# Equine Metabolic Syndrome (EMS) Factsheet

*Update April 2020*

EMS is a very common clinical condition used to describe horses that are obese, have abnormal fat deposition, insulin dysregulation and laminitis. Some breeds of horse, such as native ponies, are predisposed to this condition but their environment and management also plays a large role in the disease. The most common reason for insulin dysregulation in horses is obesity, similar to in humans. Increased insulin in the bloodstream has been shown to cause laminitis.

## The Cause

Typically horses with EMS will be overweight, with body condition scores of 7/9-9/9. They will often be described as a 'good doer,' gaining weight on seemingly very little food. Abnormal fat deposition is seen, most often with large fat pads on the neck, behind the shoulder, at the tail base and around the sheath.

Laminitis is a common sign in horses with EMS, often presenting quite mildly. Due to insulin dysregulation, your horse is more likely to develop laminitis after consuming large amounts of lush grass or concentrates.

Overweight with excessive fat on the crest, shoulders and flank

## How do you diagnose EMS?

The history and weight of your horse can often give a good indication, but sometimes signs are subtle. Endocrine (hormonal) causes of laminitis including EMS and PPID account for up to 90% of laminitis cases. It is therefore important to perform blood tests to confirm the presence of disease, and also advise us on the risk of developing laminitis. Resting glucose and insulin can be measured after a period of starvation, but a more accurate result can be achieved by performing an oral glucose test, where we test two hours after a high sugar meal (provided by the practice). There are other more accurate tests but these require a short visit to the hospital and so are not commonly performed.

## How do you treat EMS?

The mainstay of treatment is management - weight loss and exercise - this requires a lot of dedication and effort from you! Access to pasture should be restricted, such as with a grazing muzzle or a bare paddock; shorter time at grass in their normal field will not work. The diet should consist of soaked hay (for 30-60 minutes) and a vitamin/mineral balancer. When not suffering from laminitis, aim to exercise your horse every day as this will improve insulin sensitivity and aid weight loss. While not a replacement for management, some horses do require additional help. Metformin (a tablet used to treat Type II diabetes in humans) can be used in addition, or thyroxine for weight loss resistant animals.

## Will my horse get better?

If managed properly, your horse can regain insulin sensitivity and will be at a much reduced risk of laminitis. You will need to continue to manage your horse carefully for the rest of its life. Repeated episodes or chronic laminitis will lead to a poorer prognosis due to the damage caused to your horses feet - it is therefore important to recognise the condition early and start making management changes before lasting damage is caused.

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