

A Mind-Body Program for Older Adults With Chronic Low Back Pain: A Randomized Clinical Trial.

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Abstract

IMPORTANCE: Treatment of chronic low back pain (LBP) in older adults is limited by the adverse effects of analgesics. Effective nonpharmacologic treatment options are needed.

OBJECTIVE: To determine the effectiveness of a **mind-body** program at increasing function and reducing pain in older adults with chronic LBP.

DESIGN, SETTING, AND PARTICIPANTS: This single-blind, randomized clinical trial compared a **mind-body** program (n = 140) with a health education program (n = 142). Community-dwelling older adults residing within the Pittsburgh metropolitan area were recruited from February 14, 2011, to June 30, 2014, with 6-month follow-up completed by April 9, 2015. Eligible participants were 65 years or older with functional limitations owing to their chronic LBP (≥ 11 points on the Roland and Morris Disability Questionnaire) and chronic pain (duration ≥ 3 months) of moderate intensity. Data were analyzed from March 1 to July 1, 2015.

INTERVENTIONS: The intervention and control groups received an 8-week group program followed by 6 monthly sessions. The intervention was modeled on the Mindfulness-Based Stress Reduction program; the control program, on the "10 Keys" to Healthy Aging.

MAIN OUTCOMES AND MEASURES: Follow-up occurred at program completion and 6 months later. The score on the Roland and Morris Disability Questionnaire was the primary outcome and measured functional limitations owing to LBP. Pain (current, mean, and most severe in the past week) was measured with the Numeric Pain Rating Scale. Secondary outcomes included quality of life, pain self-efficacy, and mindfulness. Intent-to-treat analyses were conducted.

RESULTS: Of 1160 persons who underwent screening, 282 participants enrolled in the trial (95 men [33.7%] and 187 women [66.3%]; mean [SD] age, 74.5 [6.6] years). The baseline mean (SD) Roland and Morris Disability Questionnaire scores for the intervention and control groups were 15.6 (3.0) and 15.4 (3.0), respectively. Compared with the control group, intervention participants improved an additional -1.1 (mean, 12.1 vs 13.1) points at 8 weeks and -0.04 (mean, 12.2 vs 12.6) points at 6 months (effect sizes, -0.23 and -0.08, respectively) on the Roland and Morris Disability Questionnaire. By 6 months, the intervention participants improved on the Numeric Pain Rating Scale current and most severe pain measures an additional -1.8 points (95% CI, -3.1 to -0.05 points; effect size, -0.33) and -1.0 points (95% CI, -2.1 to 0.2 points; effect size, -0.19), respectively. The

changes in Numeric Pain Rating Scale mean pain measure after the intervention were not significant (-0.1 [95% CI, -1.1 to 1.0] at 8 weeks and -1.1 [95% CI, -2.2 to -0.01] at 6 months; effect size, -0.01 and -0.22, respectively).

CONCLUSIONS AND RELEVANCE: A **mind-body** program for chronic LBP improved short-term function and long-term current and most severe pain. The functional improvement was not sustained, suggesting that future development of the intervention could focus on durability.

TRIAL REGISTRATION: clinicaltrials.gov Identifier: [NCT01405716](https://clinicaltrials.gov/ct2/show/study/NCT01405716).

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