



Metabolize® Field Study

Poseidon Animal Health conducted a field study trial to test the safety, palatability, and effectiveness of our new product: MetaboLize®. This initial trial was designed by Associate Professor, Dr Melody de Latte of the Science Faculty at the Queensland University of Technology, who is an expert on disorders of metabolism and laminitis in horses. The trial was then conducted directly by Poseidon Animal Health's in-house Head Veterinarian, Dr Erin Roddy, DVM, Doctorate of Veterinary Medicine, Equine Focus, Bachelor of Science in Chemistry and Psychology. The study was performed with the prior approval of the Department of Primary Industries Secretary's Animal Care and Ethics Committee.

MetaboLize® Trial Methodology

Twelve ponies of varying ages, breed, and sizes were selected for the clinical trial. The ponies (n = 12) recruited for the study were of mixed breed (either Welsh pony or Australian Pony, or a cross of these two breeds), sex (4 female, 8 neutered male) and age (15.6 ± 1.4 years). The amount of exercise undertaken by each pony varied within the cohort, ranging from no exercise to 30 min of light work up to 4 times/week.

These ponies were privately owned and were kept in their normal home environment and in their normal (moderate level) exercise routine. The ponies all had their health and lameness assessed by a veterinarian at the beginning of the study and routine bloodwork was performed on all of the ponies. The ponies all received a grading from the veterinarian with regard to their body condition and the crestiness of their necks. The ponies were found to be of general good health although several suffered from Cushing's disease, chronic low-grade laminitis, and several had obvious fatty lumps and cresty necks. Several of the ponies had low to moderate grade lameness which were generally associated with their chronic laminitis. A few of the older ponies were noted to be depressed and lethargic, and one in particular was considered to potentially be at the end of its life.

For the first two weeks of the study the ponies were all fed a balanced diet low in starch and sugar designed by our in-house nutritionist but otherwise maintained their normal routine. Their behaviour and weight were monitored daily to ensure a smooth transition to the new diet.

At the end of the first two weeks the first glucose challenge test was performed. The ponies were fasted overnight, and their glucose and insulin levels were checked first thing in the morning. The ponies were then fed a meal of mainly sugar. After two hours (to allow the sugar to be absorbed from the gastrointestinal tract into the bloodstream) the glucose and insulin levels were checked again.



The result of this glucose challenge test was that all the ponies showed a marked increase in their blood glucose and insulin levels which is to be expected. At this stage in the study the ponies were reassessed by the veterinarian for general health, lameness, body condition score, and cresty neck score.

For the third and fourth weeks of the study all the conditions remained the same except that a dose of MetaboLize® was added to the ponies' feed once each day for these two weeks. As in the first half of the study the ponies' behaviour and weight was monitored daily for changes. The owners also monitored the palatability (willingness of the ponies to eat) of the feed with the Metabolize® added.

At the end of the second two-week period the glucose challenge test was performed again in exactly the same manner as at the end of the first two weeks. The ponies were also assessed again by a veterinarian for weight, lameness, body condition score, and cresty neck score.

MetaboLize® Trial Results

The results of the study were excellent. Within the two weeks of supplementation with MetaboLize®:

- There was a measurable decrease in the cresty neck score of the ponies.
- A majority of the ponies showed softening and decrease in fatty lumps.
- Several of the ponies with lameness issues were more free-moving and had more energy even within a few days of starting Metabolize®.
- The glucose challenge test showed a decrease in the blood glucose and insulin levels which is an indication that the sugar is being cleared from the blood and directed to muscle tissue instead of being deposited as fat.
- There were no issues with the supplement's palatability and all of the ponies happily accepted and ate their feed with MetaboLize® added.
- None of the ponies lost any weight or body condition despite seeing a reduction in their fatty deposits and cresty neck scores.

Overall, despite being a short trial with a small number of ponies, we achieved phenomenal results and saw no adverse effects whatsoever.



Trial References

Ahrens MJ, Thompson DL. Effect of emulin on blood glucose in type 2 diabetics. Journal of medicinal food. 2013;16(3):211-5. Epub 2013/03/01. doi: 10.1089/jmf.2012.0069. PubMed PMID: 23444965.

Carter RA, Geor RJ, Staniar WB, Cubitt TA, Harris PA. Apparent adiposity assessed by standardised scoring systems and morphometric measurements in horses and ponies. Veterinary Journal. 2009;179(2):204-10. doi: 10.1016/j.tvjl.2008.02.029. PubMed PMID: WOS:000263170100009.

Geor RJ, Harris P. Dietary management of obesity and insulin resistance: Countering risk for laminitis. Veterinary Clinics of North America-Equine Practice. 2009;25(1):51-65. doi: 10.1016/j.cveq.2009.02.001. PubMed PMID: ISI:000265278100005.

Carter RA, Geor RJ, Staniar WB, Cubitt TA, Harris PA. Apparent adiposity assessed by standardised scoring systems and morphometric measurements in horses and ponies. Veterinary Journal. 2009;179(2):204-10. doi: 10.1016/j.tvjl.2008.02.029. PubMed PMID: WOS:000263170100009.