
Equine stereotypic behaviour is not a new diagnosis. Crib-biting, weaving, stall walking and self mutilation have been described - probably since the time that horses were first confined. The main difference is that these behaviours are no longer considered ‘vices’ that occur in a horse lacking in character. Instead, we now realise that these behaviours are a response of the horse to its environment, a response that may help the individual to cope with confinement (Broom and Kennedy 1993). There is evidence in pigs (Dantzer and Mormede 1983) and calves (Wiepkema 1987) that oral stereotypic behaviour reduces stress and pathology, but this has not been demonstrated in horses.

The quantitative impact of stereotypic behaviour on horses is being measured. In this issue (p86), McGreevy et al. (1995a) report that approximately 13% of Thoroughbred horses exhibit stereotypic behaviour (weaving, cribbing, wood chewing or stall walking). Other surveys have found incidences of 1-4% of English Thoroughbreds (Prince 1987), 2.5% of Italian Thoroughbreds (Vecchiotti and Galanti 1986) and 15% of Canadian horses of a variety of breeds (Luescher et al. 1991). The second quantitative measure is how much of the animal’s time is spent in stereotypic behaviour. Preliminary data indicate that stereotypic behaviours are not performed ‘all the time’ as many owners report. A mare weaved for 2 of 12 h and a stallion cribbed for less than an hour during 12 h of videorecording (Houpt and McDonnell 1993). These low rates may not interfere with the animal’s ability to perform or to rest.

The study of McGreevy and colleagues not only indicates how many horses are exhibiting stereotypies but also the factors associated with high incidence. The 3 most important factors appear to be visual and tactile contact with other horses, amount of forage and bedding material. Others have hypothesised that lack of contact with other horses and inadequate time spent prehending and masticating are causes of stereotypic behaviour (Ralston 1982). It is reassuring to find that this suggestion is supported statistically.

Because horses at grass spend so much time grazing, feeding many small meals has been advocated as better, i.e. more natural than 2 large meals. The results of the McGreevy survey indicated that multiple feedings are associated with an increase in stereotypic behaviour. This is probably related to food anticipation behaviour that occurs when the cue associated with feeding precedes the food. However, these authors report that feeding forage more than 3 times/day was associated with a reduction in the prevalence of abnormal behaviour. There may be a big difference between eating many small meals when the feed is always present in the pasture and waiting to be fed a small meal. Compare the behaviour of airline passengers awaiting their complimentary beverage with that of the same population sitting in their homes a few metres from their refrigerator. An interesting follow-up study should be made of differences in the behaviour and incidence of stereotypies in automatically fed vs. hand fed horses. The former may be less stressed than the latter.
The effect of bedding type is somewhat surprising. Horses do not prefer straw bedding to wood shavings as a place to lie (Hunter and Houpt 1989), but in the stables surveyed, straw also may be serving as a more adequate forage than other bedding types. It is interesting that large yards with more than 75 horses reported a low frequency of stereotypies. There are 2 possible interactions. One is that, when there are many horses, stereotypies are not noticed because each horse is not observed as frequently and, as noted above, the actual time spent stall walking, cribbing, etc. is low. The other explanation is that the large stable of horses may be an environment that does not induce stereotypic behaviour and, theoretically, is a less stressful one.

There have been important ‘break throughs’ in the past year in our understanding of these behaviours, one of which is reported in this issue (p92). Crib-biting has frequently been associated with aerophagia. In fact, wind-sucking is a common lay term for the behaviour. Now McGreevy et al. (1995b) have shown that, in fact, horses do not swallow air when they crib. Air is taken into the mouth and pharynx but not swallowed. Only if the horse ingests food or water shortly after cribbing will some air be pushed down the oesophagus. The endoscopic findings indicate that cribbing is unlikely to be a cause of flatulent colic. It is more probable that the horse cribs because it is experiencing abdominal discomfort than that the animal is swallowing enough air to produce gastrointestinal signs. Another recent and unexpected finding is that cribbing does not result in an increase in opiates in the horse’s peripheral circulation (Gillham et al. 1994). Instead, those horses that crib have a much lower level of β-endorphins than non-cribbing controls. When one tries to develop an hypothesis explaining the biochemistry underlying cribbing it is difficult to reconcile the low opiate levels in cribbing horses with the earlier finding of Dodman et al. (1987) that the opiate blockers such an naltrexone and nalmefane reduce cribbing.

The implications of McGreevy’s studies, reported in this issue, are that horses should be in visual and tactile contact with other horses, bedded on straw and fed a large proportion of their diet as forage in less than 3 meals per day. Although in some cases it is possible to change a horse’s environment or diet without interfering with its function as a performing animal, in many cases it is not. In these cases, the greatest need of the owner whose horses is demonstrating stereotypic behaviour is for suitable medication. By suitable we mean effective and economically feasible. The pharmaceutical industry may be able to develop drugs that can be used to attenuate stereotypic behaviour. The goal should be to reduce the horse’s motivation to crib bite or stall walk rather than to sedate the horse.