

EnhanceFitness

Evidence-based Physical Activity Program for Older Adults

Website: www.projectenhance.org

Year Program First Implemented in Community Settings: 1997.

As of July 2017, 708 active sites. 1,249 unduplicated total ever-active sites.

Available in 40 states and District of Columbia.

Program Synopsis

- General description of program
 - EnhanceFitness is low-cost, evidence-based group falls prevention and physical activity program developed specifically for older adults. The exercises have been packaged into a formal regimen focusing on four key areas important to the health and fitness of mature participants: low impact cardiovascular; dynamic/static balance work, strength training and stretching.
 - Classes meet three times a week, an hour each session, providing social stimulation as well as physical benefits.
- Program goal
 - The goal of EnhanceFitness is to improve the overall functional fitness and well-being of older adults.
- Reasoning behind the program design and elements
 - Clinical researchers have proven unequivocally that physical activity reduces the risks of dying prematurely from heart disease, and of developing diabetes and colon cancer. It can help reduce high blood pressure for those who already have it, relieve feelings of depression and anxiety, help control weight, help build and maintain healthy bones, muscles and joints, and help older adults become stronger, more balanced, supple and more able to move without falling (Keenan & Hawkins, 2004).
 - Regular exercise in older adults improves energy metabolism, and vigorous resistance training substantially increases strength. Long- term controlled trials of exercise suggest that it reduces the loss of bone strength (Buchner & Wagner, 1992).
 - To address older adult physical activity needs, EnhanceFitness is multi-component and combines several key fitness areas: cardiovascular exercise, dynamic/static balance work, strength training and stretching.
 - EnhanceFitness can be tailored for specific chronic diseases (e.g., arthritis).

- EnhanceFitness is taught by a certified fitness instructor to ensure quality assurance and safety.
- Group participation and social interaction are often cited by participants as important dimensions of EnhanceFitness. Many participants have been attending classes for years, building a feeling of group cohesion among members. For example, participants may call another participant who stops coming to encourage them to return.
- Target population
 - Older adults, from the frail to the fit. The class can be taken seated or standing, and instructors are trained in how to modify the exercises to suit the varying abilities of participants.
 - Enrollees' physicians are informed in writing of their patients' upcoming participation in EnhanceFitness and are given the option of writing to the site if they believe that a patient should not participate.
- Essential program components and activities
 - Warm-up (5-8 minutes)
 - Cardiovascular workout (20 minutes)
 - Cool-down (3-5 minutes)
 - Upper and Lower Body Strength Training with weights (20 minutes)
 - Flexibility (8-10 minutes)
 - Balance training and Posture Review are included throughout
- Length/Timeframe of program
 - One-hour classes, 3 times per week. Classes are ongoing and are provided continuously all year long.
- Recommended class size
 - Maximum of 25.
- Desired outcomes
 - Increase strength and endurance
 - Maintain or improve physical function
 - Boost activity levels
 - Elevate mood
 - Decrease depression
 - Reduce falls risk
 - Lower healthcare costs
- Measures and evaluation activities
 - Outcomes testing is conducted in the first week of classes and repeated every four months. Tests include the Biceps Curl to test upper body strength, the 8-Foot Up-and-Go to test balance and mobility, and the

Chair Stand to test lower body strength. These are validated tests (Fullerton Fitness Test) as researched by C. Jessie Jones, PhD, and Roberta E. Rikli, PhD. Optional tests include the 6-minute walk, 2-minute step test, and the 1-leg stand.

- The EnhanceFitness Online Data Entry System (ODES) is a secure web-based data management and reporting system that EF affiliates may license to use to track and evaluate outcome measures, as well as to manage program implementation data. EF affiliates can generate real-time reports from EF ODES including:
 - Reports used for program evaluation and for participant coaching, such as attendance monitoring, fitness testing outcomes measures by participant and aggregated at the class, site or affiliate level.
 - Reports for class management, such as those showing which participants are missing enrollment forms; which participants are due or overdue for regular fitness checks (outcomes testing).
 - Aggregated reports at the class, site or affiliate level showing participant outcomes, attendance rates, class satisfaction survey results, demographic profiles of participants, rate of new enrollment and continuing utilization.
 - Sound Generations/Project Enhance and EF affiliates' Master Trainers also use reports on outcome measures and program implementation to monitor sites' fidelity to program protocols.

Health Outcomes and Evidence Supporting Health Outcomes

- In a 1994 randomized controlled trial, participants had significantly better scores on 7 of 8 SF-36 subscales (a standardized evaluation tool normalized for older adults) compared to controls. They also had fewer depressive symptoms than controls (Wallace et al, 1998). Note: EnhanceFitness later used the shorter SF-12 subscale for evaluation purposes during program dissemination, but no longer uses either the SF-36 or SF-12.
- A retrospective cohort study examined a demographically representative sample from a Washington State integrated health system of older adult participants in physical activity programs and their risk for falls requiring medical care between 2005 and 2011. In fully adjusted Cox proportional hazards models, consistent (hazard ratio [HR], 0.74; 95% confidence interval [CI], 0.63–0.88) and intermittent (HR, 0.87; 95% CI, 0.8–0.94) EnhanceFitness participation were both associated with a reduced risk of falls resulting in medical care.
- Data collected on over 14,000 participants since 2000 showed participants significantly improved ($p=0.01$) in the Timed Up-and-Go, Chair Stand, and Arm Curl measurements after four months compared to baseline measurements. (EnhanceFitness database, retrieved 7/5/2017)

