

Title: Effectiveness of a standardized community-based exercise program for people with arthritis.

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Purpose: Arthritis is a major source of physical disability in the U.S. Well-controlled clinical trials demonstrate reduced impairments and improved function in people with a number of rheumatic diseases. The purpose of this study was to determine effectiveness of a standardized community-based exercise program developed and disseminated by the Arthritis Foundations (AF). **Subject/Methods:** Community dwelling adults (n=174) with a self-reported physician diagnosis of a rheumatic disease were recruited and enrolled. A randomized controlled trial compared exercise to no exercise and 8 weeks to 16 weeks. Participants were assigned to a delayed training group that exercised for 8 weeks after an initial 8 week delay (DTG=84) and a 16 week training group (TG= 90). Standardized outcome measures were selected to reflect stated program goals and content. Measures included self-reported and measured physical function, pain, fatigue, self-esteem and self-efficacy for arthritis symptom management. Data were collected at 8 and 16 weeks and six month follow-up by staff blinded to group assignment. Exercise instructors were trained according to the AF training manual. Class content was monitored for consistency and compliance. Analysis of covariance was used to determine between group differences. Effect sizes (ES) and confidence intervals were calculated for two-group comparisons. **Results:** The sample was 90% while female with diagnoses of osteoarthritis, systemic inflammatory diseases and fibromyalgia. TG and DTG were similar at baseline on all measures. Eight weeks of exercise compared to no exercise resulted in statistically significant and clinically meaningful improvements in self-reported function (p.001, ES.49); measured function (p.007, ED.39); pain (p.04, ES.26); fatigue (p.017, ES.34); and arthritis self management efficacy (p.007, ES.46). Sixteen weeks compared to 8 weeks showed similar between group difference in self-reported (p.019, ES.51) and measured physical function (p.013, ES.49), and arthritis self-management efficacy (p.024, ES.48). Retention at 16 weeks and 6 months was 86% and 82%, respectively. At baseline, non-completers reported more fatigue, lower self-esteem and physical function. At follow-up, improvements remained significant compared to baseline and there were no differences between groups. **Conclusions:** Participation in the standardized AF exercise program resulted in statistically significant and clinically meaningful improvements in pain, fatigue, function and self-efficacy for managing symptoms immediately following the intervention and at 6-month follow-up. **Clinical Relevance:** The incidence of arthritis, a chronic and potentially disabling condition will rise markedly in the coming decade. Evidence-based exercise programs appropriate for widespread dissemination are needed to complement therapeutic interventions and provide community-based referrals for health professionals.

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