



Horse Health:

Equine Metabolic Syndrome

What is it?

Equine Metabolic Syndrome (EMS) is a condition that's becoming increasingly recognised in horses and ponies, especially those prone to weight gain and laminitis. Understanding EMS is essential for keeping your horse healthy and managing their long-term wellbeing.

EMS is a **metabolic disorder** in horses and ponies that involves poor **insulin and blood sugar** control, **abnormal fat distribution**, and an increased **risk of laminitis**. In simple terms, horses with EMS struggle to regulate their blood sugar levels properly, which can lead to serious health issues, most importantly laminitis.

Insulin is a hormone that helps cells absorb glucose from the bloodstream after eating. In EMS, the horse's cells become resistant to insulin, meaning glucose stays in the blood longer. The body responds by producing even more insulin, which can have damaging effects - particularly on the delicate blood vessels in the hooves.

What causes it?

The exact cause of EMS isn't fully understood, but several contributing factors are known:

- **Genetics:** Certain breeds, especially hardy native ponies, are genetically predisposed. These animals evolved to survive on sparse grazing and now struggle when given rich diets and less exercise.

- **Diet and lifestyle:** Horses with regular access to lush pasture, concentrate feeds, and hay may consume far more energy than they need, leading to **weight gain and obesity**.
- **Fat as an active organ:** Fat tissue isn't just passive storage - it actively produces hormones and inflammatory substances that can worsen insulin resistance.

EMS is often compared to **Type 2 diabetes** in humans, where lifestyle and diet play a major role in disease development. While it is not identical, there are many similarities.

What horses are at risk?

While any horse can develop EMS, some are more susceptible:

- **Native breeds** like Welsh ponies, Shetlands, and cobs
- Horses with a **cresty neck** or fat deposits above the eyes and around the tail base
- Horses with a **history of laminitis**
- **Overweight or obese** horses
- Horses with **limited exercise** or turnout

EMS can also occur alongside **Pituitary Pars Intermedia Dysfunction (PPID)**, also known as equine Cushing's disease, especially in older horses.

What are the symptoms?

The signs of EMS can be subtle at first but often include:

- **Obesity**, especially with fat deposits in specific areas
- **Cresty neck**
- **Fat pads** above the eyes or around the tail
- **Recurrent laminitis**, even with minimal triggers
- **Lethargy** or reduced performance

Laminitis is often the first noticeable sign, and it can be severe. If your horse shows signs of foot pain, reluctance to move, or shifting weight between limbs, contact your vet immediately.

How is it diagnosed?

Diagnosis typically involves:

- **Physical examination:** Vets look for telltale signs like fat distribution and body condition.
- **Blood tests:** These assess glucose and insulin levels, and potentially an oral glucose tolerance test, to see how the body responds to sugar intake.
- **Additional tests:** Your vet may also check for PPID or take **x-rays** of the feet if laminitis is suspected.

Early diagnosis is key to preventing long-term complications and managing the condition effectively.

How can it be treated or managed?

Managing EMS focuses on **weight control**, **diet**, and **exercise**.

Weight reduction

- **Restrict grazing:** Use a muzzle or limit turnout to reduce sugar intake from grass.
- **Cut out concentrate feeds:** These are often high in sugar and starch.
- **Feed low-energy forage:** Hay may be soaked to reduce sugar content.
- **Use a balancer:** This provides essential vitamins and minerals without extra calories.

Exercise

- Regular, gentle exercise improves insulin sensitivity and helps with weight loss.
- If your horse is recovering from laminitis, exercise may need to wait until they're comfortable.

Medication

- In some cases, vets may prescribe metformin, a human diabetes drug, to help regulate blood sugar while the horse is unable to exercise.

Laminitis treatment depends on severity but may include:

- Box rest
- Pain relief
- Supportive shoeing or trimming

Equine Metabolic Syndrome is a serious but manageable condition. With the right approach to diet, exercise, and veterinary care, horses with EMS can thrive, although **laminitis** remains the biggest threat to quality of life and must be carefully managed.

The key is **early recognition**, **consistent management**, and **a tailored plan** that suits your horse's individual needs.

Can it be prevented?

Yes - EMS is largely preventable with good management:

- **Monitor body condition** regularly
- **Avoid overfeeding**, especially rich pasture and sugary feeds
- **Provide regular exercise**, even for retired horses

- **Choose forage wisely** - soaked hay or low - sugar options are best for at - risk horses
- **Know your horse's breed and risk factors** - native types need extra care

Prevention is especially important for young ponies and horses with a family history of EMS or laminitis. If you suspect your horse may be at risk, speak to your vet. They can help you develop a plan to keep your horse healthy and reduce the risk of laminitis and other complications.