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IS YOGA EFFECTIVE FOR KNEE OSTEOARTHRITIS IN OLDER WOMEN?

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Purpose: Although yoga is recommended as an exercise intervention to manage arthritis, there is limited evidence documenting its effectiveness in osteoarthritis (OA), with little known about its long term adherence and impact. This study's aims were to assess the feasibility and potential efficacy of a group-based Hatha yoga exercise program in reducing pain/stiffness, enhancing physical function, and improving quality of sleep/life in older women with knee OA.

Methods: A randomized controlled trial design with two arms was used: 1) a treatment group received the 8-week yoga intervention involving group-based and home-based exercise sessions, and 2) a delayed treatment control group. The inclusion criteria were: 1) Cognitive intact community dwelling women ages 65 years or older, 2) have physician diagnosed and symptomatic knee OA, 3) have not practiced yoga in the past 5 years; and (4) not currently participating in a supervised exercise program. Yoga poses that were used in previous OA studies and those currently recommended by the Arthritis Foundation were reviewed by a group of certified yoga instructors (n=5) for their appropriateness, feasibility, and safety. Participants completed a weekly 60-minute yoga group-based session led by a certified yoga instructor for 8 weeks, and were requested to practice four additional 30 minute home sessions/week. Outcome measures included: the Western Ontario and McMaster (WOMAC) Universities OA Index scale, the Short Physical Performance Battery, the Pittsburgh Sleep Quality Index, the SF-12, and the Cantril Self-Anchoring Scale which were used at baseline, 4 weeks (during active treatment), 8 weeks, and 3 months follow-up. The 3 month outcome was designed to evaluate the carry-over effects of the yoga intervention and long-term exercise adherence.

Results: A total of 36 older women were recruited. The average age of participants was 72 years (SD 5.6, range 65–86 years), with racial/ethnic backgrounds: White (86%), Black/African American: 11%, and Hispanic: 3%. Almost 40% of participants had a BMI of over 30, and 44% have 2–3 comorbidities. Preliminary results based on the first cohort (n = 18) revealed that OA symptoms were significantly different between the control and intervention groups at 8 weeks (p = .001). After the yoga intervention, both treatment and delay treatment groups demonstrated improvements in OA symptoms after 4 weeks (WOMAC global scores: t = - 2.64, p = .017) and after 8 weeks (t = - 4.47, p = .000). Changes from baseline for sleep and quality of life at 4 weeks and 8 weeks during the active treatment period (for both groups) were not significant. The majority of older women (n=13) participated ≥ 75% of classes, with common barriers being illness and lack of transportation. Older women practiced on average 112 minutes/week (mean adherence rate 47%) at home, 67% practiced ≥ 4 days/week and 44% practiced ≥ 120 minutes/week as recommended. No adverse events were reported during both class and home practice sessions. All 18 participants enjoyed the yoga intervention program and will recommend yoga to others.

Conclusions: A weekly yoga program with home practice appears to be a feasible, acceptable, and safe option for older women with knee OA that may lead to improvements in physical function, and less stiffness and pain. This study advances current knowledge on the use of yoga for OA management. Information gained from this pilot study will inform the design of a larger clinical trial testing its efficacy.

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CARDIOVASCULAR RISK FACTOR CHANGES FOLLOWING THREE DIFFERENT MAINTENANCE PROGRAMS IN OBESE KNEE OSTEOARTHRITIS PATIENTS AFTER A MAJOR WEIGHT LOSS: A RANDOMIZED CONTROLLED TRIAL

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Purpose: Obese patients with knee osteoarthritis (OA) should be encouraged to lose weight and maintain it at a lower level to obtain symptomatic relief of OA. As secondary endpoints in a knee OA trial our aim was to compare the changes in cardiovascular risk factors after 1-year of diet therapy or knee exercise vs. control in obese patients after a major weight loss. We hypothesized that a supervised dietary program, rather than an exercise regimen with the same amount of attention, would improve cardiovascular risk factors in obese patients with knee OA.

Methods: Obese individuals (>50 years) having knee OA (ACR criteria), were enrolled in a 16-week intensive weight loss program, provided a formula weight loss diet for 8-weeks followed by 8 weeks on a normal hypo-energetic diet. They were then randomized to either 1-year maintenance program with [D] continuous dietary support, or [E] a specialized knee exercise program, or [C] a control group receiving no support for one year. The amount of attention was exactly the same in D and E. The endpoints in this secondary data analysis are changes in waist circumference, number of patients characterized as having metabolic syndrome (MS; American heart association criteria, incl: central obesity, elevated triglycerides, too low HDL cholesterol, elevated blood pressure and blood glucose) and changes in vitamin D used as a novel risk factor of cardiovascular disease. The statistical analyses were based on the intention-to-treat population using non-responder imputation (BOCF) for missing data. Two sided significance tests were used throughout. We applied a likelihood-based approach to general linear mixed models, dealing with the repeated (longitudinal) measures in the statistical model.

Results: 192 participants, mean age 63 (SD 6) years, mean weight 103.2 (15.0) kg, and BMI of 37.3 (4.8) kg/m² were randomized (1:1:1; 64 patients in each group). The average baseline waist circumference was 111.3 (10.9) cm, average vitamin D was 48.2 (20.4) nmol/L, and the number of participants with MS in the groups D, E and C was 44, 43 and 44 respectively. Mean changes in waist circumference 68 weeks from baseline, in D, E, and C were -8.3, -4.6 and -6.9 cm, respectively (ANCOVA: P<.0001); D lost significantly more cm than did E: -3.7cm (95%CI -5.7;-1.7cm; P<.0004). Vitamin D increased in all treatment groups and in D, E and C the changes was 27.4, 18.0 and 20.1 nmol/L, respectively (ANCOVA: P=.0003); D experienced a significantly larger increase than E: 9.5 nmol/L (95%CI 3.6;15.3nmol/L; P=0.0015) Finally, the composite CV risk factor -the number of patients with MS at follow-up were 26 (41%), 33 (52%), and 33 (52%), respectively (P=0.33); apparently with no significant difference between D and E - although with a potential absolute difference of 11%point in favor of dietary maintenance.

Conclusions: Continued dietary support for one year after a major weight loss in patients with knee OA improved cardiovascular risk factors significantly more than a knee exercise maintenance program. Although the sustainability of weight loss and improvement of risk factors was significantly better in the diet group, this trial did not find evidence of a difference between continuous attention from a dietitian following a 1-year maintenance program compared to either exercise or no attention in terms of classification of MS. Relationship between self-reported disability and objectively measured physical capacity in patients with knee osteoarthritis.

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RELATIONSHIP BETWEEN SELF-REPORTED DISABILITY AND OBJECTIVELY MEASURED PHYSICAL CAPACITY IN PATIENTS WITH KNEE OSTEOARTHRITIS. A SYSTEMATIC REVIEW AND META-REGRESSION ANALYSIS.

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Purpose: To investigate the relationship between patient-reported disability and objectively measured physical capacity in patients with knee osteoarthritis (OA).

Methods: A systematic review and meta-analysis was performed based on published trials investigating exercise therapy identified by a comprehensive literature search. Eligible trials were randomized controlled trials comparing