



10th International Equitation Science Conference

Equine Stress, Learning and Training

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Social transmission of habituation from mares to their foals

Behavioural development of foals is strongly governed by the mare during early post-natal life. Scientist, researcher and conference Co-chair Janne Winther Christensen, PhD from Aarhus University, Denmark states that “it is possible to reduce the fearfulness exhibited by foals through social transmission from the mare early in the foal’s life”.

Christensen’s study of twenty-two pairs of mares and foals investigated whether mares can be used to modify fearfulness in foals via social transmission of object habituation (lack of reaction to new potentially fear inducing objects).

Pregnant mares were habituated to four standard fear-eliciting situations using desensitization methods and a combination of positive and negative reinforcement. The fear eliciting situations involved touching and walking over plastic on the ground, walking past colourful objects, having a plastic bag wiped over the body and having an umbrella held over the body.

The pairs of mares and foals were divided into CONTROL and DEMO groups. From birth to 8 weeks of age mares of DEMO foals demonstrated their habituation to the four

different situations (objects) for 10 min/day with the foal nearby who was loose and free to interact with the training objects in the test arena during the demonstrations. Mares of foals in the CONTROL group were handled in a similar way for the same amount of time in the arena but without any of the test objects (umbrella, plastic or bags) present whilst their foals were also loose nearby. The heart rate and behavioural reactions of all foals were recorded at 8 weeks and 5 months of age as they underwent standardized fear tests, which included the objects and situations that were present during demonstrations and completely new objects. At 8 weeks, heart rates and fear reactions of DEMO foals were significantly lower than in CONTROL foals for all fear tests; with DEMO foals exhibiting more exploratory behaviour in all tests, indicating that the DEMO foals had generalized their habituation to potentially fear inducing situations, including completely new objects, from their mothers. This effect was still seen at 5 months; with DEMO foals still showing reduced fear reactions, but not substantially lower heart rates than the CONTROL foals that had not been exposed to their mothers being habituated very early in their life. Christensen suggested that the effect was probably achieved through a combination of maternal transmission of habituation and individual foal learning.

Understanding and managing fearfulness in horses is important to both human safety and horse welfare.

The International Society for Equitation Science conference offers an outstanding international platform for scientists and professional practitioners to present and discuss research related to the field of equitation science. For more information about the conference, venue and programme: www.ISES2014.com

The International Society for Equitation Science (ISES) is a not-for-profit organisation that aims to facilitate research into the training of horses to enhance horse welfare and improve the horse-rider relationship.

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