



Equine metabolic syndrome (EMS) is a recognised disorder of horses and ponies. It doesn't relate to one particular problem but rather, "A collection of risk factors that are associated with an increased susceptibility to laminitis."

A horse with EMS is quite often referred to as "a good doer" i.e. It seems to gain weight very easily on very little food intake. Those most susceptible seem to be the native breeds, ponies and donkeys in particular. In part, this may be due to an evolutionary trait that enabled them to survive in harsh conditions on poor/sparse pasture.



Insulin resistance

Insulin resistance is an important, central feature of EMS. Insulin is made and released into the body by an organ called the pancreas. For cells in the body to work they require energy in the form of glucose. Insulin signals to the body's cells and allows them to take up glucose from the bloodstream. If the body becomes insulin resistant then these cells no longer remove glucose from the bloodstream, which results in a high blood sugar (hyperglycaemia). The body responds to this increase in glucose in the blood by releasing yet more insulin from the pancreas thus causing a high blood insulin level (hyperinsulinaemia).

Diagnosis

The clinical history of an animal is often highly suggestive of EMS and will lead us to recommending certain blood tests which enable us to come to a definitive diagnosis and thereafter to discuss and work with you to manage the syndrome.

As indicated above, these blood tests involve looking at the levels of insulin and glucose in your horse's blood. The simplest blood test involves a one-off sample. However, due to the compensatory mechanisms of a horse's physiology, this test can sometimes be inconclusive. A better test- sometimes known as the oral sugar test- involves feeding a set dose of 'Karo lite syrup' and then measuring insulin and glucose levels in the blood 60-90 minutes later.

The type of clinical history that would lead us to recommend a blood test would include:

- recurrent bouts of laminitis
- enlarged fat deposits such as a large crest, shoulder fat pads, mammary gland, prepuce or tail base
- a low level of fitness and resistance to weight loss efforts

(It should be remembered that horses don't always read the text books so may show all, some or none of these signs. EMS has been recorded in some high-level competition warm bloods).

Managing the condition following diagnosis involves very careful control of diet, weight loss, exercise and sometimes medication.

