterized by abnormal fat deposits on the neck (cresty neck), shoulders, loin, and above the eyes and around the tail head.

The onset of EMS is usually between the age of 8 and 18 years. Generally, the first indication of EMS noticed by the client is laminitis, the inflammation of the sensitive tissue (lamina) that attaches the coffin bone in the foot to the hoof wall. When the horse develops laminitis, the hooves become painful and the horse may be reluctant to walk or may walk very gingerly, as if walking on eggshells. If the laminitis is affecting the front feet, the horse may stand with the front legs positioned out in front and the back legs under him in an attempt to shift the weight to the hindquarters. The horse may also lay down frequently, or stay down to keep the weight off the painful hooves. Laminitis has many triggers, among them sudden dietary changes (grain overload or rapidly growing spring pasture), colic,



and untreated infection. However, it is not well understood why the EMS horse develops laminitis.

Although EMS cannot be cured, owners may manage their horse to prevent or limit EMS occurrence by closely monitoring the horse's weight and making sure that the horse receives plenty of exercise. Substantial clinical improvement can be achieved with a 5 - 10% reduction in the horse's weight as it has been proven that horses carrying more weight tend to have higher levels of circulating insulin. Also, recent studies have determined that physical conditioning improves insulin sensitivity, lowering blood insulin in horses.

Many feed companies have developed low-carbohydrate feeds targeted for the EMS horse. Additionally, there are supplements on the market, such as Standard Process' Equine Metabolic Support, that aid in the maintenance of the EMS horse.

If you are concerned about EMS in your horse, feel free to call the Elkhorn Veterinary Clinic for an appointment. We will be happy to examine your horse and, if necessary, draw blood for a insulin/glucose test which will aid in diagnosing EMS. (Horses enrolled in the Equine Wellness Program are eligible for a 10% discount on this laboratory test.)

- Margie Black

## Equine Recurrent Uveitis

**E**quine Recurrent Uveitis (ERU) is an immune-mediated inflammatory condition of the eye and is the most common cause of blindness in horses. It may affect one or both eyes. You may have heard other names for this disease, such as Moon Blindness, Iridocyclitis, and Periodic Ophthalmia. While the exact causes are still being researched, bacterial, viral, parasitic, and protozoal infections and trauma have been linked to this disease. In reality, most of the cases never have a definitive

cause identified. It is important to understand that ERU is not one disease, but rather a grouping of ill-defined repeated incidences of inflammation within the eye.

Some horses show classic bouts of acute, painful inflammation followed by variable periods of comfort. Symptoms include swelling around the eye, excessive tearing, squinting, a blue or whitish look to the cornea, blood or pus in the eye, a small pupil, and a change in the color of the iris. Horses can fall into the “insidious” category, where a low level of inflammation is present but the horse does not appear to be painful to the owner. These cases are particularly difficult because a veterinarian may notice a significant amount of irreversible damage to the eye(s) on a routine health examination and the owner has been unaware of the changes. Chronic and acute uveitis can cause chronic changes that can include an irregular shape to the pupil due to adhesions within the eye, mineral deposits on the cornea, cataracts, movement of the lens, glaucoma, scarring of the retina, or retinal detachment. Nonetheless, any horse that has ERU may eventually pro-



All of the eyes above are of horses with Equine Recurrent Uveitis. #1. The arrow is pointing to abnormal color behind the lens. #2. A small pupil with hazy eye. #3. A blind, shrunken eye (phthisis bulbi), the end-stage of ERU.

gress to end-stage despite aggressive therapy. In end-stage eyes, the tissue that produces the fluid within the eye may wear out, thus causing shrinking of the eye (phthisis bulbi) and complete loss of vision. (See #3 above.)

