



Evidence-Based Community Programs

Help Your Patients Take Charge

Fit & Strong! (F&S!)

F&S! is a group exercise program that combines strength training, aerobic conditioning, and arthritis self-management education. It was developed by researchers at the University of Illinois at Chicago (UIC). F&S! can increase physical activity levels, improve cardiovascular fitness, and reduce stress.

Encourage your patients to sign up for the program at a location nearby.

Who is it for?

- F&S! is designed for older adults with osteoarthritis, particularly those who have lower-extremity joint pain and stiffness.
- This program was developed to help people with arthritis make beneficial behavior and lifestyle changes.

How is it conducted?

- F&S! meets in groups of 20–25 people. Sessions are 90 minutes long and meet three times per week for 8 weeks.
- The first 60 minutes of a session are spent on stretching, balance, range of motion, endurance, and resistance exercises focused on the lower extremities. Resistance training involves the use of cuff weights and therabands provided by the facility.
- Specific exercises—such as sit-to-stand and floor-to-stand progressions and complex walking patterns requiring balance and agility—simulate daily activities. The goal is to help participants gain confidence and support their independence.
- During the last 30 minutes, participants learn problem-solving and other self-management techniques.
- Before the end of the 8-week program, participants meet one-on-one with the instructor to develop an individualized exercise plan they can maintain after the program ends.

What are the qualifications of the instructors?

- F&S! instructors are certified exercise instructors or licensed physical therapists.
- Instructors must complete an 8-hour training course taught by a F&S! master trainer.

What are the benefits?

- Preliminary studies suggest that F&S! can safely reduce symptoms of osteoarthritis and encourage participants to stay active.¹⁻⁴
- Benefits may last up to 12 months and include:^{2,4}
 - Increased physical activity levels
 - Reduced pain
 - Reduced joint stiffness
 - Increased confidence in ability to exercise
- No safety concerns have been reported in the literature.
- Participant feedback has been very positive. In evaluations done by UIC, 99% of participants said they benefited from the program and 98% would recommend it to a friend.⁵

Summary of the Evidence

Author, Year	Design	Participants	Outcomes
Hughes SL, Seymour RB, Campbell R. et al. (2004)	RCT* with wait-list control Outcomes assessed at 2 and 6 months	150 older adults with osteoarthritis in lower extremities	↑ ability to exercise, adherence to exercise ↓ pain and stiffness
Hughes SL, Seymour RB, Campbell RT. et al. (2006)	RCT with wait-list control Outcomes assessed at 2, 6, and 12 months	215 older adults with osteoarthritis in lower extremities	Outcomes sustained at 12 months: ↑ exercise efficacy ↑ self-efficacy over time
Seymour RB, Hughes SL, Campbell RT, et al. (2009)	Two-group comparison of instruction by PTs vs. certified exercise instructors Outcomes assessed at 8 weeks and 6 months	351 participants	Outcomes for both groups: ↑ lower extremity strength, physical function ↓ pain, stiffness Better self-efficacy for exercise in PT-led group
Hughes SL, Seymour RB, Campbell RT, et al. (2010)	Multisite randomized comparative effectiveness trial with repeated measures	486 older adults with osteoarthritis	Outcomes at 6 and 12 months: ↑ physical activity and functioning ↓ pain and stiffness ↑ muscle strength, exercise capacity ↓ depression, anxiety Greatest sustained improvements for people receiving phone followup to reinforce personal fitness plan

*RCT = randomized controlled trial

Selected References

- ¹ Hughes SL, Seymour RB, Campbell R, et al. Impact of the Fit & Strong! intervention on older adults with osteoarthritis. *Gerontologist*. 2004;44(2):217–228.
- ² Hughes SL, Seymour RB, Campbell RT, et al. Long-term impact of Fit & Strong! on older adults with osteoarthritis. *Gerontologist*. 2006;46(6):801–814.
- ³ Seymour RB, Hughes SL, Campbell RT, et al. Comparison of two methods of conducting the Fit & Strong! program. *Arthritis and Rheumatism*. 2009;61(7):876–884.
- ⁴ Hughes SL, Seymour RB, Campbell RT, et al. Fit and Strong!: bolstering maintenance of physical activity among older adults with lower-extremity osteoarthritis. *American Journal of Health Behavior*. 2010;34(6):750-763.
- ⁵ University of Illinois at Chicago. *Fit & Strong! Testimonials*. Available at www.fitandstrong.org/about/testimonials.html.

Fees and Location

F&S! is a low-cost program. Fees per session may vary by location. Check www.apta.org/Arthritis to find current locations.

For More Information

F&S! Program Web Site
www.fitandstrong.org

Centers for Disease Control and Prevention
www.cdc.gov/arthritis/interventions.htm