

Changes in heart rate during the initial training period of three-year-old warmblood sport horse stallions

Alice Schmidt¹, Stefanie Neuhauser², Jörg Aurich², Jürgen Müller¹, Christine Aurich^{1,2}

¹*Graf Lehndorff Institute, Brandenburg State Stud, 16845 Neustadt (Dosse), Germany*

²*Section for Reproduction, University of Veterinary Science, 1210 Vienna, Austria*

The first weeks of training have been suggested to represent a stressful period for young horses. In general, training practises for horses have been questioned recently. Heart rate (HR) provides information on fitness of the horse but is also an indicator of stress or pain correlating with plasma cortisol concentrations. In this study, three-year-old warmblood stallions (n=8) were followed through a standardised 10-week classical training programme from lunging to first mounting of a rider and progressing to moderate work. Feed and management was similar for all horses. HR was recorded with a mobile recording System (Polar, Finland) fixed to a girth around the thorax of the horse and was monitored twice weekly from 30 min before to 30 min after training. In addition, cortisol concentrations were determined in saliva and faeces. Overall basal HR before daily training was 39 ± 2 (SEM) beats/min and did not change over the study period. Average HR during initial lunging (week 1) was 119 ± 14 beats/min and decreased to 95 ± 5 beats/min in week 2. Due to individual variations this decrease did not reach statistical significance. Neither first mounting of a rider (89 ± 10) nor an increasing workload (e.g. week 8: 111 ± 4) were associated with prolonged increases in mean HR, but transient increases were recorded and the response to mounting of the rider differed markedly between stallions. After daily training, HR decreased rapidly but was slightly, although significantly ($p < 0.05$, Friedman-test) higher than pre-work values (46 ± 2 beats/min). In conclusion, based on HR, the initial training of sport horse stallions in the classical German training system is not associated with major stress for the horse. The increase in HR during training is due to physical exercise itself and not associated with specific situations of training programme.

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