

# INCIDENCE AND RISK FACTORS ASSOCIATED WITH EXERTIONAL RHABDOMYOLYSIS SYNDROME IN STANDARDBRED TROTTERS IN SWEDEN

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**Aims:** (1) To determine the incidence of exertional rhabdomyolysis syndrome (ERS) in Standardbred trotters in Sweden; (2) to investigate risk factors and performance effects and (3) to determine whether ERS in Standardbreds is similar to reports of forms of the syndrome in other breeds. **Methods:** A telephone survey of 57 trainers with 1402 horses in training was undertaken to establish the incidence of ERS in the past year. A questionnaire-based case control study was then undertaken involving 22 trainers selected on the basis of their routine confirmation of positive ERS cases by measuring serum muscle enzyme activities. **Results:** The overall incidence was 4.1 cases per 100 horses (95% CI 3.1-5.1%) in the last year with 60% of trainers reporting at least one case. In the case control study, the incidence was 6.4 (95% CI 4.6 – 8.2%) per 100 horses. Mares (Odds Ratio 3.9 (95% CI 1.59-9.61),  $p=0.001$ ) and horses with a nervous temperament (Odds Ratio 5.02 (95% CI 2.24-11.27),  $p<0.001$ ) were significantly more frequently affected. Unlike for running starts, cases performed better from standstill starts ( $p=0.005$ ) than controls. On average, 7 training days were lost per episode with 63.6% of affected horses having more than one episode. 50% of cases were prevented from racing following an episode. There were no significant associations with age or other performance indicators. **Conclusions and Practical Significance:** ERS has a similar incidence in Standardbreds to previous reports in Thoroughbreds and shares risk factors of a nervous temperament and being female. Though further study including *in vitro* analysis is required, our results suggest that ERS in Standardbreds may have the same underlying genetic cause as ERS in Thoroughbreds and that the disorder may be amenable to similar management and prophylaxis strategies. **Acknowledgements:** Jagerso Veterinary Clinic, Malmo, Sweden and the Swedish Trotting Association.