To Determine the Effect of An Oral Joint Supplement on Orthopaedic, Physiotherapy and Handler Evaluation Scores in Horses

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Abstract

Introduction

Despite the range of oral joint supplements available, there has been very limited research into their efficacy.

Aims

To determine effect of an oral joint supplement on orthopaedic, physiotherapy and handler evaluation in horses.

Methods

Twenty-four mature horses were included in the study. Horses were excluded if they were in poor body condition, had health problems or greater than 2/5 lameness. Supplement S5 (containing chondroitin sulfate 1.62 g/100 kg bwt, glucosamine 1.9 g/100 kg bwt, vitamin C 0.8 g/100 kg bwt, methyl sulphonyl methane 2.56 g/100 kg bwt, DHA 0.66 g/100 kg bwt, EPA 0.34 g/100 kg bwt or placebo P (carrier/flavours only) were given to horses in their feed for 21 days each in a triple-blind crossover design; all horses received supplement and placebo in random order. Horses were evaluated at Days 0 (baseline), 21 (after first treatment) and 42 (after second treatment). Assessments included: clinical orthopaedic evaluation for straight line and lunging circle (walk and trot), and during ridden exercise (walk, trot and canter); handler field evaluation; during groundwork and while ridden, grading-specific criteria; grading of range of motion (ROM) and muscle tone based on standardised physiotherapy criteria. All evaluators were blinded to treatment. Significance indicates P<0.05.

Results

S was associated with significantly lower lameness grade in a straight line and circle than either P or baseline. Both S and P were associated with significantly improved ROM and muscle tone over baseline. Handler scores for ridden and groundwork were significantly higher with S compared with P or baseline. After S, horses were graded significantly higher for field ‘ease-of-movement’ compared with P or baseline.

Conclusions and practical significance

Oral administration of this supplement was associated with less lameness, improved ridden/groundwork scores and improved ‘ease of-movement’ in the field. Improvement in physiotherapy assessment with both treatments over time suggests effects of ongoing training on ROM and muscle tone.

Ethical animal research

This study involved informed consent of the persons responsible for horses used in the study. Sources of funding: World Horse Welfare. Competing interests: David Martin and Rebecca Frost are employed by Science Supplements. Vicki Adams and Rachel Murray are involved with Science Supplements on a consultancy basis.