



Left or right handed horses

I attended the recent two-day Horses Inside Out 2013 Conference in the UK, which was aimed at riders, therapists, saddle fitters, riding instructors and students. It was like a Mecca for biomechanically-minded equestrian fans, and featured an array of professionals with more letters after their names than were included in their names, if you get my drift! International speakers like Dr Meike van Heel MSc BSc PhD and Professor Dr Lars Roepstorff DVM PhD, (movement scientist and biomechanist respectively) joined a host of physios, trainers, saddlers and vets to discuss the latest research in equestrian health.

One of the most fascinating elements I believe was research presented from the Netherlands, initially published in 2006 but seemingly not widely known of by horse owners, that involves uneven equine feet, and traces this condition back to foal-hood. Researchers found that asymmetrical hoof conformation is not hereditary, but that symmetrical conformation traits are. They also found that uneven equine feet are on the increase, and partly blame the recent fashion for pretty sports horses, bred with small heads and long legs and necks – we have all seen gangly foals spreading and crossing their legs in order to munch grass, but have we considered how it affects their conformation?

"Form follows function in development," reported Dr Meike van Heel. "You can get different hoof shapes caused by [foal] grazing behaviour. Aesthetic considerations drive what is popular in breeding."

Interestingly, this 'small head, long legs' fashion is also thought to lead to handedness, or laterality. Yes, horses can be right or left handed too!

Around half of the study foals showed handedness, and those that did had it from five-eight weeks of age. By the age of three, around a quarter of foals still had a preference. (This preference dropped when the young foals were stabled, as they had no need to graze). Researchers found that the stronger the animal's preference for handedness (left or right), the larger the amount of unevenness would be prevalent in their hooves. All of the horses that had laterality or handedness had the 'small

head, longer legs and tall frame' syndrome described, and all needed to spread their legs to graze.

This hoof asymmetry or unevenness is therefore said to be caused by the 'splayed legs' grazing stance – the preferred leg is out in front, and this is also the one that develops a lower hoof-pastern angle. By 27 weeks, hoof unevenness was found to be present, and it tends to become stronger over time. Researchers found that the study foals' trimming programmes did not affect the resulting uneven feet. "The farrier could not solve their unevenness problem," Dr van Heel said.

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So what is the outcome for these 'handed' foals? Their uneven feet lead to asymmetrical loading (body weight distribution), as the lower the hoof/pastern angle, the higher the load on their limbs and bodies. This can lead to strains on the navicular bone area and also the deep digital tendon. It may also lead to training issues.

"Long legged, big foals are predisposed to develop handedness," Dr van Heel said. "The subsequent uneven feet may create overload injuries. This handedness [that we are breeding in] may see beautiful horses, but not great athletes," was Meike's stark conclusion.

Isn't this fascinating? (You can search for the info online using the reference below.) We may all have a smile and a giggle at the baby horses getting into a pickle with their gangly legs as they try and graze in the field, but who knew that it could lead to physical problems later in life? It is wonderful that the world's equine experts are getting together to educate owners like us, and highlight how our breeding interventions are affecting horses' health. ●

REFERENCE: Equine vet. J. (2006) 38 (7) 646-651: 'Uneven feet in a foal may develop as a consequence of lateral grazing behaviour induced by conformational traits', Utrecht University, M. C. V. VAN HEEL et al.)