
**Summary**

Stereotypies are invariant and repetitive behaviour patterns that seemingly have no function, which tend to develop in captive animals faced with insoluble problems and may be indicative of reduced welfare. A 4 year prospective study of the factors influencing the development of stereotypic and redirected behaviours (abnormal behaviour) in a population of 225 young Thoroughbred and part-Thoroughbred horses was conducted between 1995 and 1999. Abnormal behaviour affected 34.7% of the population. Multivariable analysis showed that foals of low- or middle-ranking mares were less likely to develop abnormal behaviour than foals of dominant mares (rate ratio (RR) 0.23, P<0.01; RR 0.48, P<0.01, respectively). Weaning by confinement in a stable or barn was associated with an increased rate of development of abnormal behaviour, compared with paddock-weaning (RR 2.19, P4.05), and housing in barns, rather than at grass after weaning, was associated with a further increase (RR 2.54, P<0.01). Specific stereotypic and redirected behaviours were then considered as separate outcomes. Crib-biting was initiated by 10.5% of horses at median age 20 weeks, weaving by 4.6% of horses at median age 60 weeks, box-walking by 2.3% of horses at median age 64 weeks and wood-chewing by 30.3% of horses at median age 30 weeks. Wood-chewing developed at a lower rate in horses born to subordinate or mid-ranking mares than in horses born to dominant mares (RR 0.29, P<0.01; RR 0.41, P<0.01, respectively), and at a higher rate in horses kept in barns or stables rather than at grass after weaning (RR 4.49, P<0.001; RR 1.46, P41.001, respectively). Feeding concentrates after weaning was associated with a 4-fold increase in the rate of development of crib-biting (RR 4.12, P = 0.02). The results of this study support the idea that simple changes in feeding, housing and weaning practices could substantially lower the incidence of abnormal behaviour in young horses.