



Older Adults Can Get Moving: New Screening Tool Tailors Activities to Individual Needs

Assessing existing screening guidelines for physical activity

SUMMARY

In 2002, researchers at Texas A&M Health Science Center undertook a comprehensive overview of methods used to screen older people before they begin exercise regimens.

The purpose was to see what impact such health screens might have on either facilitating or impeding people from appropriate levels of activity.

Key Results

- The project team created an assessment tool for older adults called the Exercise/Physical Activity Assessment and Screening for You (EASY). According to the project director, it represents a paradigm shift in screening, changing the focus from excluding people from activity because of their physical condition to tailoring physical activity regimens to individual needs.

Funding

The Robert Wood Johnson Foundation (RWJF) provided a grant of \$99,838 from 2002 to 2005 to support this project.

THE PROBLEM

The U.S. Surgeon General's 1998 report, *Physical Activity and Health*, concluded that, "No one is too old to enjoy the benefits of physical activity." This message, however, sometimes runs counter to guidelines from national organizations such as the American College of Sports Medicine, the American Heart Association, and the Aerobics and Fitness Association of America that traditionally have recommended adults past age 40 or 50 get a health screening before starting a physical activity program.

Most of these screenings are designed to protect people at risk for a serious adverse event—such as a heart attack—in response to vigorous exercise. Yet many of them fail to identify this tiny subset of individuals, or conversely, result in high rates of false

positives, especially among older adults (Morey and Sullivan, *American Journal of Preventive Medicine*, 25:204–208, 2003).

Moreover, the guidelines may not apply to older people who simply want to increase routine daily activities such as walking or biking, and may scare some people away from physical activity of any type (Shephard, *Journal of Aging and Physical Activity*, 8:301–311, 2000).

Given that most adults are not meeting the recommended levels of physical activity (U.S. Department of Health and Human Services, 2000), it is important to review and assess existing guidelines to determine the extent to which they serve as a facilitator or barrier to engaging older adults into physical activity.

CONTEXT

This grant was made at the time RWJF had a program management team focused on health and behavior and active living. The team created an Active Aging portfolio of grants, including:

- *Active for Life: Increasing Physical Activity Levels in Adults 50 and Older*®. (For more information see [Program Results](#).)
- BluePrint for Promoting Physical Activity for Adults 50+.
- Best Practices for Promoting Physical Activity Programs.
- YMCA's program, Total Health+ for Sedentary Adults. See [Program Results](#) on ID# 044054.

These projects and programs were designed conceptually to be integrated and to work with RWJF's other projects in active living.

THE PROJECT

A team led by Professor Marcia Ory, PhD, MPH, of the Texas A&M Health Science Center, with a subcontract to Barbara Resnick, PhD, CRNP, of the University of Maryland School of Nursing, undertook a comprehensive overview and analysis of pre-activity screening practices to assess their usefulness and value, as well as the factors that influence the different approaches. The overview included several activities:

Literature Review and Interviews with Experts

The project team reviewed the literature regarding physical activity/exercise guidelines and the extent of adverse events associated with exercise interventions and different

screening approaches in older adults. They also interviewed selected experts in the field and disseminated an annotated bibliography to key players. (See the [Bibliography](#).)

Study of Screening, Safety and Adverse Events in Physical Activity Interventions

In 2003, researchers surveyed the procedures used to screen approximately 5,500 people at 11 different sites participating in the [Behavior Change Consortium](#).

The consortium was a four-year collaboration between the National Institutes of Health and the American Heart Association to fund investigations of innovative strategies aimed at achieving long-term healthy behavior changes in tobacco use, diet, exercise and substance abuse.

The different populations and settings across the consortium sites provided an opportunity for the team to gather comprehensive data about the occurrence of adverse events due to exercise interventions and screenings. Findings included:

- Only six sites had formal protocols for screening participants prior to starting an exercise program; three required medical clearance.
- No serious cardiovascular events were reported, independent of screening practices or exercise interventions.
- Relatively few musculoskeletal injuries did occur, emphasizing the need for awareness of these types of possible injuries during interventions.

The researchers published a paper about their findings in a 2005 issue of the *Annals of Behavioral Medicine*. (See the [Bibliography](#) for details.)

Study of Older Adults' Perspectives on Screening Prior to Initiating an Exercise Program

In 2003, the research team conducted four focus groups of 122 adults, ages 50 to 80, about their experiences with screening, and the impact it had on their willingness to engage in physical activity. The team recruited the participants, mostly African Americans (72%), from a continuing care retirement community, a senior-center exercise program, a faith-based exercise program and community exercise classes. Participants' opinions were mixed:

- Some felt a sense of safety from pre-activity screening because their instructor knew something about them when they began exercising.
- Those who were already active, or had regular health care, believed that screening was unnecessary, and that they would exercise no matter what.

The investigators published an article about their research in a 2005 issue of *Prevention Science Journal*. (See the [Bibliography](#) for details.)

