Glucosamine appears to provide little benefit for chronic low-back pain

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Even though it is widely used as a therapy for low back pain, a randomized controlled trial finds that patients with chronic low back pain (LBP) and degenerative lumbar osteoarthritis (OA) who took glucosamine for six months showed little difference on measures of pain-related disability, low back and leg pain and health-related quality of life, compared to patients who received placebo, according to a study in the July 7 issue of *JAMA*.

"Osteoarthritis is a common condition that currently affects more than 20 million individuals in the United States, and this number is expected to increase," the authors write. "Low back pain is widespread and is the second most common concern expressed by patients in primary care. It poses a diagnostic and therapeutic challenge to clinicians due to the unclear etiology [cause] and the range of interventions with limited effect." Glucosamine is widely used as a treatment for OA, despite its controversial and conflicting evidence for effect, and is also increasingly taken by LBP patients, even though the evidence of its effectiveness remains inconclusive.

Philip Wilkens, M.Chiro., of Oslo University Hospital and University of Oslo, Norway, and colleagues investigated the effect of a 6-month intake of glucosamine in reducing pain-related disability by conducting a randomized, placebo-controlled trial with 250 patients older than 25 years of age with chronic LBP (for longer than 6 months) and degenerative lumbar OA. Patients took either 1,500 mg. of oral glucosamine (n = 125) or placebo (n = 125) daily for 6 months, with effects assessed after the 6-month intervention period and at 1 year. The primary outcome was pain-related disability as measured with the Roland Morris Disability Questionnaire (RMDQ). Secondary outcomes were numerical scores from pain-rating scales of patients at rest and during activity and a quality-of-life measure. Data collection occurred at the beginning of the trial and at 6 weeks, 3 and 6 months, and at 1 year.

At the beginning of the trial, the average RMDQ score was 9.2 for the glucosamine group and was 9.7 for the placebo group. The 6-month average RMDQ score was 5.0 for both the glucosamine and placebo group, and 1-year score was 4.8 for the glucosamine group, and 5.5 for the placebo group. No statistically significant difference in change between groups was found when assessed after the 6-month intervention period and at 1 year for RMDQ, and for measures of LBP at rest, LBP during activity and quality-of-life. Mild adverse events were reported in 40 patients in the glucosamine group and 46 patients in the placebo group.

"Based on our results, it seems unwise to recommend glucosamine to all patients with chronic LBP and degenerative lumbar OA. Further research is needed to clarify whether glucosamine is advantageous in an alternative LBP population," the authors conclude.

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