

The Truth Behind Your “Easy Keeper” — Equine Metabolic Syndrome

— Jessica Young, DVM

All horse owners at one time or another have heard the term “easy keeper”: a horse that can seemingly gain weight on nothing but air. The truth of the matter is that these “easy keepers” are horses that may be suffering from a newly recognized and very serious disease called Equine Metabolic Syndrome (EMS). EMS leaves horses very susceptible to developing a variety of very serious and potentially life threatening health problems including laminitis (founder).

WHAT IS EMS?

It is a syndrome that has been recognized in equine veterinary medicine with increasing significance since 2002. As of yet, while much is known about EMS, there remains many questions as to the exact cause of the disease. Horses that may be affected with EMS are those that suffer either from generalized obesity or regional obesity.

Regional obesity is characterized by excess fat deposits over specific locations in the body such as: the crest of the neck, shoulders, withers, tail head, and in the sheaths of geldings/stallions and the mammary tissue of mares. Mares with EMS may also cycle irregularly or not at all. In all horses with EMS there is a predisposition towards laminitis (founder) that develops without known causes such as grain overload, colic, or other systemic illness.

WHAT CAUSES EMS AND WHY DOES OBESITY PLAY A ROLE?

That is the question that many researchers are still trying to answer. Adipose tissue (fat) is no longer just considered unsightly to look at. It secretes hormones that can interfere with a variety of processes in the horse’s body including the action of insulin and the regulation of blood sugar. In general most horses with EMS suffer



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from insulin resistance (IR) where insulin is present in the body but no longer performs as it should. This ultimately results in a cascade of reactions that causes alterations in blood pressure and blood flow to various organs and tissues of the body, including the laminae of the hooves. This chronic state of IR in horses suffering from EMS is still being looked at as the possible reason for the development of laminitis.



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WHAT HAS CHANGED TO CAUSE THIS INCREASING PROBLEM OF OBESITY IN HORSES?

Environmental (feed intake, level of exercise) and genetic factors play a role in the development of regional and generalized obesity. It appears that horses with EMS have enhanced metabolic efficiency in terms of utilizing nutrients from feed. Horses evolved as grazing herbivores with forage (wild and native grasses) as their main dietary energy source. Horses developed a survival mechanism to be able to utilize their diet intake very efficiently during times of environmental stress (winter, drought). Under modern conditions where feed is plentiful year-round, and with increasing situations of reduced physical activity (stall confinement, “pasture pets”), these horses are especially prone to obesity. Genetic predispositions are also being increasingly recognized with breeds such as the Warmblood, Spanish Mustang, Paso Fino, Peruvian Paso, Morgan, and all pony breeds being more commonly affected. That said EMS has been seen in every type of equine regardless of breed.

TREATING THE DISEASE.

The co pt behind treating the disease is simple though the results often are not: less calories and more exercise. Dietary management of horses suffering from EMS

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involves lowering the NSC (non-structural carbohydrate or “sugar”) content of the diet. Reducing or taking away pasture grass from the diet is essential to the management of the disease as the digestible energy of the pasture grasses and the horse’s intake cannot be quantified. Removing grain products from the diet and switching to a hay-only diet that is low in NSC is also essential. Ideally the overall diet for the horse should contain only 10-12% NSC. Many types of hay (including grass hay) contain varying levels of NSC due to the type of forage in the hay, the growing stage/condition of the forage when it was cut, and the drying process. Hay with the lowest NSC should be fed and this can be calculated through laboratory analysis of a core sample of your hay. Soaking hay for 30-60 minutes in warm water and discarding the water prior to feeding is another way to lower the NSC content. This process may also leach vitamins and minerals from the hay, so it is important to replace those dietary components with products that are specifically designed to be low in starch such as forage diet balancers and low starch pelleted feeds. Horses with EMS can be turned out to pasture as long as they are wearing a grazing muzzle and prevented from eating fresh grass.

Consistent exercise is also another vital component to treating EMS. This is often hard to do as commonly the syndrome isn’t recognized until the horse is seen by a veterinarian because of laminitis or the sudden onset of front limb lameness and the horse is too painful to be exercised. It is important to recognize that your horse is overweight and may be suffering from EMS and get them on the correct diet and path to losing weight before they develop debilitating laminitis.

If you think your horse may be suffering from EMS, it is important to contact your veterinarian and get help in designing a correct feeding program. Restricting caloric intake too quickly and drastically can also cause serious health problems. It is important to analyze each horse individually and discuss diagnostic options with your veterinarian to decide on the best course of action to help them lose weight. The best way to keep your horse healthy is to watch their weight closely, provide them with plenty of exercise, and prevent the problem before it occurs.



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