Today the number of horses and ponies that are kept for leisure purposes is increasing and this segment actually dominates the equine populations in developed countries (Agro et al. 2015). While this transition has improved equine welfare in many ways, the management practices have also resulted in a considerable increase in the amount of equine obesity. Obesity can create issues within animal welfare by reducing the function of internal organs, preventing proper thermoregulation and decreasing exercise performance (Argo et al. 2015). Obesity is also a known risk factor for other disease states such as insulin resistance and laminitis. The combination of these three problems is often called Equine Metabolic Syndrome. This paper is going to discuss a study done with horses to see if soaked hay diets can be used to promote weight loss in horses suffering from obesity.

Soaking hay in water is a common strategy that is used to manage some diseased horses. It has been found to be useful in horses diagnosed with laminitis, hyperkalemic periodic paralysis, polysaccharide storage myopathy, and chronic obstructive pulmonary disease (Martinson et al. 2015). The current recommendations for hay soaking include soaking the hay for 30 minutes in warm water or 60 minutes in cold water (Martinson et al. 2015). The hay is soaked to remove the water-soluble carbohydrates, potassium, and dust.

The addition of a soaked hay diets for the use of weight loss management in horses still lacks clinical evidence. In regards to Equine Metabolic Syndrome and obesity, weight loss management seems to be the basis for corrective treatments (Argo et al. 2015). One recommendation for Equine Metabolic syndrome is that obese horses should be given 1.5% of their ideal body mass as fresh hay daily and that when necessary, the hays should be soaked in order to reduce the non-structural carbohydrate content to be less than 10% (Argo et al. 2015).

The article states that there has not been any evidence to show what clinically safe rates of weight loss are in equine. For humans and other companion animal species, safe rates of weight loss are suggested to be between 0.5-2% of body mass in a week (Argo et al. 2015). One concern the article mentioned was if obese horses and ponies have a severe negative energy balance and rapid weight loss, this may cause triggers for potentially fatal hyperlipaemia (Argo et al. 2015). The individuals conducting the study wanted to make sure that the horses in the study were always monitored to prevent too rapid weight loss.

The main objective of the study was to evaluate the weight loss of animals offered soaked hay. Twelve privately horses and ponies of various heights and breeds were used from a population that was referred to the Philip Leverhulme Equine Hospital for the study and management of Equine Metabolic Syndrome. All
of the animals used in the study were mature horses and ponies that were overweight or obese with a body condition score between 7 and 9. The grass hay that was fed to the horses and ponies was from the same batch throughout the entire study. Each animals body mass was recorded weekly for the duration of the 6 week study. The soaked hay was fed at 1.25% of the horses and ponies body mass each day as dry matter before soaking. The target weight loss for each animal was 0.5-1% of its body mass each week.

The results of this study found that soaked hays used as the primary forage in obese horses and ponies was associated with an increase of weight loss compared to the predicted loss had the hay been fed fresh. The animals fed the soaked hay for 6 weeks ended up losing 0.98 +/- 0.10% of their body mass weekly. The most weight loss was around 2% body mass weekly. The following table shows the proportion of body weight that was lost in each animal during the study. The solid black lines show the animals that were fed the soaked hay diet, while the gray dotted lines show the animals fed a fresh hay diet.

![Graph showing body mass loss](image)

Conclusions from this study is that there is still more research that needs to be done with soaked hay diets for the use of weight loss in equine. However, this article did show promise for the use of soaked hay to manage diseases in horses that involve obesity.