Study of Health Care Practitioner and Researcher Perspectives on Physical Activity Screening Practices

In 2003, the project team held five focus groups of 42 health care practitioners and researchers—all experts in aging, primary care, exercise science or behavioral science—to explore professional perspectives about pre-activity screening for older adults.

The groups conferred about the rationale for and against across-the-board screening, examined inconsistencies between screening beliefs and practices, and discussed new ways to increase physical activity among older adults. The groups concluded:

- A paradigm shift is necessary in screening practices so that the focus changes from an "exclusions" perspective to an emphasis on individually tailored programs geared toward optimal physical benefits without the risk of an adverse event.

The investigators published an article about their research in a 2008 issue of *Critical Public Health*. (See the [Bibliography](#) for details.)

Roundtable Discussion on the Role of Pre-Activity Participation Screening in Older Adults

In March 2005, the team hosted a roundtable discussion in Washington with 17 experts, including representatives from the Centers for Disease Control and Prevention, the American Council on Exercise, the American Heart Association, the National Institute on Aging and the National Council on Aging. (See [Appendix 1](#) for list of participants.)

The meeting, designated as a [White House Conference on Aging](#), focused on new ways to encourage older Americans to engage in routine moderate-intensity activity without mandatory screening, and the barriers that exist to changing the status quo. Participants concluded:

- It is much more dangerous to be sedentary than active.
- Algorithms and new tools are needed that focus on injury prevention and risk management to help professionals tailor activity programs to an individual's needs.
- Fear of litigation (in case of injury or death) explains why exercise program providers adhere so loyally to across-the-board screening, even without evidence that it keeps older adults safe. (See [Appendix 2](#) for full list of findings and recommendations.)

Expert Panel Discussions to Explore Possibility of Creating a New Tool

Building on the findings from all of the research activities, the project team established an interdisciplinary expert panel with many of the roundtable participants to help develop a simple new tool that would:

- Provide a quick assessment of health problems.
- Provide initial strategies for tailoring an exercise program to an individual's health conditions.
- Offer safety tips to minimize potential health risks.

Investigators have published six articles on the project, as well as compiling an annotated bibliography. They have completed one other manuscript, and are working on a legal case review that, according to Ory "will debunk the myth that legal suits are prevalent for those encouraging older adults to be more active." (See the [Bibliography](#).)

RESULTS

The project yielded the following results:

- The project team created the Exercise/Physical Activity Assessment and Screening for You (EASY) assessment tool for older adults. (See [Appendix 3](#) for details.) The six questions in the tool help older individuals, their physicians, and/or providers of exercise programs identify an activity regimen suited to their health conditions, illnesses or disabilities.

A manuscript of the tool was published in 2008, and a Web version, with links and resources, is available. (See the [Bibliography](#).)

SIGNIFICANCE TO THE FIELD

According to Project Director Ory, the change from excluding older people from physical activity to tailoring regimens to their individual needs represents a paradigm shift for the field.

LESSONS LEARNED

1. **Build a broad-based team of experts to provide input, achieve buy-in from key organizations and create change.** Roundtable participants included representatives from federal agencies and influential advocacy organizations. (Principal Investigator; Program Officer)

AFTERWARD

The research team is developing a document to explain and publicize the EASY tool. The team will distribute it through organizations such as:

- AARP
- American College of Sports Medicine
- American Heart Association
- International Council on Active Aging
- National Blueprint for Promoting Physical Activity
- National Institute on Aging

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APPENDIX 1

Roundtable Participants

(Current as of the end date of the program; provided by the program's management; not verified by RWJF.)

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APPENDIX 2

Roundtable Discussion Highlights

- ***Priority Issue 1: The New Screening Paradigm: From Screening to Tailoring***

Because research exists that calls into question the need for mandatory screening, roundtable participants focused on what could be done to encourage and enable older Americans to engage in more routine, moderate-intensity physical activity, while eliminating the need for mandatory screening.

New tools would focus more on injury prevention, risk management and matching physical activities to the kinds of activities of daily living in which the person wishes to engage.

Barriers

- Existing screening and exercise guidelines come from many sources, but there is not a standard guideline agreed upon by all of the major health organizations.
- Studies have shown that the primary source of health information for older adults is the physician. Yet many experts at the roundtable, some of whom were physicians, felt that physicians lacked the information to help create a new paradigm wherein screening is augmented by helping patients identify and learn to do the exercises that are best suited to their respective conditions.
- Although mandatory screening may be unnecessary for most persons, there are some high-risk groups of older adults who would benefit from screening-like activities, as well as general guidance on physical activity from their physicians and from national organizations.

Recommendations

- Evidence-based review bodies, such as the United States Preventive Services Task Force, should evaluate the scientific evidence for various existing screening recommendations.

- Those groups that have established the existing physical activity pre-screening guidelines should work together to establish a combined position statement on pre-activity screening. To this end, these groups should limit mandatory testing to those for whom testing has provided demonstrable benefit.
- Algorithms and tools that would enable health professionals and exercise providers to better tailor exercise programs and recommendations to individual needs and preferences should be created.

