

WHAT IS EQUINE METABOLIC SYNDROME (EMS)?

EMS can affect any horse or pony, but it's most commonly seen in those who are overweight. A key aspect of EMS is insulin dysregulation, meaning affected horses are at a greater risk of laminitis and other complex disorders. However, thankfully, it's treatable with a good weight management plan agreed in partnership with your vet.

SIGNS AND SYMPTOMS

EMS resembles Type II Diabetes in humans and the key signs include:

- Overweight or abnormal fat distribution (can occur even in animals of normal or low weight with unusual fat deposits)
- Insulin resistance (IR) with elevated insulin levels or insulin dysregulation
- Laminitis, from mild episodes to severe, persistent cases



Native British ponies are high risk, but EMS affects many breeds. Laminitis in EMS-prone horses is common in spring due to high-sugar grass increasing glucose and insulin and worsening IR. However, grazing alone rarely causes laminitis without an underlying condition; grass typically triggers excessive insulin release in already susceptible animals. Many horses have both Cushing's Disease and EMS and should be tested for both.

DIAGNOSIS

Collect thorough history, considering:

- *Feed type/amount
- *Pasture quality
- *Exercise level
- *Previous laminitis, bilateral foot pain
- *Links to feeding changes, new pasture, season
- *Family history of EMS



Clinical exam should assess:

- *Overall and regional fat accumulation
- *Body condition score (0-5)
- *Body weight
- *Neck crest adiposity (fat score)
- *Neck circumference
- *Fat at tail head, shoulders, prepuce
- *Signs of laminitis

Despite suggestive history and signs, the veterinary surgeon will confirm with laboratory tests:

Basal tests: Most cases of insulin resistance (IR) are diagnosed by measuring insulin and glucose in a single blood sample. Hyperinsulinaemia (>20 mU/mL) combined with high-normal glucose, without stress or pain, confirms IR. If laminitis is painful, delaying testing can be recommended.



Dynamic tests: If basal tests inconclusive, use oral/IV glucose tolerance or combined glucose-insulin tests (CGIT); horse must be pain-free and fasted.

TREATMENT & MANAGEMENT

EMS management focuses on lifestyle: diet and exercise, with medication as last resort.

Diet: Reduce weight and soluble carb intake, no pasture or grain/concentrate, feed 1.5-2% current bodyweight in soaked hay (8+ hrs soak), supplement vitamins/minerals lost via soaking and ensure protein requirements are still met.



Exercise: Begin only if pain-free. Regular activity e.g., start with 10 mins daily, progress to 20-30 mins riding/lunging 2-5 times/week, burns fat and improves insulin sensitivity.

Medication: Use if lifestyle changes are unsuccessful. Medication shouldn't replace dietary and activity adjustments.

Equine Metabolic Syndrome is a serious condition in horses that can trigger other diseases, making diet and lifestyle management essential for prevention. If you have questions or concerns, consult your veterinary surgeon.