



What Works in Physical Activity Programs for Sedentary Older Adults? Best Practices Identified and Put in a Web-Based Directory

Evaluation of physical activity programs for sedentary mid-life and older adults: best principles, practices and programs

SUMMARY

Little is known about the effectiveness of community-based physical activity programs that serve older adults or the extent to which these programs use best practices. In this project, investigators at the National Council on Aging, in collaboration with researchers at the University of Illinois at Chicago and the University of Washington at Seattle, sought to identify and disseminate best-practice physical activity programs, study their impact on older adults and provide a directory of such programs.

Key Results

The investigators:

- Identified 10 physical activity programs employing evidence-based best practices.
- Disseminated best-practice components and principles via a series of seven issue briefs.
- Conducted a randomized control study of the impact on people age 50 and older of three of the physical activity programs employing best practices.
- Created [Active Options](#), a Web-based directory of resources and information regarding agencies that provide physical activity programs for older adults in 14 states.

Key Findings

- *Upper- and lower-body strength:* At five and 10 months after baseline, adults participating in best-practice physical activity programs scored significantly better than control group members on tests measuring upper- and lower-body strength.

- *Level of physical activity:* At five and 10 months after baseline, treatment group participants increased their frequency of physical activity by an average of 26 percent, compared with a 9 percent increase among control group participants.

Funding

The Robert Wood Johnson Foundation (RWJF) supported the project with two grants totaling \$2,399,192 from September 2002 through June 2009.

CONTEXT

In 2000, RWJF funded the National Council on Aging to survey community-based agencies regarding their health and social service programs for older people (grant ID#s 039022 and 041755). The 628 agencies responding provided services in four key areas:

- Social support
- Caregiving
- Chronic disease self-management and health promotion
- Physical activity

Among the survey's key findings:

- Of the four types of programming, physical activity programs received the lowest performance scores, but scored the highest for cost-effectiveness.

See [Grant Results](#) for more information about the survey.

At the time, physical inactivity and its consequences had become a priority for RWJF. As part of that focus, RWJF began by addressing the physical activity needs of older adults. Its projects were based on the *National Blueprint: Increasing Physical Activity Among Adults Age 50 and Older*, a national meeting and proceedings summarizing priorities for increasing activity among older Americans. See [Grant Results](#).

Initiatives funded in this area included:

- *Active for Life[®]: Increasing Physical Activity Levels in Adults Age 50 and Older*, a national program that studied how to deliver and sustain research-based physical activity programs in real-world settings so that large numbers of people could benefit from them. See [Grant Results](#).
- A social marketing campaign by AARP to get older people in Richmond, Va., and Madison, Wis., to be more physically active. See [Grant Results](#) for more information.

- A test of a 12-week physical activity program that combined aerobics, resistance exercise and motivational activities in a group of 340 low-income, mostly Black seniors in New York City. See [Grant Results](#).
- An AARP study about what motivates older adults to be physically active. See [Grant Results](#).

When Risa Lavizzo-Mourey, M.D., M.P.H., became RWJF's president in 2003, the focus on physical activity began to shift away from older adults and toward children, specifically increasing physical activity as a way to prevent childhood obesity.

THE PROJECT

The goals of this project were to:

- Identify and disseminate best-practice physical activity programs and programming principles that are critical for effectiveness and replication.
- Conduct a scientific study of the impact on older adults of physical activity programs that employ best practices.
- Provide a directory of community agencies that deliver physical activity programming for older adults in major metropolitan areas.

Nancy Whitelaw, Ph.D., senior vice president and director of the [Center for Healthy Aging](#) at the [National Council on Aging](#) directed the project. Whitelaw collaborated with investigators at:

- The Illinois Prevention Research Center at the University of Illinois at Chicago, one of 14 Healthy Aging Research Network (HAN) centers created by the Centers for Disease Control and Prevention (CDC).
- The [Health Promotion Research Center](#) at the University of Washington in Seattle. The Health Promotion Research Center is the lead agency for the national Healthy Aging Research Network.

Activities

Whitelaw and colleagues undertook several activities to achieve the goals of the project.

Identifying Best-Practice Physical Activity Programs

To identify physical activity programs employing best practices and principles, the National Council on Aging announced a competition at its joint national meeting with the American Society on Aging in February 2003. Competition entrants completed an application that included questions drawn from the literature about what constitutes effective and successful physical activity programming.