Treatment of acute flare-ups of ERU consists of the following:

1. Topical steroids to treat the inflammation. Solutions may be prescribed in small bottles and we can give you tips for safely applying these liquids to your horse’s corneas.
2. Topical atropine to dilate the pupil, thus stabilizing the “leaky” blood vessels that will help control pain and aid in preventing adhesions in the eye that may limit future vision.
3. Systemic anti-inflammatories and pain relievers such as Banamine (flunixin).
4. Reducing corneal edema (swelling), if present, with topical sodium chloride (salt) solutions.
6. Strategic use of a UV-guarding fly mask and/or housing in a dark environment to reduce the pain caused by bright light.

Likely, some form of maintenance therapy will be needed when your horse appears comfortable. This is as important as treating acute attacks. Oral aspirin is often given as a maintenance drug to help reduce inflammation and topical steroids are still needed to help quiet the inflammation you can’t see. Alternative therapies such as acupuncture and herbs have also been demonstrated to alleviate symptoms in some horses.

The prognosis for a horse that has ERU is always guarded because vision loss is such common end result with this disease. While there is no way to prevent a horse from developing this devastating disease, careful evaluation of your horse’s eyes by your veterinarian at a pre-purchase examination or routine health care visit can alert him/her to the need for medical intervention. By working together, we can try to maintain comfortable, visual eyes as long as possible.

-Theresa Schreiner, DVM

## Equine Wellness Program - Quality Care at an Affordable Price

**P**reventive veterinary care is essential to providing your horse a long, healthy, useful life. Vaccinations, dental care, intestinal parasite control as well as annual physical examinations with nutrition and weight management consultations all play an integral role in your horse’s health care.

The Elkhorn Veterinary Clinic offers horse owners an economical means of providing preventive care through the Equine Wellness Program. This year will be the fifth year that we have offered the program. We’ve made improvements to the program each year, and this year is no exception. By enrolling your horse in the

Equine Wellness Program, you can save more than 25 % on the included vaccinations and services.

New for 2011, the program extends the opportunities for you to save by offering a 10% discount on the following services to enrolled horses - farrier radiographs, large animal profile (baseline CBC, differential, and blood chemistry), and glucose/insulin test. In addition, owners with three or more horses can take advantage of the multiple horse discount of 5% per wellness program enrollment.

To learn more, call our clinic or visit our website at [www.elkhornvet.com](http://www.elkhornvet.com).

### Equine Wellness Program Includes:

- Annual Medical Exam
- Annual Coggins Test
- One Dental Exam
- One Dental Level 1 with Sedation
- Annual Vaccinations:  
*West Nile, EEE, WEE, Tetanus Toxoid, Rabies, Potomac Horse Fever, Influenza, and Rhinopneumonitis*
- Nutrition & Weight Management Consult
- Medical Record Sheet
- 25% Discount on Additional Vaccinations
- 25% Discount on Paste Dewormers

**2011 Enrollment Fee is \$295**

## Maximizing Nutrition for Miniature Horses



Miniature horses can be fun and interesting additions to our equine families, but they can come with certain challenges. Weight management tends to be the hardest part of owning a miniature horse. Regardless of the size of the horse they all have the same basic nutritional needs.

Miniature horses tend to be “easy keepers,” meaning that they seem to maintain or increase their weight on limited quantities of forage and little if any grain. Due to this minis tend to be overweight or obese, which can cause problems such as laminitis and decreased performance. When feeding minis it is best to weigh your hay and grain that you are feeding. You should also feed minis at regular intervals of 2-3 times per day. Miniatures should never be fed free-choice, as this can make it much easier to overfeed.