Program Costs

- Please see www.projectenhance.org for most current cost information
- EnhanceFitness Package
 - Basic fee, Year 1: \$3,200. Package includes:

- EnhanceFitness license for one site (one-time fee per each additional physical site: \$500)
- 1.5 day EnhanceFitness instructor training for up to 15 instructor candidates
- EnhanceFitness Instructor manual for each instructor trained
- One Site Coordinator Implementation Manual per site
- EnhanceFitness marketing materials
- Secure Web site link to program resources
- Data collection forms
- One license for EF Online Data Entry System (ODES) for data entry, analysis, and reports. (Licenses for additional users cost \$200 per person per year.)
- Instructor support including moderated discussion group and newsletter
 - Annual License Renewal: \$50/site and \$200/ODES license
- EnhanceFitness Master Trainer Training
 - Basic fee: \$2,000. Package includes:
 - 2-day in-person Master Trainer training followed by a 1.5 day mentored New Instructor Training
 - Master Trainer Manual
 - Quarterly National Master Trainer Calls

Cost Benefit Analysis Results

- There are 2 Group Health Cooperative studies on EF; both used cost and utilization estimates from Group Health Cooperative administrative data. Inpatient utilizations, primary care visits, and three summary cost variables (total, inpatient, and primary care) were chosen for comparison.
 - From Group Health Cooperative Cost Analysis (Ackermann et al, 2003):
 - The average increase in annual total health costs of participants was \$642 compared to non-participant increase of \$1,175.
 - If attending class once per week, there was a 6% cost savings for participants compared to non-participants.
 - If attending class more than once per week, there was a 21% cost savings.
 - From Group Health Cooperative Cost Analysis (Ackermann et al, 2008):
 - If attending an average of one class or more per week, lower adjusted total healthcare costs were seen in Year 1 (-\$1,929) and Year 2 (-\$1,784) than nonusers.
- An analysis was done as part of an EnhanceFitness replication study in Hawaii.
 - From Cost Benefit Analysis (Sugihara et al, 2011):
 - Based on national reports of healthcare costs for the elderly, averting 20% of the costs for these 96 elderly would save \$344,256 per year.

The expected investment to return ratio, I-R ratio, for EF on Kaua'i is about 1-1.8.

- Centers for Medicare and Medicaid Services. Report to Congress: The Centers for Medicare and Medicaid Services' evaluation of community-based wellness and prevention programs under Section 4202(b) of the Affordable Care Act. 2013;4202:1–87. The CMS retrospective study (conducted by Acumen) used a retrospective cohort study design to investigate how Medicare beneficiary participation in each of the wellness programs that were examined was associated with health outcomes and resource utilization. Acumen obtained Medicare fee-for-service (FFS) claims data from 1999 through 2012. The outcomes evaluated during the year after program enrollment for EF were total medical costs, costs by Medicare setting (e.g., inpatient, emergency department, outpatient), health services utilization by Medicare setting, physical and occupational therapy use, and incidence of falls or fall-related fractures.
 - From CMS Retrospective Study (2013):
 - Participation in the program was associated with an estimated total medical cost savings of \$945. Specifically, participants in an unplanned inpatient setting saw savings of \$545 and those in a skilled nursing facility setting saved \$139.
 - Participation in the program helped decrease unplanned hospitalizations; one unplanned hospitalization was prevented during the outcome period for every 20-25 participants.
 - Participants saw a decreased mortality rate; 1.4% versus 2.9% among controls.

Resource Requirements

- Facility
 - Enough space for each participant to move around comfortably
 - A room with good lighting, a wooden floor (recommended), and good ventilation
 - Room temperature of 68-72 degrees
 - Area that does not echo
 - ADA accessible
- Equipment and materials
 - Adjustable ankle and wrist weight cuffs for a class of 20 (approximate cost for a class of 24: \$900)
 - Rolling cart for the weights
 - Secured room for storing the weights
 - Sturdy, armless straight-back chairs
 - Music
- Performance Measure Equipment:
 - Stop watch (smart phone application or other)
 - Five-pound and eight-pound hand-weights
 - Tape measure

- Cone (or garbage can or large water bottle)

Training Requirements

- Instructor training
 - Fitness instructors must be certified by a nationally-recognized fitness organization such as YMCA, ACE, or ACSM. They must also attend the required 1.5-day EnhanceFitness Instructor training. It is recommended that the class instructor and the site coordinator and/or manager attend the training.
- Instructor certification required?
 - Yes, they must be certified fitness instructors and attend the 1.5-day EnhanceFitness Instructor training.
- Instructor qualifications
 - Certified fitness instructor
 - Current CPR certification
 - Preferred (not required) qualifications:
 - 2 years group exercise leader experience or background in exercise science, physical education or related health field
 - Knowledge of older adults' needs and issues
 - Basic motivational techniques
- Number of instructors required per class
 - One

References

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