## A natural supplement alleviates knee osteoarthritis symptoms: A controlled randomized pilot trial

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**Background and Aims:** In this study the effectiveness of treatment with a natural multi-ingredients supplement (Flexx®, contains seven herbal extracts plus Glucosamine/Chondroitin) on pain, joint mobility, and walking distance in subjects with mild to moderate knee osteoarthritis were evaluated.

**Methods:** Patients with mild to moderate osteoarthritis of the knees (n = 48) were divided to four double-blinded treatment groups: (A) Glucosamine sulfate (1500 mg/day); (B) Glucosamine sulfate/Chondroitin sulfate (1500/1200 mg/day); (C) Flexx® (two capsule/day); and (D) Placebo. Main outcome measures were Western Ontario and McMaster Universities (WOMAC) Osteoarthritis Index and 6 Minute Walking Distance (6MWD). **Results:** Forty patients completed the trial and the data analysis showed significant differences between the treatment groups for changing in WOMAC scores (p=0.006). But, also significant differences were found between the treatment groups at baseline for WOMAC scores and stiffness (p=0.0029 and p=0.015, respectively). Only the Flexx® and Glucosamine/Chondroitin groups demonstrated significant improvements in related symptoms over the time of the study. The Glucosamine group (like the placebo group) did not show any significant improvements in symptoms. Within group analysis demonstrated significant improvements over time on treatment for the WOMAC, activity, composite and stiffness (Flexx® only) scores as well as the 6MWD for subjects in the Flexx® and Glucosamine/Chondroitin treatment groups. The Flexx® and Glucosamine / Chondroitin treatment groups walked 30 meters (+8%) and 20 meters (+3.2%) extra respectively.

**Conclusions:** All treatments were well tolerated and the adverse events profiles were not significantly different between the treatment and placebo groups. This preliminary trial proposes that a natural multi-ingredients supplement (Flexx) may alleviate the pain and stiffness of knee associated by osteoarthritis over a treatment period of three months and is significantly more effective than placebo and Glucosamine alone and also justifies further study.

Keywords: Flexx; Glucosamine/Chondroitin; Knee osteoarthritis; WOMAC