From the 83 entries, a team of external reviewers drawn from groups such as the Healthy Aging Network, the Centers for Disease Control and Prevention, the Center for Medicare & Medicaid Services, the National Recreation and Parks Association, the Active Aging Partnership and the Aging Network, selected 29 semifinalists. Selection criteria, developed after a review of the research literature on aging and physical activity promotion, included programs that:

- Served more than 300 different people age 60 or older each year
- Included multiple types of activities on a regular basis
- Had a solid history of physical activity programming
- Collected and evaluated outcomes data
- Retained participants or helped them remain active outside the formal program
- Demonstrated sustainability

Project staff interviewed staff at the 29 semifinalists by telephone, gathering additional information about the type and scope of services, staff and volunteer training, collection and use of data, management, sustainability and use of technology.

In September 2003, the council announced 10 best-practice “winners” and awarded each \$1,000. (See [Appendix](#) for a list of the 10 best-practice programs.)

Scientific Study of the Impact of Best-Practice Programs

The project team visited the 10 best-practice programs and selected three to participate in a rigorous impact study designed to answer: “Are the best physical activity programs in community-based organizations having a measurable impact on participants?”

The impact study targeted sedentary people age 50 and over who were able to walk independently and were not engaged in a regular program of exercise. Criteria for selection of the three study sites included:

- The strength of the physical activity program
- The existence of a “multiple component” activity program—one that provided flexibility, aerobic and strength training activities in a single class that met at least three times per week
- Ability to enroll a large number of new participants
- Heterogeneity across provider types

The project team selected three programs for the impact study:

- Goodman Rotary 50+ Fitness Program, Madison School and Community Recreation, Madison, Wis.
- Resources for Seniors, Inc., Raleigh, N.C.
- Senior Fit, Holy Cross Hospital Community Health, Silver Spring, Md.

Researchers interviewed and tested study participants at the beginning of the study (baseline) and then randomly assigned them to the treatment group (whose members participated in the “multiple component” activity program) or the control group (whose members could participate in any single activity program offered, but not the “multiple component” program).

Researchers then interviewed and tested all participants five and 10 months after baseline.

Enrollment occurred between August 2004 and March 2005. Some 544 adults participated in the study: 289 in the treatment group and 255 in the control group.

Web Directory of Agencies that Deliver Physical Activity Programming

The National Council on Aging subcontracted with the 14 universities comprising the Healthy Aging Research Network to conduct online surveys of physical activity programs taking place around their communities. It also contracted with the University of Washington Health Promotion Research Center to create a central Web directory that would house information about surveyed programs.

There were a number of challenges related to developing the Web directory. Whitelaw noted that the project team underestimated the complexities of developing a user-friendly Web site that could be used for data entry as well as data retrieval. In addition, much of the development work at the University of Washington was being accomplished by graduate students, whose work schedules did not promote efficient communication.

In 2007, the National Council on Aging subcontracted with the Seattle-based [Comprehensive Health Education Foundation](#) to relocate the directory, improve its functionality, pilot test the new platform and conduct focus groups to determine whether the directory should include programs serving groups other than elderly people. RWJF’s second grant to the National Council on the Aging (ID# 063345) facilitated the transition.

RESULTS

Whitelaw described the following results of the project in a report to RWJF:

- **The National Council on Aging launched an issue brief series to disseminate best-practices and evidence-based models.** The National Council on Aging used information from the best-practice program selection process to prepare seven issue briefs:
 - *Best Practices in Physical Activity*
 - *Designing Safe and Effective Physical Activity Programs*
 - *Recruiting and Retaining Effective Instructors for Physical Activity Programs*
 - *Keeping Current on Research and Practice in Physical Activity for Older Adults*
 - *Motivating Participants to Be More Physically Active*
 - *Recruiting Older Adults into Your Physical Activity Programs*
 - *Maintaining Participation of Older Adults in Community-Based Physical Activity Programs*

See the [Bibliography](#) for more details.

- **Created [Active Options](#), a Web directory to help older adults, providers and others identify appropriate and accessible physical activity programs in their communities.** Providers in the 14 states featured in Active Options complete periodic surveys describing their programs. An Active Options Community Champion, usually a staff member of a local Area Agency on Aging or health department, ensures that the information is accurate and publishes the data in a searchable, public database housed at the central Web directory.

FINDINGS

Susan Hughes, D.S.W., lead investigator for the impact study, reported the following findings in a 2009 article published in the American Journal of Public Health (abstract available [online](#)).

