EVIDENCE UPDATE – DISCOVER THE SCIENCE

Based on 15 years of scientific research, along with our ongoing commitment to research and trials, you can be assured of our dedication within the supplement industry. The recenlty published clinical study performed at Massey University is now available for you to read in full online. Additionally, in response to requests, we've also included independent clinical trials covering Green Lipped Mussel as an active ingredient, as well as Hyaluronic Acid.

A pilot study to detect the effects of a green-lipped mussel (Perna canaliculus) nutraceutical on working farm dogs with musculoskeletal abnormalities using accelerometry.

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ABSTRACT

Aims

To obtain preliminary data on changes in gait from the use of a green-lipped mussel (Perna canaliculus) extract product in working farm dogs with musculoskeletal abnormalities using accelerometry.

Methods

New Zealand working farm dogs (n=32) with signs of musculoskeletal abnormalities were enrolled in a double-blinded, placebo-controlled cross-over study. Each dog was allocated to one of six groups to receive three trial substances (180 mg full fat green-lipped mussel extract (GLME180); 220 mg full fat green-lipped mussel extract (GLME220); placebo) in one of the six possible different orders. Each trial substance was administered orally once a day for an 8-week period, with a 4-week washout in between each. Dogs wore a collar-mounted triaxial accelerometer for the study duration. Diet and activity were not controlled. Accelerations were recorded continuously and analysed (n=27) in 10-second activity epochs partitioned into daytime and night-time periods. Analysis of activity during the daytime period was limited to epochs when dogs were gaiting faster than a walk. The median and IQR of activity were determined for the daytime and night-time. Additionally, the 75th and 90th percentiles of daytime activity for each 24-hour period were determined. Mixed effects linear regression models were constructed to determine if each trial substance altered the response variables.

Results

During the daytime, the 90th percentile was higher when dogs were given GLME220 compared with the placebo (β coefficient 2.6; 95% CI=0.25–4.94; p=0.03). Dogs that started the trial with the GLME products had a higher 90th percentile activity compared with dogs that began with the placebo (β coefficient 26.26; 95% CI=0.45–52.06; p=0.046). The 75th percentile for activity was not affected by the GLME product. The daytime IQR was larger when dogs were given the GLME180 product compared with the placebo (β coefficient 1.25; 95% CI=0.12–2.37; p=0.03). Night-time median activity and the IQR was greater in dogs that started the trial with the GLME products than in dogs that began with the placebo. The night-time IQR for activity was greater for GLME180 than for the placebo.

Conclusions

Administration of a low dose of the GLME-containing product increased peak activity in working farm dogs with signs of musculoskeletal abnormalities and may improve their performance.

Clinical relevance

Even mildly affected working farm dogs might benefit from support of their musculoskeletal abnormalities, and this particular GLME-based product shows promise as an adjunct to other management strategies.

INDEPENDENT LITERATURE

Greenshell™ Mussels: A Review of Veterinary Trials and Future Research Directions

Eason CT, Adams SL, Puddick J, Romanazzi D, Miller MR, King N, Johns S, Forbes-Blom E, Hessian PA, Stamp LK, Packer MA.

Veterinary Sciences

2018 (5 (2): 36)

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Greenshell Mussel Products: A Comprehensive Review of Sustainability, Traditional Use, and Efficacy.

Miller MR, Abshirini M, Wolber FM, Tuterangiwhiu TR, Kruger MC

Sustainability

2023 (15 (5): 3912)

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A 2022 Systematic Review and Meta-Analysis of Enriched Therapeutic Diets and Nutraceuticals in Canine and Feline Osteoarthritis

Barbeau-Grégoire M, Otis C, Cournoyer A, Moreau M, Lussier B, Troncy E

International Journal of Molecular Sciences

2022 (23 (18): 10384)

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Absorption, uptake and tissue affinity of high-molecular-weight hyaluronan after oral administration in rats and dogs

Balogh L, Polyak A, Mathe D, Kiraly R, Thuroczy J, Terez M, Janoki G, Ting Y, Bucci LR, Schauss AG

Journal of Agricultural and Food Chemistry

2008 (56 (22): 10582-93)

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Evaluating Complementary Therapies for Canine Osteoarthritis Part I: Green-lipped Mussel (Perna canaliculus)

Hielm-Björkman A, Tulamo RM, Salonen H, Raekallio M

Evidence Based Complementary and Alternative Medicine

2009 (6 (3): 365-73)

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