



Can we drive horses mad?

by Coralie Sopher, Equine Guelph

Dr. Daniel Mills, a specialist in veterinary behavioural medicine at the University of Lincoln, UK, believes we can and do drive our horses mad when we stable them for prolonged periods. At a recent seminar at the University of Guelph, sponsored by Equine Guelph, OVC Summer Leadership Program and the Col. K.L. Campbell Centre for Animal Welfare, Mills discussed behavioural problems and presented his research findings on the underlying causes of several common undesirable activities displayed by confined horses. Although the display of these behaviours may be undesirable to humans and might reduce the value of an animal, Mills questions whether or not they significantly harm a horse.

Stress and stereotypies

We all know what it feels like to be stressed, however, we often have difficulty recognizing this in horses. Not all stress is bad, but problems occur when it becomes excessive and the stressor cannot be relieved, leading to lack of control in the horse's environment. Mills suggested that decreased grazing, socialization and tactile contact in stabled horses are significant factors.

Stress responses may be physiological, physical or behavioural. Examples include increased heart rate and blood pressure, and stereotypic behaviour (stereotypies).

Stereotypies are repetitive behaviours that serve no obvious function and include weaving, box walking and cribbing. He added that there is no solid evidence to support that stereotypies are caused by boredom as previously believed, nor are they

learned or copied from other horses. Rather, the incidence of several horses exhibiting similar behaviours at a given facility is due to exposure to the same environment and management practices. Mills believes the presence of stereotypies in domesticated, but not wild horses, is a product of a man-made environment and are coping mechanisms for the animal. Horses have evolved as social herbivores and our provision of food and shelter

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among other physical items allows them to satisfy their physiological, but not behavioural needs, often leading to frustration.

Risk factors

Through extensive surveys and scientific research, Mills has identified risk factors associated with stereotypies. Factors contributing to weaving, for example, include decreased social contact with other animals, restricted exercise and turnout in areas less than four acres as well as anticipation of feeding. Additional factors include decreased hay as source of forage, feeding concentrates and using non-straw bedding.

Treating stereotypic behaviours

In order to prevent and treat stereotypies, one must remove the underlying causes, allowing the horse to have a greater control of his activities and reduced stress. Mills cautions against the use of methods aimed at physically eliminating repetitive behaviours. For example, he has noted that weaving bars on stall doors and collars on cribs do not eliminate weaving and cribbing, respectively, and tend to further frustrate and stress a horse. Mills

determined that increasing visual and social interaction among stabled horses is a key factor in treating stereotypies.

When studying stable design, he established that by increasing the number of windows, doors and between-stall grill openings significantly decreased repetitive behaviours. Stable size, however, and the use of standing stalls were not contributing factors to these behaviours. In fact, Mills stated that fewer stereotypies were evident in barns where horses were stabled in standing stalls. Significant reductions in stereotypies were routinely found to occur when several management changes were made, including increasing exercise, turnout time and paddock size, reducing concentrates and increasing forage and supplying straw bedding.

Encouraging redirection of energy into alternative activities was shown to reduce unwanted behaviours. For example, introducing feed balls into a stall was shown to reduce stereotypies in some horses, however, in others stable toys proved too challenging or threatening, therefore, increasing frustration and stress.

Reducing stereotypies

A mirror on a stall wall may greatly decrease or even eliminate a stereotypic behaviour in a horse by imitating visual contact with other horses and decreasing social isolation. In his studies using mirrors in the stalls of known weavers, Mills found that weaving behaviour as well as other activities such as nodding were greatly reduced and other routine activities such as feeding were unaffected.

Based on years of research, Mills developed the commercially available "Lincoln stable mirror." He cautions that, although these may be very effective, there are some horses that might respond aggressively and the mirrors should not be installed near feeding and drinking locations. Also, it is imperative that they are shatterproof and not too large to prevent the horse from feeling threatened. The horse must be able to escape the reflection in order to have a sense of control over its environment. In related studies, Mills established that a life-size poster of another horse's head was equally effective in increasing socialization and reducing stress.

Education is key

"Loving your horse is not the same as caring for your horse," said Mills, who said he sees "owners who love their horses, but with unhappy horses." He stressed there is a great need for education of the owners. If owners can understand the factors that cause stress in the horse, then many of the behaviour problems could be reduced or eliminated.



Equine Guelph is the horse owner and caregiver's centre at the University of Guelph. Equine Guelph is dedicated to improving the health and well-being of horses through the provision and promotion of research, performance and education. Visit www.equineguelph.ca for more information.