Fit & Strong!™ Fact Sheet

The Problem: Arthritis is the **most common cause of disability** among older adults in the United States. The most common form of arthritis, osteoarthritis (OA), is highly prevalent among older adults (1,2). OA in the lower extremity (LE) joints is particularly challenging. Pain in these joints leads to sedentary behavior, weight-gain, and total body deconditioning, which increases the risk for developing chronic diseases, falls, and death (3-5). Physical activity that targets strength is known to improve pain and function in this population; **however, 83% of older adults do NOT meet the recommended guidelines** for aerobic physical activity and muscle-strengthening activity (6). OA is costly; it is the **second most expensive condition** treated in hospitals and the **most expensive condition** billed to private insurance, largely due to costs of joint replacement surgery for persons with OA. The average cost in IL for either total knee or hip replacements is **$33,773 per person** (7,8).

A Solution. Fit & Strong! (F&S) is a **group physical activity and behavior change program** for persons with arthritis. The program consists of 24 sessions each 90 minutes. The first 60 minutes focus on flexibility, low-impact aerobics, and strength training to improve lower body function. The remaining 30 minutes consist of health education and group problem solving using a structured curriculum. Participants develop personalized action plans to maintain physical activity and progress after the class ends. F&S is **effective**, **engaging, and fun** – the program has **high retention and attendance rates**.

The Evidence: Published findings demonstrate that the 8-week F&S program **significantly improves physical activity engagement, lower extremity pain and function, lower extremity strength, mobility, and anxiety and depression** (9-12). These improvements were achieved at 8 weeks and **maintained out to 18 months**. These findings matter because impaired lower extremity strength is a risk factor for falls and decreased mobility is independently associated with decreased life expectancy (4). Mobility declines with age in older adults; F&S reverses this trend and improves quality of life in a very high risk population.

Current Capacity: F&S is currently offered by community sites across 32 states + DC. F&S is **recommended by** the Centers for Disease Control and Prevention (**CDC**) (13), the **National Council on Aging** (14), the **American Physical Therapy Association** (15), and is a **Research Tested Intervention Program** evaluated by the National Cancer Institute/NIH (16). **F&S @Home**, a new virtual/online version of the program, is now available as is a weight loss version, **F&S Plus** (12). New instructors can be trained online via our online instructor training website. A Hispanic version, **En Forma y Fuerte!,** of the program has also demonstrated substantial benefits and is also available (17).

Contact:

To find a Fit & Strong! class near you, or receive additional information, contact us at **fitandstrong@uic.edu or 312-413-9810.** Visit our website at: fitandstrong.org.

Fit & Strong!™ Fact Sheet

References

1. http://www.cdc.gov/chronicdisease/resources/publications/aag/pdf/2015/athritis-aag-508.pdf
2. http://www.cdc.gov/arthritis/data_statistics/arthritis-related-stats.htm
3. Dunlop, D. D., Hughes, S. L., Edelman, P., Singer, R. M., & Chang, R. W. (1998). Impact of joint impairment on disability-specific domains at four years. Journal of Clinical Epidemiology, 51(12), *1253-1261.*
4. Studenski, S., Perera, S., Patel, K., Rosano, C., Faulkner, K., Inzitari, M., ... & Nevitt, M. (2011). Gait speed and survival in older adults. Journal of the American Medical Association, 305(1), 50-58.
5. Sherrington, C., Whitney, J. C., Lord, S. R., Herbert, R. D., Cumming, R. G., & Close, J. C. (2008). Effective exercise for the prevention of falls: a systematic review and meta-analysis. Journal of the American Geriatrics Society, 56(12), 2234-2243.
6. Bennie, J.A., De Cocker, K., Teychenne, M.J. *et al.* (2019). The epidemiology of aerobic physical activity and muscle-strengthening activity guideline adherence among 383,928 U.S. adults. *Int J Behav Nutr Phys Act* **16,** 34. https://doi.org/10.1186/s12966-019-0797-2
7. Torio, C., & Moore, B. (2016) National Inpatient Hospital Costs: The Most Expensive Conditions by Payer. Statistical Brief #204. Healthcare Cost and Utilization Project (HCUP). Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs/sb204-Most-Expensive-Hospital-Conditions.jsp
8. Blue Cross Blue Shield. (2015). *A Study of Cost Variations for Knee and Hip Replacement Surgeries in the U.S*. Health of America Report. Retrieved from http://www.bcbs.com/healthofamerica/BCBS_BHI_Report-Jan-_21_Final.pdf
9. Hughes, S. L., Seymour, R. B., Campbell, R., Pollak, N., Huber, G., & Sharma, L. (2004). Impact of the fit and strong intervention on older adults with osteoarthritis. The Gerontologist, 44(2), 217-228.
10. Hughes, S. L., Seymour, R. B., Campbell, R. T., Huber, G., Pollak, N., Sharma, L., & Desai, P. (2006). Long-term impact of Fit and Strong! on older adults with osteoarthritis. The Gerontologist, 46(6), 801-814.
11. Hughes, S. L., Seymour, R. B., Campbell, R. T., Desai, P., Huber, G., & Chang, H. J. (2010). Fit and Strong: bolstering maintenance of physical activity among older adults with lower-extremity osteoarthritis. American Journal of Health Behavior, 34(6), 750-763.
12. Hughes, S. L., Tussing-Humphreys, L., Schiffer, L., Smith-Ray, R., Marquez, D. X., DeMott, A. D., ... & Fitzgibbon, M. L. (2020). Fit & strong! plus trial outcomes for obese older adults with osteoarthritis. The Gerontologist, *60*(3), 558-570.
13. http://www.cdc.gov/arthritis/interventions/physical-activity.html
14. https://www.ncoa.org/healthy-aging/falls-prevention/falls-prevention-programs-for-older-adults/
15. https://www.apta.org/uploadedFiles/APTAorg/Practice_and_Patient_Care/Patient_Care/Arthritis/FitandStrong.pdf
16. http://rtips.cancer.gov/rtips/programDetails.do?programId=2521570
17. Der Ananian, C., Smith-Ray, R., Meacham, B., Shah, A., & Hughes, S. (2017). Translation of fit & strong! for use by Hispanics with arthritis: a feasibility trial of¡ en forma y fuerte!. Journal of aging and physical activity, 25(4), 628-638.