

SYNOVIUM MOTION JMT

SYNOVIUM Motion JMT has scientifically proven to be the food additive for a long life supple moving horse. Motion JMT has a scientifically proven positive effect on joint motion. The combination of glucosamine and chondroitin has clinically shown to have a significantly effect on the length of the stride. This effect was clinically suggested after development and now also scientifically proven.

For longtime there has been a discussion what kind of glucosamine was best for the horse. In 2008 the results were published where it was proven that the sulfate form of the glucosamine had significant higher level in the synovial fluid compared to hydrochloride. Of course you will find the sulfate form in our Motion JMT since we want what is best for the horse. In studies we have found the minimal effective dose of glucosamine of minimal 12 gram a day to create an effect. Unfortunately there is no food supplement at the market which brings the horses the minimum of 15 gram pure glucosamine per day. Check at your stables the daily doses and find out yourself. Motion JMT brings the horses 15 gram of pure glucosamine sulfate a day.

Last but not least we found that MSM was responsible for positive results on oxidative stress biomarkers after jumping exercise. Since we have the knowledge and experience with horses that they are far more comfortable if there is no soreness in the joints, muscles and tendons. We know that a healthy joint will only work in combination with healthy tendons and muscles. To keep tendons and muscles free from oxidative stress we have added the MSM the Motion JMT as well.

Try the product yourself and feel relieved you do not waste your money on other supplements with no scientifically and significantly proven results!

1) SYNOVIUM Motion JMT does have an effect clinically proven in horses.

Equine Vet J Suppl. 2006 Aug;(36):622-5.

Double blind investigation of the effects of oral supplementation of combined glucosamine hydrochloride (GHCL) and chondroitin sulphate (CS) on stride characteristics of veteran horses.

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REASONS FOR PERFORMING STUDY:

Oral chondroprotective supplements are commercially popular for veteran (and other athletic or arthritic) horses prone to joint degeneration, yet lack conclusive scientific support.

OBJECTIVES:

To quantify the effects of an oral joint supplement (combination glucosamine hydrochloride (GHCL), chondroitin sulphate (CS) and N-acetyl-D-glucosamine) *in vivo* on stride parameters of veteran horses.

METHODS:

Twenty veteran horses were randomly assigned to a treatment ($n = 15$) or placebo group ($n = 5$).

Pre-treatment gait characteristics were recorded at trot using digital video footage (50 Hz). The range of joint motion, stride length, and swing and stance duration were assessed using 2-dimensional motion analysis.

Treatment (or placebo) was administered daily for 12 weeks at the manufacturer's recommended dosage. Gait was reassessed every 4 weeks using the pre-treatment protocol. Double blind procedure was implemented throughout. Relationships between variables were analysed using General Linear Model. **RESULTS:**

Differences occurred in the treated horses by week 8. Range of joint motion increased significantly in the elbow ($P < 0.05$), stifle and hind fetlock ($P < 0.01$). Stride length increased significantly ($P < 0.05$) with treatment. Swing duration was significantly increased at week 12 ($P < 0.05$), whilst stance duration remained constant.

CONCLUSION:

The oral chondroprotective offered symptomatic relief to veteran horses, evidenced by improved stride characteristics.

POTENTIAL RELEVANCE:

Oral GHCL and CS supplementation may improve welfare by alleviating symptoms of degenerative joint disease.

2) SYNOVIUM Motion JMT contains glucosamine sulphate instead of glucosamine hydrochloride.
Osteoarthritis Cartilage. 2008 Sep;16(9):973-9. Epub 2008 Mar 4.

Comparison of pharmacokinetics of glucosamine and synovial fluid levels following administration of glucosamine sulphate or glucosamine hydrochloride.

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Québec, Canada.

OBJECTIVE:

To compare the pharmacokinetics of glucosamine and the synovial fluid levels attained following treatment with glucosamine sulphate or glucosamine hydrochloride in a large animal model at clinically relevant doses.

METHODS:

Eight adult female horses were used. Crystalline glucosamine sulphate (Dona) or glucosamine hydrochloride was administered at a dose of 20 mg/kg by either intravenous (i.v.) injection or nasogastric (n.g.) intubation. Plasma samples were collected before dosing and at 5, 15, 30, 60, 120, 360, 480 and 720 min after dosing. Synovial fluid samples were collected from the radiocarpal joints within 48 h before dosing and at 1, 6 and 12 h post-dosing. Glucosamine was assayed by Liquid Chromatography Electrospray Tandem Mass Spectrometry (LC-ESI/MS/MS).

RESULTS:

Plasma concentrations reached approximately 50 microg/mL after i.v. injection and approximately 1 microg/mL after n.g. administration of both types of glucosamine. The median oral bioavailability was 9.4% for glucosamine sulphate and 6.1% for glucosamine hydrochloride. Synovial fluid concentrations were significantly higher at 1 and 6 h following oral treatment with glucosamine sulphate compared to glucosamine hydrochloride.

3) SYNOVIUM Motion JMT contains MSM

Acta Veterinaria Scandinavica 2008, **50**:45doi:10.1186/1751-0147-50-45

The effect of methyl sulphonyl methane supplementation on biomarkers of oxidative stress in sport horses following jumping exercise

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Abstract Background

Exercise induces changes in several organs and tissues, and this process might be due to oxidative damage caused by free radicals and inflammatory mediators. Methyl Sulphonyl Methane, better known as MSM, is a naturally occurring sulphur compound with well-known antioxidant properties. On the other hand, Vitamin C is important in limiting free radical damage in the aqueous phase of the cell, and cellular vitamin C status may be linked to the mechanisms involved in quenching cellular reactive oxygen species. The aim of this study was to determine if supplementation with MSM and vitamin C could alleviate exercise-induced oxidative stress in horses undergoing jumping competition.

Methods

Twenty four jumping horses involved in competition were used. Horses were given the following three treatment diets: control (without supplementation), MSM 8 mg/kg, and combined supplements (MSM 8 mg/kg + Vit-C 5 mg/kg). EDTA blood samples were collected before exercise, upon arrived to the schooling area (control), and each week after last show. Nitric oxide, carbon monoxide, lipid hydroperoxides and the antioxidant enzymes, glutathione

peroxidase, glutathione transferase and glutathione reductase, plasma levels were determined.

Results

Competition induced a significant increase in lipid peroxidation, nitric oxide and carbon monoxide. By contrary, reduced glutathione as well as antioxidant enzyme activities, were decreased. MSM administration significantly ameliorated all these exercise-related changes, and this effect was potentiated by Vit C reaching values in some of the parameters similar to those found before competition.

Conclusion

These results suggest that jumping exercise could induce harmful effects on horses, probably due to an increase in oxidative damage and proinflammatory molecules. In addition, we have demonstrated that MSM could exert some protective effect on oxidative and inflammatory exercise-induced injury.