

Keeping Active, Living Longer

William B. Karper, EdD

By now, nearly everyone knows that most Americans, including older adults, are not engaging in enough physical activity to benefit their health or fitness. This is especially troubling for older people because of age-related physical and mental decline. The potential for a decline in the health of the nation has become a major concern for federal and state public health agencies, and health professionals need to be aware of the wealth of scientific research that supports numerous health and fitness benefits associated with being physically active. Sometime in late 2008, the US Department of Health and Human Services (DHHS) will release a document entitled “Physical Activity Guidelines for Americans.” As a result of a presidential initiative and priority by Secretary Leavitt, a 13-member advisory committee was formed, was supported by over 30 consultants, and these national guidelines were developed. The advisory committee has recently released a well-referenced report which summarizes and reviews the science that relates physical activity to numerous health outcomes.¹ Below is important information from the report.

Health Effects of Physical Activity

Strong evidence indicates that men and women who are more active have lower rates of all-cause mortality, coronary heart disease, high blood pressure, stroke, type 2 diabetes, metabolic syndrome, colon cancer, breast cancer, and depression. Strong evidence also supports the fact that more active men and women have a higher level of aerobic and muscle fitness, healthier body mass and composition, enhanced bone health, and a biomarker profile favorable for preventing cardiovascular disease and type 2 diabetes. Additionally, there is modest evidence showing that physically active older adults have better sleep quality and health-related quality of life compared to their less active peers. Strong evidence also indicates that being physically active is associated with higher levels of functional health, a lower risk of falling, and better cognitive function. Finally, strong evidence supports that

physically active overweight and obese people experience numerous health benefits similar to people with normal weight. Therefore, adults of all sizes and shapes stand a good chance of gaining health and fitness benefits from being physically active.¹

Selecting Appropriate Physical Activity

Specific patterns of physical activity have been connected with better health and fitness. Data from numerous studies evaluating different benefits in different types of people generally support engagement in 30-60 minutes of moderate to vigorous physical activity 5 or more days each week. A lower risk of type 2 diabetes in older adults has been observed at 30 minutes of moderate to vigorous physical activity 5 days per week. Lower rates of colon

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and breast cancer and the prevention of unhealthy weight gain or significant weight loss by physical activity alone is associated with 3-5 hours of moderate to vigorous physical activity per week. It is important to know that different aerobic activities and different intensities can be combined to achieve a positive effect. Also, some activity is better than none, additional activity

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confers additional benefits, the more vigorous the activity the better, and accumulating smaller daily bouts of activity is acceptable.¹ Probably one of the safest, least injury producing, and pleasurable physical activities for many older people is walking. Tudor-Locke and colleagues report that taking 3,000–4,000 steps each day at 100 steps per minute, stepping for at least 10 minutes at a time, and taking steps above and beyond a person's minimal level of daily physical activity is in line with public health guidelines.²

In addition to aerobic activity, progressive muscle strengthening exercises that work all of the major muscle groups should be completed 2 or more days each week. Minimally, one set of 8–12 repetitions of an exercise for each muscle group should be performed. The last repetition for each exercise should cause volitional fatigue. Naturally, people with a lower exercise capacity need to use a lower absolute intensity and amount of weight for each exercise, but they should still do 8–12 repetitions of each exercise until reaching fatigue to reap positive outcomes.¹

For older adults at risk of falling, strong evidence supports that regular exercise can reduce falls by 30%. In this regard, the recommendation is to engage in balance training 3 times per week along with moderate intensity muscle strengthening exercises for 30 minutes per session. Also, walking 2 or more times per week for 30 minutes is encouraged. There is some evidence that tai chi exercise can reduce falls. However, it is interesting that no evidence is presented in the report that planned physical activity reduces falls in older adults who are not at risk of falling.¹

Getting Help With Physical Activity Needs

This author has been told by many older adults that they would like to become more physically active, but they do not know how to get started or fear getting started alone. Older adults with sufficient financial resources can hire a personal fitness trainer or join a local health club or YMCA/YWCA where someone on staff should be able to plan and supervise physical activity for them. Some elder residential facilities also have fitness personnel on staff and have a schedule of dry-land and aquatic exercise programs. Additionally, some people can go to municipal senior centers or faith-based programs where exercise instruction and physical activity opportunities are sometimes provided.

In North Carolina, there may be a unique and additional possibility because of the many state and private universities and colleges that are spread throughout the state. Many of these schools house exercise science/kinesiology departments, and in all of those departments, there are fitness personnel. Because these people teach about health, performance, and fitness everyday, they are likely to be familiar with the pending federal report and have practical fitness training experience in the field. Loosely organized smaller older adult neighborhood, social club, and faith-based groups or tightly organized larger older adult communities and faith-based groups could invite a faculty or staff member from one of these many institutions to visit with them and help them get started with a group exercise program while addressing individual concerns. In some instances,

The North Carolina Senior Games: Celebrating 25 Years of Healthy Aging!

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The time-tested adage that "Time flies when you're having fun" has proved accurate in many facets of life, but when you add "fitness," "fellowship," "friends," and "family"—all benefits ascribed to the North Carolina Senior Games program by its participants—it's no wonder that a quarter-century has flown by in the history of the largest senior Olympic-style program in the United States.

From a start with 3 Local Senior Games in 1983, all 100 of North Carolina's counties are now served through 54 Local Senior Games, devoted to serving persons 55 years of age and older with year-round programs providing health education, exercise classes, athletic events, SilverArts, cheerleading, and the SilverStriders walking program.

