



Equine Metabolic Syndrome Fact Sheet

What is Equine Metabolic Syndrome (EMS)?

EMS cases typically present as obese with large regional deposits of fat, insulin resistance and recurrent laminitis. EMS is most common in young to middle aged native pony breeds.

The owner will often describe the pony as a 'good doer' that puts on weight very easily, despite being on a restricted amount of food. EMS can be closely related to type II Diabetes in humans.

What is insulin resistance?

As in people, obesity is the most common cause of insulin resistance in horses. EMS cases have an inability to respond to insulin (hormone). Insulin is involved in the uptake from the bloodstream and storage of glucose in cells following eating.

This uptake then restores the blood glucose back to normal. With insulin resistance the body isn't responding to the insulin, therefore it attempts to resolve this by producing more and more insulin.

It is this increased level of insulin that tells us that resistance is occurring.

Clinical signs

- **Fat deposits (regional adiposity)** - often on the crest of the neck, the shoulders and tail base. Mares may have fat deposits in their mammary glands and in geldings/stallions a fat filled, enlarged sheath may be seen.
- **Laminitis** - it is unclear what the exact link is between EMS and laminitis but many of these cases will have recurrent laminitic episodes.

Diagnosis

Often we will suspect a diagnosis of EMS in obese ponies showing recurrent laminitis.

There are a variety of blood tests used try and diagnose EMS. These involve looking at blood glucose concentration, serum insulin and free fatty acid concentration. Ideally we will assess both glucose and insulin levels in a fasted animal to eliminate variations associated with digestion, which can be done with a simple blood test.

More advanced testing requires administration of glucose (oral or intravenous) and insulin and then blood sampling over the following hours. This is known as an intravenous or oral glucose tolerance test.

Treatment and management

The key to both treatment and management is exercise and weight loss. Obese horses should be fed solely on soaked hay, with no access to pasture. 1.5% of the IDEAL bodyweight should be fed daily until the desired weight has been reached.

As long as the pony is sound an exercise programme can be started. This should consist of 2-3 sessions a week of moderate exercise lasting 20-30 minutes. Intensity and duration can be increased over time as the pony becomes fitter and slimmer.

**PLEASE FEEL FREE TO CONTACT US WITH ANY
QUESTIONS ABOUT EMS - IT CAN BE A CONFUSING TOPIC
AND ANY OF OUR VETS WILL BE MORE THAN HAPPY TO
DISCUSS YOUR INDIVIDUAL HORSE WITH YOU.**

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