As a general rule of thumb you should feed 1 to 1.5% of the body weight per day in forage. Minis that are easy keepers may require even less to maintain their weight. Most minis need minimal grain, if any. To get an accurate approximation of your minis’ weight you can use one of three formulas.

$$(\text{Girth} \times 9.36) + (\text{length} \times 5.01) - 348.53 = \text{body weight in pounds}$$

$$(\text{Girth} \times 11.68) + (\text{height} \times 2.85) - 357.26 = \text{body weight in pounds}$$

$$(\text{Girth} \times 13.18) - 326.07 = \text{body weight in pounds}$$

The girth is measured by placing a tape just behind the front legs and over the withers. The tape should be pulled snug, but not so tight that it depresses the flesh. Length is the distance from the center of the chest, along the side, and around to the center of the tail. Height is the distance from the ground to the top of the withers keeping the tape perpendicular to the ground. Do not use the distance from the ground to the base of the mane as is used for determining height for registration. All measurements should be done in inches for proper calculations. Weight tapes designed for standard horses should not be used to estimate weight on miniatures, as they are not accurate for minis.

When feeding supplements it is important to reduce portions for minis where needed, as most supplements have directions for feeding full sized horses (1000-1200 pounds). In addition please remember to give your mini access to plenty of fresh, clean drinking water, keep salt available free-choice, and maintain an effective internal parasite control program.

- Christi Schuckman, CVT

## Staying Well in a Winter Wonderland

It happens every year, the long days and warmth of summer give way to the chill of autumn and eventually, the short, frigid days of winter. Your horse knew what was coming and prepared by growing a thicker, longer coat. While your horse does his part to take care of himself, here are a few preparations that you should make to create a healthy winter environment for your horse.

1. Make sure your horse has access to free choice water at all times. Horses housed in stalls may still be faced with frozen water buckets when the days get quite cold. Buckets containing plug-in heaters are easily acquired and simple to use if you have access to electricity at your stall. If heated buckets are not an option, allow time for your horse to drink fresh water several times a day and hang several buckets in his stall. A tank heater in a water trough works well for horses housed outdoors for most of the day. It may be the easiest, most economical way to water horses in the winter. There are numerous water troughs on the market that are insulated or you can add insulation to the outside of your current trough. Also, placing a cover over part of the top of the trough will help in keeping the water from freezing. Be extra



careful to assure proper grounding of electrical.

2. Horses faced with low temperatures need extra calories to stay warm. Plan to feed your horse extra hay when the mercury drops so that he stays warm and maintains his weight. Make sure that you have plenty of hay in storage, or a dependable source so that you can make it through the winter without having to scramble to locate more hay. Have your horse’s teeth examined by a veterinarian to make sure that he is chewing his food

properly and getting the most nutrition out of every bite.

3. Horses need fresh air and exercise to stay healthy, even in cold weather. Although it may be too cold to ride, make sure that your horse has ample time outdoors during the winter. Purchase a sand/salt mixture to spread on roadways or alleyways to help eliminate ice and keep areas safe if you must lead your horse to a paddock or pasture. If you are worried that your horse will be cold while outside, a blanket can assist in keeping him warm. Waterproof blankets are a necessity if your horse may be outside in cold rain, sleet, or snow.

Planning ahead for the cold weather will make the winter months a bit easier for both you and your horse. Attending to your horse’s most basic needs of water, feed, and fresh air will undoubtedly keep him healthier throughout the winter.

-Margie Black

## *“Leading Your Horse to a Healthy Future”*



Enroll your horse in the Equine Wellness Program prior to his first preventive care appointment of the year to maximize your savings. There is more information inside this brochure and on our website. We're always happy to discuss the healthy benefits of our Equine Wellness Program - feel free to call us!

Just a reminder - in Wisconsin, Coggins Tests for Equine Infectious Anemia are considered current within the calendar year the blood is drawn. There is a grace period until January 31st.

The Elkhorn Veterinary Clinic has been integrally involved with SMILES since its inception 26 years ago. Located in Darien, WI, SMILES, a non-profit, tax exempt corporation offering therapeutic and recreational horsemanship lessons to children and adults with disabilities. For those of you interested in combining your love of horses with a desire to give back to the community, give SMILES a call at 262-882-3470, or view their website at [www.smiles.nu](http://www.smiles.nu).