With over 60,000 program participants each year, North Carolina's Senior Games remain a model for the nation, with the largest number of Local Games and the most diverse program in the country with workshops, clinics, an unsurpassed arts program, year-round training, and special events. The Local Senior Games also serve as qualifiers to the annual State Finals competition, and, every 2 years, the State Final winners can advance to the National Senior Olympics.

The North Carolina Senior Games (NCSG) has always strived to reach individuals using a holistic approach, enriching not only physical activity, but enhancing mental, social, and emotional health as well. Rita Roy is the director of Pitt County Community Schools and Recreation and has been a part of the Greenville-Pitt Senior Games for 24 years. She also serves as the tournament director of the State Finals 3-on-3 basketball tournament, on the NCSG Sports Management Team, on the Facilities Committee at State Finals, and as a cochair of the SilverArts. According to Roy, empowering older citizens through Senior Games helps engage seniors so that they "are not only healthy adults taking care of themselves longer...they are citizens participating in our economy, they are the base of so many volunteer programs, and they are examples to follow. The growth I have witnessed has not been just about numbers, but about quality. The quality I have witnessed has not been just in programs, but in lifestyles."

Researchers at North Carolina State University have analyzed health behaviors of Senior Games participants in our state, most recently in 2006. In this telephone

students majoring in exercise science/kinesiology from those departments may welcome the chance for hands-on experience in helping a group of elderly people with their group or individual physical activity needs.

Keeping Safe

In general, engagement in moderate physical activity is very safe for almost everyone. However, paying attention to a few things may increase safety. It is important to warm up the body prior to exercising and to gradually cool down when finishing activity. Avoiding abrupt changes in activity intensity may lessen the possibility of injury and cardiovascular events. It is best for older adults to stay away from any physical activity which places joints in deep flexion or hyperextension. It may also be prudent for older adults to only exercise up to the point where the pain begins, never pushing or forcing through pain except when under the direction of a licensed physician, physician extender, or physical therapist. In regards to discomfort during physical activity, any unusual symptoms or new pain should be reported to a physician or physician extender immediately, and all physical activity should be stopped pending medical advice. It is best to avoid physical activity outdoors on days when temperatures are extreme or when air quality is bad and to always drink water when thirsty during exercise. Finally, it is sensible for sedentary older people with diagnosed medical conditions or who have been told they are at risk for developing certain conditions to check with their physicians or physician extenders before beginning new physical activity or before progressing from moderate to very vigorous activity. Examples of medical conditions which often call for medical advice prior to becoming physically active or prior to increasing the intensity of physical activity are cardiovascular or cerebrovascular diseases, type 1 or type 2 diabetes, osteopenia/osteoporosis, rheumatological disorders, and pulmonary diseases.

Data support that being physically active positively affects the health of younger and older adults in numerous ways. Elderly people should be strongly encouraged to develop a habit of exercising most days of the week. In almost all cases, moderate activity is safe and can be done almost anywhere or anytime, either alone or with others. Also, it can be done at no expense and usually requires no special clothes or footwear. **NCMJ**

REFERENCES

- 1 Physical Activity Guidelines Advisory Committee. Physical activity guidelines. US Department of Health and Human Services website. <http://health.gov/paguidelines/>. Accessed June 27, 2008.
- 2 Tutor-Locke C, Hatano Y, Pandgrazi RP, Kang M. Revisiting "how many steps are enough?" *Med Sci Sports Ex.* 2008;40(7 suppl):S537-543.

survey, they discovered that 78% of Senior Games respondents rated their present health as "excellent" or "very good," in sharp contrast to 43% of the 55-64 year olds and 32% of the 65+ year olds who described themselves in those terms. In addition, over 95% of Senior Games participants would recommend participating to their friends and family. Over 75% said that training and preparation for Senior Games are part of their regular weekly activity. And once folks get involved in Senior Games, they stay involved. Retention is high...88% have never thought about stopping!^a

Sylvia Starks, a participant in the Region K Senior Games, summed up the impact of the program upon herself and her family in this manner; "I won my first medal in the Senior Games at the age of 65 and it changed my life. Now I work hard everyday to train and to spread the word about the Senior Games. Recently, 4 generations of my family completed a cycling event together. Senior Games is about wellness for everyone... it is our mission to stay healthy together!"

Younger family members aren't the only "non-seniors" that benefit from involvement with Senior Games. Across the state, colleges and universities encourage students to volunteer with Local Games and at State Finals. A rich history of partnership with North Carolina State University, University of North Carolina at Chapel Hill, East Carolina University, University of North Carolina at Pembroke, Western Carolina University, University of North Carolina at Wilmington, and many other institutions of higher learning have enabled students to witness firsthand the positive benefits of healthy aging. By partnering with NCSG, these young people have volunteered their time, witnessed the impressive accomplishments of older artists, and conducted research on the positive role that Senior Games plays in participants' lives.

Though 25 years have passed, the mission of NCSG remains as vital today as it was in the very beginning—perhaps even more so! With so many dedicated individuals working hard to create and implement outstanding Senior Games programs and to ensure the longevity of a quality State Finals, a quarter-century is only the beginning. As Toby Thorpe, director of Albemarle Parks and Recreation and a longtime State Finals event manager said, "the greatest benefit of the Senior Games program is that a healthy example set by today's seniors will perpetuate itself in years to come." For more information about the North Carolina Senior Games, please visit www.ncseniorgames.org.

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^a Information based on a 2006 survey of 1,000 North Carolina Local Senior Games participants. See www.ncseniorgames.org for more information.