



MANAGING AN INSULIN RESISTANT HORSE

EMS (Equine Metabolic Syndrome) is an age-related metabolic disorder, which leads to insulin resistance. Common clinical signs include increased drinking and urinating, obesity, abnormal excess fat deposits, and laminitis. It is diagnosed via a blood test demonstrating elevated insulin levels. EMS is managed almost entirely by controlling the horses' diet. A major goal of managing EMS is to minimize the risk of associated laminitis. This is achieved by correcting the obesity, enhancing sensitivity to insulin and attempting to avoid spikes in insulin.

A MAJOR GOAL FOR MANAGING AN EMS PONY IS TO REDUCE POSTPRANDIAL (after-eating) INSULIN SPIKES. THIS IS ACHIEVED BY CONTROLLING SUGAR AND CARBOHYDRATE INTAKE.

KEY POINTS:

- Feed less, exercise more.
- Invest in a weight tape, and track your horse's weight every 2 weeks.
 - Aim for weight loss of 0.4 to 0.5% body weight per week.
 - Reduce feed intake to 1.5% of current body weight daily OR 2% of ideal body weight, whichever is higher.
 - (reduce this further if they are getting turnout/grazing time).
- ELIMINATE HARD FEEDS AND SNACKS!
- Base the diet on FORAGE or a FORAGE substitute.
 - Feed from a hay net, and feed 3 to 4 meals per day.
 - Feed a late-maturity hay with a low energy content
 - Look for a combined Starch (ESC) and sugar level of <10%
 - Rhoades grass or meadow hay is usually the lowest in NSC/ESC.
 - If this is not available, you can feed oaten or wheaten hay. Some wheaten hay is lower NSC than oaten. Lucerne is even lower in NSC, but some ponies do not respond well to the high protein levels in Lucerne hay.
 - TRY FEEDING A WHEATEN HAY, or a 50% Wheaten 50% Lucerne hay mix.
 - If feeding hay only, add a multi-vitamin that includes Vitamin E, Copper, Zinc and other minerals. (Look for a LOW CALORIE "ration balancer").
 - Ex: Kentucky Gold
 - OR feed a commercial FORAGE BASED low calorie feed that is balanced (include this in the daily intake allowance)
 - Look for:
 - Vitamin E – 4 IU per kg (1800 IU per 450kg horse)
 - 2-4 oz of flaxseed oil per day
 - 1 oz of salt added to feed per day in cold weather, 2 oz of salt in warmer weather
 - 2.5g of Magnesium per day
 - 2mg (TOTAL MAX) of Selenium per day

- If you don't have any luck reducing intake, and swapping to a 50-50 wheaten/Lucerne mix, you can try cutting out a portion of feed and replacing with unmolassed beet pulp (Speedi Beet)
 - SOAK HAY FOR 45 minutes prior to feeding, then dump the water, rinse with cold fresh water, and feed the moistened hay.
 - DO NOT ALLOW ACCESS TO PASTURE GRAZING! To maintain turnout activity, either turnout onto a "dry lot" (ie sand arena, no food on the ground), OR use a grazing muzzle.
 - Ponies spending 3 hours in pasture with a grazing muzzle had their feed intake reduced by 80%. Ponies can consume up to 1% of their body weight in 3 hours of time turned out on paddock!
- Make all changes gradually, do not "withhold" feed for prolonged periods.
 - Try these dietary changes over one month, if no luck, and if your pony is a good candidate (very high insulin levels) he or she may benefit from a Metformin trial.