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The unshod horse: A competitive disadvantage in dressage?

To shoe or not to shoe the performance dressage horse? Researchers Richard Mott and Julie Ellis from Warwickshire College, Moreton Morrell, Warwickshire, England believe that in order to make an informed decision on whether to shoe or not, it is important to weigh up potential costs and benefits. Comparing the kinematics of shod and unshod horses, Mott and Ellis found that performance of a dressage horse is unlikely to be affected by whether they were shod or unshod and that the unshod horse is not at a competitive disadvantage.

Twenty Irish Sport Horses with an average age of 13 years, of similar height and weight and used for general riding and dressage were conditioned to being either shod or unshod for at least the previous 12 months prior to the study.

Using high-speed video cameras the horses were recorded trotting in hand on a non-waxed fibre/sand arena surface. Five key dressage performance related indicators for gait quality (stride duration, fetlock extension, scapular rotation, elbow flexion and carpal flexion) were assessed for the shod and unshod horses. Additional stride parameters of

speed, stride length, maximum hoof vertical displacement and swing duration were also compared.

Whilst shod horses displayed reduced stride length and trended towards greater joint flexion, the only highly significant differences were in the carpal flexion and maximum hoof vertical displacement displayed. Unshod horses demonstrated less carpal flexion and less maximum hoof vertical displacement than shod horses. None of the other key dressage performance related indicators, stride duration, fetlock extension, scapular rotation and elbow flexion, showed differences according to whether the horse was shod or not. Mott and Ellis proposed that horses who had worn shoes for at least 12 months become habituated to the additional weight of shoes, and with the results of the study showing that shod horses did not display a significant difference in 4 of the 5 kinematic variables that correlate best with dressage marks, that shod horses do not have a competitive advantage over their unshod counterparts. These findings differ from previous findings that have shown that shoeing improves gait quality but at the risk of increasing concussion to the limbs.

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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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