

Equine Metabolic Syndrome

By Ashley Phelps, DVM



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Equine Metabolic syndrome (EMS) is a clinical syndrome with increased adiposity, insulin resistance, and hyperinsulinemia, affecting horses, ponies and donkeys. The underlying cause of the syndrome is unknown. Typically, it first develops in horses between 5-16 years of age. Most common breeds affected include ponies, Saddlebred, Tennessee Walking horse, Paso Fino, Morgan, Quarter Horse, and Mustang.

The signs associated with EMS in horses include obesity, increase fat deposition in the neck and tail head regions, laminitis, hyperinsulinemia with normal blood sugar levels, infertility, increased appetite, and altered ovarian activity. For diagnosis, your veterinarian will most usually perform combined glucose-insulin test (CGIT), which requires blood to be obtained before a dextrose IV solution and insulin are given. Then blood will be obtained at certain time intervals after the injections.

Therapy is lifelong to improve the quality of life of horses diagnosed with EMS. Currently, there are no medications approved for the treatment of EMS in horses. Therapy and other management recommendations by your veterinarian may include:

1. **Dietary Management:** Restriction of carbohydrates is essential. Often pasture access is eliminated or highly restricted.
2. **Exercise:** Increasing the amount of exercise, if possible, can help with weight loss. However, if laminitis has occurred, exercise may be limited.
3. **Levothyroxine sodium:** It is prescribed to increase weight loss and thereby improving insulin sensitivity. It is unlikely to resolve clinical signs alone and must be paired with dietary management and exercise.



4. **Laminitis management:** Many horses diagnosed with EMS will also have laminitis. Your veterinarian may recommend corrective shoes and trimming, pain medication, or dietary changes if laminitis is present.
5. **Other Therapies:** Chromium, magnesium, cinnamon, and chasteberry (*Vitex agnus-castus*) may be recommended for the management of EMS. However, there is limited scientific evidence to support the use of these supplements at this time.

Management of EMS is lifelong but can be rewarding. Working with your veterinarian and farrier can provide many wonderful years with your horse.

References:

Frank, N., Geor, R., Bailey, S., Durham, A., & Johnson, P. (2010). Equine Metabolic Syndrome. *Journal of Veterinary Internal Medicine*, 24(3), 467-475. doi:10.1111/j.1939-1676.2010.0503.x

The PATH Intl. Equine Welfare Committee encourages positive and engaging educational exploration from our readers - we'd love to hear your feedback! Please let us know if you have any questions about our tip or have a suggestion about specific topics you would be interested in learning more about in the future. Email [Dr. Ashley Phelps](#), PATH Intl. Equine Welfare Committee chair. Thank you!