



## **Equitation Science: ‘The Road Ahead’**

### **Pain should never be discounted as a cause of poor performance in equestrian sports**

Pain due to musculoskeletal injury is the most common cause of performance loss in equestrian activities. Early diagnosis of musculoskeletal injuries is more likely to result in successful treatment, which will improve horse welfare and the long term sustainability of individual horses. Many performance issues which initially present as training problems or are attributed to behaviour are likely to be pain related, reported Dr Sue Dyson at the 2012 International Society for Equitation Science Conference. Presenting the findings of a number of recent studies Dr Dyson, Head of Orthopaedics at the Animal Health Trust, Newmarket, identified many of the risk factors for pain related musculoskeletal issues which impact on horse performance.

“Conformation plays a significant role in determining the likelihood of an individual horse suffering an injury during its competition career” advised Dr Dyson. “Selecting horses with appropriate conformation can minimise the risk of those horses developing the common musculoskeletal injuries”.

Conformation issues of concern include straight hocks, a high croup relative to the withers and overly extended hind fetlocks.

“Horses with one or more of these defects are statistically more likely to suffer lameness which will affect their performance. Size is another risk factor for injury” noted Dr Dyson. “Larger horses - those above 16.3 hands appear more prone to injury of the limbs than smaller horses.”

Hoof asymmetry was also identified as a cause of increased incidences of lameness. Horses with asymmetric feet were considerably more likely to experience foot pain and have shorter competition lives.

Dr Dyson's team examined a number of horses which initially presented with behavioural problems and found that in most cases subclinical pain was the cause of the reduced performance.

"The evaluation of subtle variations in gait regularities can be difficult" noted Dr Dyson, "However pain should not be discounted as a cause of behavioural difficulties or a loss of performance. Just because a horse isn't obviously lame doesn't mean that it isn't experiencing some form of pain"

"Problems such as a sudden difficulty in performing flying changes, stiffness on one rein, alterations in rein contact or changes in head carriage may be signs of a musculoskeletal problem", advised Dr Dyson.

The correct management of performance horses including careful farriery for correct hoof balance, care in the choice of riding surfaces, protecting against over training and providing sufficient time for repair between episodes of strenuous exercise will help to reduce the prevalence of musculoskeletal problems in performance horses.

"Timing workouts" is critical noted Dr Dyson. "It's two days after the strenuous exercise that the muscle soreness sets in. We know to give the horse a light workout the day after heavy exercise, but we need to take care the next day as well". Progressively increasing the intensity of fitness workouts to allow the horse time to adapt as well as scheduling sufficient time for recovery and repair will reduce the likelihood of a horse developing muscle, joint or back pain.

Diet was also identified by Dr Dyson as an area of concern. "Many of the competition horses entering our clinic for lameness evaluations are obese" said Dr Dyson. "The extra weight carried by these horses puts additional pressure on their joints leading to increased wear and tear which results in lameness."

Dr Dyson noted that obesity is also likely to increase the risk of sub clinical laminitis which affects performance as well as causing the horse pain. The horse may not appear lame but will show a shortened stride or loss of freedom in their action.

In summary pain should never be discounted as a cause of poor performance in competition horses and sudden changes in behaviour should be clinically investigated to rule out a physical cause for the change. "A bridle lame horse is a lame horse" said Dr Dyson. A well formulated diet, turn out time, progressively scaled training, appropriate work surfaces and conformation suited to the tasks to be performed are all prerequisites for physical and mental soundness of the horse.

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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. [www.equitationsscience.com](http://www.equitationsscience.com)

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