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Rogue Valley Equine Hospital

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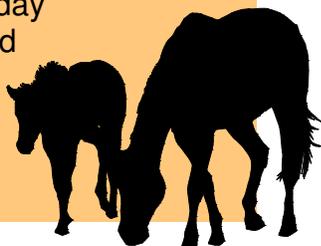
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In case of emergency:
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Office Hours

Monday-Friday
8 a.m. to 5 p.m.
Saturday
Closed



Equine Metabolic Syndrome

In the past decade a condition has been recognized with increasing frequency called equine metabolic syndrome (EMS), also sometimes called insulin resistance (IR) or peripheral cushings Syndrome. This condition previously was thought to be a manifestation of hypothyroidism, but it is now known to be unrelated to thyroid function. Affected horses are typically obese, 'easy keepers', capable of surviving on minimal caloric intake. Horses with EMS tend to have excessive fat deposits in the crest of the neck, over the gluteal region, and in the sheaths of geldings. Attempts to reduce the weight of EMS horses by limiting feed intake is often frustrating. A history of chronic laminitis or founder is a common finding.

EMS can appear in horses of almost any age, but most cases are seen in horses from 6 to 20 years old. Ponies, Miniature horses, Mustangs, Peruvian Pasos, Paso Finos, American Saddlebreds, European Warmbloods, and Morgans are the most frequent breeds reported.

EMS is very similar to human type II diabetes. Clinically, these horses consistently have elevated serum insulin levels and elevated blood glucose. Insulin is the hormone responsible for regulating glucose levels in the blood and facilitating its transfer into the cells of the body. Somehow, in these horses, the cells have become resistant to the effects of insulin, causing glucose levels to be abnormally high. Besides obesity, hyperglycemia results in many health issues for horses, including infertility in mares, and is thought to be one of the main factors in the pathogenesis of laminitis.

Metabolic Testing is Available At RVEH

If you believe your horse may be affected by EMS, having diagnostic testing done can answer many questions and enable you to initiate measures to prevent more serious health problems

Equine Cushings vs. EMS

Equine Cushings syndrome, more properly called Pituitary Pars Intermedia Dysfunction (PPID), is a related syndrome of older horses, and often appears with EMS. In advanced cases, a failure of the horse to shed its winter coat and a pot-bellied appearance are the most common signs. PPID is caused by an overproduction of ACTH, the hormone that stimulates the adrenal gland to produce cortisol, and the resulting excessive levels of this steroid in the horse's blood. PPID will be discussed in the next issue of this newsletter.

Diagnosing EMS

The most common screening test used for the diagnosis of EMS is a combination of fasting serum insulin and glucose levels. Horses should be held off feed for at least 4 hours before testing. A serum chemistry panel is often also done to evaluate serum triglycerides and liver function, which can be affected by the syndrome. Markedly increased fasting serum insulin and glucose levels in an obese, easy keeper is diagnostic for the syndrome. Marginal cases can be more accurately assessed using an intravenous glucose tolerance test, which measures a horse's ability to recover from a hyperglycemic episode.

Managing The EMS Horse

The primary goal of any management program is a reduction in obesity. This can be a challenge due to the tendency of these horses to put on weight on seemingly meager diets, but persistence and the implementation of a regular exercise program can result in a much healthier horse.

- Reduce caloric intake. Eliminate grains and as much sugar as possible from the diet. **NO SWEET TREATS!!** Low-carbohydrate feeds are now available. Hay can be tested to determine its sugar content and a low-carb hay can be used. Do not feed fat to these horses (rice bran, vegetable oil, etc.).
- Maintain a regular exercise program.
- Supplement with Chromium Picolinate (5-20mg/day). Chromium has been reported to increase the insulin sensitivity in some individuals. Supplement with Vitamin E (800-1000 units/day)
- Following an examination and testing, your veterinarian can help you formulate a diet and exercise plan and may prescribe other medications to aid in the control of the insulin resistance and obesity. like Metformin, a human drug for type-2 diabetes, or thyroid supplements (Thyro-L) to increase the metabolic rate to increase weight loss.

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Highlight a special interest mini-story or staff member with a bold photo and a small amount of copy.

Use this space to include timely horse health articles or stories about your clinic, staff or clients. Equine health articles can be purchased with your I-Bucks through the Partners In Practice Program Web site at www.Partners-In-Practice.com.

Highlight your special-interest story with a photo.

Story Headline Here

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Write a subhead.

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Write subheads to help break up the story and call attention to a particular segment.

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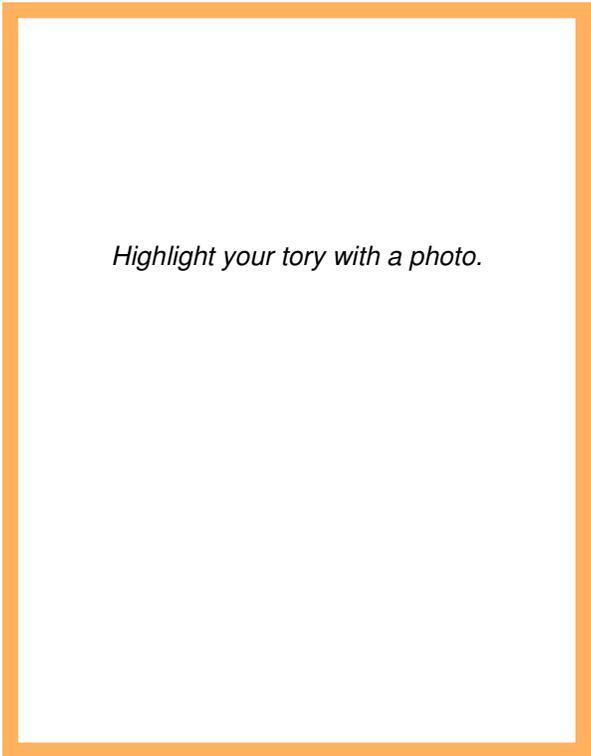
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