Effectiveness of Grazing Muzzles on Reducing Weight

By Karen Richardson, BSc (Hons), MSc Equine Science, Richardson Equine Nutrition Solutions.

For many horses prone to obesity, laminitis or those that suffer metabolic disorders, such as insulin resistance, grazing pastures can be risky. General guidance for the management of such horses includes restricting pasture intake and confining the horse or pony to a small, bare paddock.

However, for some horse owners, these strategies may not be feasible, or they may prefer their horse to be in a larger paddock where it has the opportunity to exercise, forage naturally and socialise with other horses. For these horses, an alternative method to reduce pasture intake may be the use of a grazing muzzle, but just how effective are they?

At least two research studies have demonstrated that the pasture intake of horses and ponies wearing grazing muzzles was significantly reduced, compared to when they are not wearing muzzles. A study by Glunk, Sheaffer, Hathaway and Martinson (2014) showed an average of 30% reduction in pasture intake when horses were grazed on pastures with a sward height of between 15-20cm.

Longland, Barfoot, and Harris (2011) observed an average reduction in pasture intake of 83% when ponies were grazed on pastures with a sward height of 8-15 cm in height. However, both these studies only measured the effect of the muzzles on intake over three to four hours per day, not on total daily intake, and they did not assess the effect of wearing the muzzle on bodyweight.

Recently, Longland, Barfoot and Harris (2015) examined the effect of wearing grazing muzzles for 10 hours per day on ponies that were maintained at pasture for 24 hours a day on bodyweight. This scenario most likely simulates the real-life situation for many horse and pony owners.

Ponies were adapted to grazing and drinking through their muzzles before entering the study. Ponies were then allocated to one of two groups in a cross-over design study made up of two three-week periods.

In period one, one group wore the grazing muzzles from 8.00am until 6.00pm, followed by an un-muzzled grazing period on the same “Summer” pasture until 8.00am the following day, when the muzzle was re-applied.

The second group grazed the same pasture for the entire period with no muzzles. After three weeks, the groups switched treatments, whereby the first group was allowed to graze un-muzzled and the second group wore the muzzles from 8.00am until 6.00pm each day. Ponies were weighed at 7.30am and 6.00pm on alternate days and all ponies received the same light exercise three days per week.

The findings of this study showed when ponies were allowed to graze for 24 hours a day without a muzzle, their bodyweight increased. In this study, the ponies’ weight increased an average amount of 0.11% of their bodyweight per day. For a 350kg pony, that equates to an increase in bodyweight of about 1kg per day.

In contrast, when ponies wore the muzzles for 10 hours during the day, they lost weight. On average, the weight loss was equivalent to 0.04% of bodyweight per day. For a 350kg pony, that equates to a decrease in bodyweight of about 0.14kg per day. The difference in weight gain and weight loss between two treatment groups was found to be statistically significant.

Whilst this study showed that unrestricted grazing on “Summer” pasture will lead to weight gain, and wearing a grazing muzzle for 10 hours a day will slightly reduce weight, or at least maintain a relatively constant bodyweight in this population of ponies, it also demonstrated this strategy may not work for all horses and ponies.

One of the ponies in this study still managed to gain some weight once the muzzle is removed, and another pony gained weight during the muzzle-wearing period at a rate equivalent to grazing the same pasture without a muzzle. These observations suggest some horses and ponies may compensate for lost time eating once the muzzle is removed.

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Also, one other pony did not respond well to wearing the muzzle, and tended to spend extended periods of time withdrawn from foraging activities and was removed from the study. As horses will not voluntarily go without performing foraging activities for greater than 3.5 hours (average 2.5 hours per day), adverse effects on gut health, in addition to mental health, need also be considered, and grazing muzzles may not be the best solution for all horses and ponies.

For many horses and ponies, a grazing muzzle may be a suitable solution to weight loss or reducing weight gain. If a grazing muzzle is employed to reduce pasture intake, it is important the horse or pony is allowed a period of time to acclimatise to the muzzle and learns how to drink through the muzzle.

Bodyweight and body condition score should be assessed regularly to ensure the objectives of wearing the muzzle are being met.

To learn some helpful tips about introducing your horse or pony to wearing grazing muzzles, turn to Page 70 of this issue.

References


About the Author: Karen Richardson graduated from the Royal (Dick) School of Veterinary Studies, University of Edinburgh, with a Master of Science in Equine Science (Distinction). Prior to this, Karen worked in the pharmaceutical industry as a global project manager for clinical drug development. Now an independent equine nutrition consultant, Karen specialises in formulating diets for horses suffering nutrition-related disorders. Her interest focuses on the use of high-energy fibrous feeds in performance horse diets to reduce the incidence of nutrition-related disorders, maintain performance and improve welfare. For further information or to book a consult, go to www.richardsonequine.com.au.

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Slow feeder hay nets have also been found to slow down intake.

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Horses cannot perform normal behaviours such as all-grooming, while wearing grazing muzzles.

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