



Equine Metabolic Syndrome

Equine Metabolic Syndrome (EMS) is a blanket term that includes Cushing's disease, laminitis insulin resistance and other metabolic disorders. They originate from the same fundamental hormonal imbalances that affect metabolism. These horses often have high insulin levels as a result of their muscles' inability to absorb glucose for fuel, which causes the body to produce more insulin in an effort to use the glucose.

The resulting symptoms include:

- Drinking and urinating excessively.
- Fat deposits in the shoulders, rump, above the eyes, and cresty necks that can get thick and hard.
- General obesity, until the latter stage of the disease when there is weight loss and muscle wasting.
- Depression and lethargy, sensitivity to touch in the flank and barrel.
- Thick curly coat which is slow to shed, and sometimes patchy shedding and odd sweating patterns, especially in the Cushing's horses, but may also be present in laminitis and IR.
- Impaired immunity and lowered resistance to infections and to skin and dental infections in particular.
- Tendency to founder, also toward winter laminitis episodes.
- Varying degrees of muscle tightness or even tying-up.

General care of EMS horses includes a low-carb, high fiber diet, with no grain, and a low NSC (low sugar/starch) hay. Dramatically increased levels of magnesium and chromium have also been found to be invaluable in dealing with EMS.

Magnesium levels should be increased well over the needs of the average horse. Magnesium relaxes the blood vessels for better circulation, especially important in the small blood vessels of the feet. Blood sugar stabilization and thyroid support are two other functions for which magnesium is invaluable. Magnesium deficiencies exhibit as nervousness, muscular tightness, irritability, excitability and poor memory retention. Most US soil is deficient in magnesium, especially on both coasts and anywhere there is clay soil. Since the soil is deficient, so is the hay that is grown on the soil. The high stress lifestyle of many horses leads to an increased need for magnesium, and mares are notoriously deficient in magnesium due to estrogen levels.

Chromium helps the body to use insulin more effectively, so that insulin and blood sugar levels do not rise abnormally. Anecdotally, we have seen reductions in neck crestiness and obesity with the addition of 1 to 3 mg of chromium daily to the diet of an EMS horse. Chromium has the unique ability to balance blood glucose by lowering high blood glucose in diabetics and correcting low blood glucose in hypoglycemics.

Easy Balance™

Easy Balance is a unique combination of chelated magnesium, highly absorbable chromium, organic cinnamon and other natural ingredients help support normal blood sugar and thyroid levels as well as maintaining strong endocrine and nervous systems. Cinnamon has been discovered to be valuable in the treatment of Diabetes and insulin resistance, and appears to have the ability to balance blood sugar.

H.E.S.™ (High Energy Supplement)

30% protein and 8% fat make this product an ideal addition to the ration for EMS horses. The fat is in the form of organic, whole extruded soybeans. Horses do not have gall bladders, the organ which emulsifies fats for digestion in other species, so the oils tend to tie up receptor sites in the intestine. A and D are important for calcium absorption, so oils should not be fed to athletes, growing horses or broodmares. Vitamin E is important for immune functions, and Vitamin K regulates the ability of the blood to clot normally. H.E.S. is the ideal fat supplement, because the whole soybean contains the oil in its unseparated form, with the protein and enzymes necessary for complete digestion. Because dietary fat is important for hormone balance, EMS horses benefit greatly from a bit of this supplement.