- ***Priority Issue 2: Dissemination of Best Practices***

The roundtable participants agreed that spreading the message of the benefits of regular physical activity, as well as the dangers of staying sedentary, is of utmost importance. However, it is also important to provide the public with the proper information to become active safely.

Barriers

- Science does not always translate well to statements that the general public can embrace.
- One of the most pressing reasons why across-the-board screening is still adhered to so loyally among physical-activity program providers, even without evidence showing that pre-activity screening keeps older adults safe, is the fear of litigation in the event of an injury or death. Crafting an industry-wide legal statement about what actions are appropriate and what consequences can be expected when a group or person does not comply with those actions will be potentially costly and difficult to achieve.

Recommendations

- Convene a meeting of scientists, government representatives, health care professionals, older adults, consumer groups and physical-activity program providers with the goal of recasting messages that instruct individuals to see a physician or other health care professional before beginning an exercise program.
- Engage organizations, such as the AARP and the Ad Council, to conduct focus groups testing messages developed to reach mature adults with physical-activity information.
- Leading medical associations (e.g., the American Academy of Family Physicians), federal agencies (e.g., the Centers for Disease Control and Prevention) and the Aging Network (a diverse group of federal, state and nonprofit organizations that advocate for and work on behalf of older people) should collaboratively develop a statement that encourages older Americans to enjoy regular, safe physical activity.

- Invest in the study of older Americans who exercise (as well as those who choose not to do so) to help create stronger healthy lifestyle messages.

- ***Priority Issue 3: Monitoring/Surveillance for Community Programs***

Roundtable participants agreed that a system should be developed that collects information not only about major adverse events (such as cardiac arrests) but also about those that are clinically important and prevent or impair regular physical activity (e.g., strains, sprains) and commonly require medical treatment, but do not usually require emergency care.

It would also be appropriate and welcome to design a system capable of collecting information on the benefits experienced with a more active lifestyle.

Barriers

- Research and surveillance offering good information on exercise-related injuries, illnesses and deaths is typically expensive to obtain. Further, such information is either often highly specific but applicable only to a few geographic areas, or is more national in nature but very general; either scenario presents many limitations. It is monetarily and logistically difficult to get both national representation and specificity in the same instrument and technique.

Recommendations

- Fund a system to track exercise-related adverse events and injuries, or mandate that such information be gathered via national surveys.
- Create a task force to study how big the fear of litigation really is, and if unfounded, what strategies may be employed to minimize legal concerns as a barrier to establishing programs that can encourage older adults to be more active.
- Organize a meeting of key players in the field for the purposes of establishing research priorities, making recommendations about the nature of surveillance of activity-related injuries and calling for funding of research.

APPENDIX 3

The Six Questions Comprising the Exercise/Physical Activity Assessment and Screening for You (EASY) Assessment Tool for Older Adults

- Question 1: Do you have pains, tightness or pressure in your chest during physical activity (walking, climbing stairs, household chores, similar activities)?

The purpose of this question is to help older adults identify acute cardiac problems that might result in cardiac stress if an aerobic exercise activity were initiated. Although cardiovascular events in response to physical activity are both rare and

unpredictable, this question allows the individual and his or her provider to pursue a more comprehensive assessment of the symptoms, particularly newly identified ones, as indicated, and to establish an appropriate exercise program using safety tips as described. The individual can set goals that are relevant to underlying cardiac disease (such as lowering blood pressure), and initiate an exercise program tailored toward achieving them.

- Question 2: Do you currently experience dizziness or lightheadedness?

The purpose of this question is to help the individual and his/her provider address dizziness, which may result from a variety of underlying medical problems such as vertigo, cardiovascular problems, metabolic problems such as high or low blood sugar, visual impairment or poor medication management.

- Question 3: Have you ever been told you have high blood pressure?

This question is meant to encourage regular blood pressure monitoring among older individuals. Individuals who answer yes to this question will be directed to other portions of the assessment, where they will be encouraged to work with health care providers to optimize treatment. They will also be able to link to appropriate exercise interventions that will improve both systolic and diastolic pressure.

- Question 4: Do you have pain, stiffness or swelling that limits or prevents you from doing what you want or need to do?

The intent of this question is to help older adults and their health care providers identify acute exacerbations of underlying musculoskeletal problems, and to consider the presence of chronic musculoskeletal problems so that the individual's exercise program will be appropriate.

- Question 5: Do you fall, feel unsteady or use an assistive device while standing or walking?

This screening question focuses on possible balance concerns and the safety of older individuals during their physical activities. Falls and fear of having a fall are common problems in older adults.

- Question 6: Is there a reason not mentioned why you would be concerned about starting an exercise program?

This question is included to encourage individuals to report additional symptoms that might influence their ability and willingness to exercise. For example, some individuals may be concerned about exercising because of urinary incontinence.

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