Natural horsemanship: Round-pen training of horses

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Abstract

The effect of round-pen training on the behaviour and physiological response (plasma cortisol concentration and heart rate) of 24 horses was examined using a stocks restraint stress test before, after and 3 weeks after round-pen training was carried out. Horses were allocated to treatment groups according to their ease of handling. Three treatment groups were formed, Control, Round-Pen Easy and Round-Pen Difficult (RP-D).

Before the treatment (round-pen training or control) there were no significant differences between the three treatment groups for plasma cortisol concentration and heart rate. Restraint in the stocks caused an elevation in plasma cortisol concentrations in all horses. The increase in plasma cortisol concentration was greater in the RP-D horses. A single round-pen training session was used as a treatment for the RP treated horses (Easy or difficult). Post-treatment most horses had a significant decrease in the time to enter the stocks, however, treatment had no significant effect on the plasma cortisol response, heart rate or behaviour of horses in each of the three treatment groups.

Round-pen training sessions were observed to see if the ease of round pen training was affected by either dominance rank or the behaviours observed during round-pen training. Despite the individual variation between horses, all horses followed a similar pattern of behaviour during round-pen training. There was no significant effect of social status on the ease of round-pen training.

The effect of dominance rank on the ease of handling, behaviours observed in the stocks and the plasma cortisol concentration during the pre-treatment stocks tests were examined. Horses that occupied the lower ranks were less easy to handle during the pre-treatment stocks test. The occurrence of some agitation and rest behaviours differed between horses of high and low dominance ranks. Dominance rank had no significant effect on the resting plasma cortisol concentration before treatment. Further research may clarify relationships between certain behaviours (head turning, head held up and defecation) and changes in plasma cortisol concentration during restraint, that could be used as non-invasive indicators of the onset of stress in the restrained horse.

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