- **At five months, treatment group participants were significantly more likely than control group members to believe they would adhere to their exercise programs in the face of barriers and over time.**
- **At 10 months, treatment group participants sustained these improvements and also improved significantly in their perceived ability to achieve specified outcomes, such as increased upper- and lower-body strength and exercise participation.**

- **Treatment group members scored significantly better than control group members at the five- and 10 month follow-up tests on a number of measures.**
 - Performance on the timed “sit and stand” test and the arm-curl test improved for both groups relative to baseline, but the rate of improvement was significantly greater in the treatment group.
 - Treatment group participants increased their frequency of physical activity by an average of 26 percent over baseline, compared with a 9 percent increase for control group participants.
- **There were no differences between treatment and control group participants on measures of depression, body mass index, distance walked in six minutes, upper-body flexibility or weekly caloric expenditure.**

Hughes and colleagues offered the following conclusion from the impact study in the *American Journal of Public Health* article:

- **“Best-practice community-based physical activity programs can measurably improve aspects of functioning that are risk factors for disability among older adults.”**

LESSONS LEARNED

1. **Develop and utilize collaborative relationships to facilitate the integration of research and practice and influence national policies.** These relationships not only increase the likelihood that a project will succeed—they also increase the reach and impact of the work. The strong ties of the National Council on Aging “influenced national efforts at the U.S. Administration on Aging, the Centers for Medicare & Medicaid Services, the Centers for Disease Control and Prevention and the Environmental Protection Agency,” said Whitelaw, the project director.
2. **Consult with industry experts when incorporating new technologies into health promotion planning and programs.** This can be complicated because technologies are always changing and experts disagree on what is the best way forward. Nonetheless, it is important to engage industry experts as often as possible. (Project Director/Whitelaw)
3. **Plan for long-term sustainability.** RWJF and project staff originally thought [Active Options](#) would be part of the Foundation’s ongoing work on physical activity and aging. Since the Foundation dropped this priority, project personnel have been working to find other stakeholders. (Project Director/Whitelaw.)

AFTERWARD

In 2003, while this project was underway, the National Council on Aging received an award from the federal Administration on Aging to provide technical assistance to sites receiving funds under the administration's Initiative on Evidence-Based Practice in Preventive Health Care. The National Council on Aging used findings from its best-practice initiative and the impact study to help sites introduce best practices in their physical activity programs serving older adults.

[Active Options](#) continues as a Web directory but is not updated due to lack of resources. The National Council on Aging and Healthy Aging Research Network staff continue to seek means to update and expand the site.

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APPENDIX

Ten “Best Practice” Programs

Capital Senior Center
Columbia, S.C.

CareCard
Hospital of Saint Raphael
New Haven, Ct.

Chicago Fitness Plus
Chicago Department on Aging
Chicago, Ill.

City of Aurora Senior Services
Aurora, Colo.

Goodman-Rotary 50+ Fitness Program
Madison School and Community Recreation
Madison, Wis.

Health Connection
MU School of Health Professions
Columbia, Mo.

Johnson City Seniors’ Center
Johnson City, Tenn.

Lifetime Fitness Program
Senior Services of Seattle-King County, Seattle
Seattle, Wash.

Resources for Seniors, Inc.
Raleigh, N.C.

Senior Fit
Holy Cross Hospital Community Health
Silver Spring, Md.

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Keeping Current on Research and Practice in Physical Activity for Older Adults. Washington: The National Council on Aging, Issue Brief No. 4, Summer 2005.

Motivating Participants to Be More Physically Active. Washington: National Council on Aging, Issue Brief No. 5, Winter 2006.

Recruiting Older Adults Into Your Physical Activity Programs. Washington: National Council on Aging, Issue Brief No. 6, Summer 2006.

Checklist for Structured Physical Activity Programs for Older Adults. Washington: National Council on Aging, Summer 2006.

Maintaining Participation of Older Adults in Community-Based Physical Activity Programs. Washington: National Council on Aging, Winter 2007.

World Wide Web Sites

www.activeoptions.org “Active Options for Aging” on the Comprehensive Health Education Foundation (CHEF) Web site includes links for older Americans, links for provider agencies, and links for program administrators. The link for provider agencies allows agencies to complete surveys describing their programs and services. After information is verified, it is published on the Web site and becomes available to the public. Seattle: Comprehensive Health Education Foundation.