

Hospital-based exercise programs benefit people with osteoarthritis

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A low-cost exercise program run by Hospital for Special Surgery in New York City has significantly improved pain, function and quality of life in participants with osteoarthritis, according to new research.

The study adds to the growing evidence that exercise is beneficial for [osteoarthritis](#) and shows that a hospital-based program can work. The study will be reported at the annual meeting of the American College of Rheumatology/Association of Rheumatology Health Professionals (ACR/ARHP), to be held Nov. 9-14, in Washington D.C.

The new study showed that the weekly exercise programs significantly improved enjoyment of life and balance, and decreased pain and the severity and frequency of falls. "When participants were asked to report their level of [pain severity](#), there were statistically significant reductions in pain from pre- to post-test. Pain is a huge factor in [quality of life](#)," said Sandra Goldsmith, director of the Public and Patient Education Department at Hospital for Special Surgery. "If we can offer classes that help to reduce pain, that is a good thing."

Roughly ten years ago, HSS launched its Osteoarthritis Wellness Initiative, which has grown to encompass both an educational component, including lectures and workshops, as well as [exercise classes](#). In the study to be presented at the recent ACR/ARHP meeting, Special Surgery researchers evaluated the effectiveness of the exercise programs on 200 participants.

The classes, which met weekly throughout the year, included [Tai Chi](#), yoga, mat and chair pilates, yoga-lates and dance fitness. Instructors who could tailor exercises for those with osteoarthritis and other musculoskeletal issues supervised the exercise programs. The researchers analyzed results from surveys that were administered before and after the exercise programs. The surveys included measures of self-reported pain, balance, falls and level of [physical activity](#). An 11-point numeric [pain intensity](#) scale was used to quantify intensity of muscle or [joint pain](#). The 10-point Brief Pain Inventory was used to measure pain interference on aspects of quality of life, including general activity, mood, walking ability, sleep, normal work (both outside the home and housework), and enjoyment of life.

In the sample of 200 participants, roughly 53% indicated that they experienced pain relief as a result of participating in the exercise programs. In fact, when researchers analyzed the subset of 66 participants who completed both pre and post surveys, a larger proportion, 62%, indicated they experienced pain relief after participating in the exercise programs. The level of pain intensity that participants experienced also significantly dropped from 4.5 to 2.7 in this group, where 0 was no pain and 10 was the worst pain imaginable. When researchers compared participants' estimation of how much pain interfered with various aspects of an individual's life, they identified a 54% improvement in general activity, mood, walking ability, sleep, normal work, and enjoyment of life.

"We asked participants to rate their balance, and we found a statistically significant increase in those who rated their balance as excellent, very good or good, from pre- to post-intervention, " said Dana Friedman, MPH, outcomes manager in the HSS Public and Patient Education Department. Fewer respondents reported falling from pre- to post-test (14.5% vs. 13.1%), as well as sustaining injuries that required hospitalization (12.1% vs. 10.6%).

Linda Russell, M.D., a rheumatologist at HSS who is chair of the Public and Patient Education Advisory Committee, points out that the classes are low cost for patients and the fees cover the majority of costs associated with offering these types of programs, including salaries for the instructors. "We like to get all of our patients involved in exercise, and if we can help with a low-cost alternative to exercising in New York City, because gyms are expensive, then it is wonderful," said Dr. Russell. "Patients benefit from supervised exercise programs with regard to their overall sense of well-being and pain due to their arthritis. We encourage other institutions to launch these types of program."

"We'd like to be a role model for other hospitals, showing them that offering this type of program can help their patients reduce [pain](#) and improve quality of life," said Ms. Goldsmith. "We are willing to discuss the details about how to start these programs."

All [exercise programs](#) were run through the HSS Public and Patient Education Department, which includes the Greenberg Academy for Successful Aging, a collaborative program between the HSS Public and Patient Education Department and New York-Presbyterian Hospital's Irving Sherwood Wright Center for the Aging.

Osteoarthritis is the leading cause of disability in the United States. According to the Centers for Disease Control and Prevention, an estimated 50 million U.S. adults, 22% of the population, suffered from osteoarthritis in 2009, compared with 46 million in 2003-2005. Arthritis affected the daily activities of 21 million adults in 2009. Body mass index influences the prevalence of arthritis; 29.6% of obese adults have arthritis.

Provided by Hospital for Special Surgery

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