

Easy Keepers not so easy when it comes to laminitis risk.

As owners, we recognize ponies and some breeds of horses as “easy keepers.” Research now suggests this may be related to a higher incidence of laminitis (though this is something horse owners have probably known for a long time!).



So why is this? Why are these easy keepers so much more susceptible to laminitis? The production and action of insulin is a key factor which contributes to the higher risk of laminitis. Insulin is known for its role in regulating blood glucose levels, however it also promotes fat storage. And it seems that easy keepers release more insulin in response to certain feeds compared with other horse breeds.

An Australian study has shown that ponies and Andalusians exhibited a greater insulin response and increased body condition compared with Standardbred horses after consuming

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the same grain meal (high in starch; Bamford et al., 2016), thus demonstrating the different insulin responses between these breeds and the probable role insulin plays in fat storage.

Earlier studies showed that maintaining very high levels of insulin for 48 to 72 hours in otherwise normal ponies and horses reliably caused laminitis (Asplin et al., 2007, de Laat et al 2012).

So it seems easy keeper = higher insulin responses = increased susceptibility to laminitis.

It is likely these greater insulin responses stemmed from evolution where forage was sparse, of poor quality and at times infrequent. Under these conditions it was necessary for the “easy keepers” to release greater amounts of insulin to support and maintain body condition in tough times. At times when food was plentiful, greater insulin response promoted increased fat storage, which allowed breeds to survive harsh and extremely cold winters. While these responses were an evolutionary advantage, under modern day conditions it causes much frustration to horse owners where high calorie pastures rich in starch and sugars are abundant.

These genetic factors combined with modern day conditions often lead to laminitic episodes. The constant intake of pasture high in non-structural carbohydrate (NSC = sugars +starch) seems to be creating sustained levels of high insulin which is then likely contributing to pasture-associated laminitis. For today’s horse owners it turns out that “easy keepers” are not as ‘easy’ as the term suggests.

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