

ACSM/AHA Updates Physical Activity Recommendations, Including Guidelines for Older Adults

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August 8, 2007 — More than ten years after they were first published, the **American College of Sports Medicine (ACSM)** and the **American Heart Association (AHA)** have updated their recommendations regarding physical activity for adults [1]. The new guidelines, which also include modified recommendations for older adults, are intended to update and clarify the 1995 recommendations on the types and amount of exercise needed by healthy adults to improve and maintain health.

"I think if you look back during the last ten years or so, there have been some misconceptions about exercise, especially as it relates to health and the specific benefits to the heart," **Dr Jennifer Mieres** (New York University School of Medicine, NY), a spokesperson for the AHA, told **heartwire**. "The new guidelines give a very good definition of what constitutes physical activity, as well as the benefits that this exercise can bring about. The guidelines also give a much better roadmap in terms of fitting exercise into our daily lives."

The new recommendations for adults, as well as those aged 65 years of age and older, are published in the August 1, 2007 online issue of *Circulation*.

More Data, as Well as a Little Bit of Confusion

In the published report, the ACSM/AHA writing group, led by **Dr William Haskell** (Stanford University School of Medicine, CA), points out that despite the previous ACSM physical-activity recommendations, which were supported by the AHA at that time, physical inactivity remains a pressing public-health concern. In 2005, for example, nearly 25% of adults aged 18 to 65 years old reported no leisure-time activity, and less than half of US adults met the 1995 ACSM physical activity guidelines.

In addition, the 1995 recommendations have been misinterpreted, the group notes, with some people continuing to believe that only vigorous-intensity activity will improve health, whereas others believe that light

activities, such as performing chores around the house or doing arts and crafts, are sufficient to maintain health. With this in mind, the new recommendations are intended to provide a more "comprehensive and explicit public-health recommendation" for US adults based on the available evidence.

To promote and maintain health, the ACSM/AHA writing group recommends that "all healthy adults aged 18 to 65 years need moderate-intensity aerobic physical activity for a minimum of 30 minutes on five days each week or vigorous-intensity aerobic activity for a minimum of 20 minutes on three days each week." Combining these exercises is also acceptable, with people allowed to meet the recommendations by walking briskly or performing an activity that noticeably accelerates the heart rate for 30 minutes twice during the week and then jogging for 20 minutes, or performing any activity that causes rapid breathing and a substantial increase in heart rate on two other days.

In addition to clarifying the frequency of moderate-intensity exercise and incorporating vigorous-intensity exercise into the recommendations, the new guidelines specify that moderate- and vigorous-intensity exercises are complementary to daily living and that even more exercise than the recommended amount provides additional health benefits. Muscle-strengthening activities have also been included in the updated recommendations. Although the 1995 recommendations mentioned the importance of muscular strength and endurance, they stopped short of making explicit recommendations.

The ACSM/AHA also states that combining short bouts of activity — 10 minutes or more — can be combined to meet the 30-minute daily goal. "The new guidelines tell us that these short bouts of exercise are OK," said Mieres. "We see a lot of busy patients who have no idea how to incorporate physical activity into their crazy-busy lives. Letting them break up their activities, instead of wrapping their heads around a full 30 minutes, gives them a chance to feel that daily exercise is possible."

Speaking with **heartwire**, Mieres said she sees the new recommendations as a step in the right direction toward meeting the goals of **Healthy People 2010** because they provide a prescription for exercise and incentives to help people achieve these goals. We are now just three years away from 2010, she said, and there are large segments of the population not fulfilling the outlined goals.

Older Adults Also Taken Into Consideration

In addition to publishing the guidelines for adults, the ACSM/AHA also issued recommendations on the types and amounts of physical activity needed to improve and maintain health in those 65 years of age and older [2]. The recommendations, written by lead author **Dr Miriam Nelson** (Tufts University, Boston, MA), for older adults are similar to the recommendations for the general public, but take into account the older adult's aerobic fitness and promote activities that maintain or increase flexibility and improve balance.

"In addition to strength training and aerobic exercise, other types of physical activity must be taken into consideration," said Mieres. "Stretching exercises to improve flexibility, as well as those that work on balance, especially for individuals at risk for falls and fracture, must also be considered."

Like the general recommendations, the physical-activity guidelines for older adults highlight the benefits of greater amounts of physical activity. Because older adults often have comorbid disease, such as arthritis, osteoporosis, or chronic cardiovascular conditions, the ACSM/AHA guidelines recommend integrating preventive and therapeutic activities. In addition, doctors should emphasize to their older patients the importance of reducing sedentary behavior, increasing moderate activity, putting less emphasis on attaining high levels of activity, and taking a gradual stepwise approach.

Circulation. Published online August 1, 2007.

Haskell WL, Lee IM, Pate RR, et al. Physical activity and public health. Updated recommendation for adults from the American College of Sports Medicine and the American Heart Association. *Circulation* 2007; 116; DOI: 10.1161/circulationaha.107.185649.

2. Nelson ME, Rejeski WJ, Blair SN, et al. Physical activity and public health in older adults. *Circulation* 2007; 116; DOI: 10.1161/circulationaha.107.185650.

The complete contents of **Heartwire**, a professional news service of WebMD, can be found at www.theheart.org, a Web site for cardiovascular healthcare professionals.

Clinical Context

Guidelines issued by the Centers for Disease Control and Prevention (CDC) and the ACSM in 1995 recommended 30 minutes or more of moderate-intensity physical activity for every US adult on most or preferably all days of the week. These guidelines were supported by the

AHA Committee on Exercise and Cardiac Rehabilitation. Despite accumulating evidence that the type, intensity, and amount of physical activity enhances overall health and quality of life, the sedentary lifestyle of most US adults continues to be a threat to public health.

After reviewing available data from recent trials demonstrating the health benefits of physical activity, the ACSM and the AHA have therefore updated the 1995 guidelines to clarify and expand physical activity recommendations for US adults. A separate set of guidelines provides more detailed and specific information for adults aged 65 years or older as well as for adults aged 50 to 64 years with clinically significant chronic health problems and/or functional limitations.

Study Highlights

An expert panel of clinicians, epidemiologists, exercise scientists, public health specialists (and gerontologists for the older adult guidelines) reviewed primary research articles and reviews since 1995 of physiologic, epidemiologic, and clinical studies evaluating the relationship of physical activity to health. They also reviewed physical activity guidelines from other organizations. The expert panel and outside experts reviewed the draft manuscript and pertinent comments were included in the final document.

Specific recommendations for all healthy adults 18 years or older are for moderate-intensity aerobic (endurance) physical activity for 30 minutes or more for 5 days per week or for vigorous-intensity aerobic physical activity for 20 minutes or more for 3 days per week.

Moderate-intensity aerobic activity (eg, brisk walking) is linked with a noticeable increase in heart rate. Vigorous-intensity activity (eg, jogging) is linked with rapid breathing and a greater increase in heart rate than with moderate activity.

The physical activity requirement can be met through a combination of moderate- and vigorous-intensity activity (eg, brisk walking for 30 minutes for 2 days, plus jogging for 20 minutes on each of 2 other days during the week). Bouts of 10 minutes or more of moderate-intensity aerobic activity can be accumulated toward the 30-minute minimum.

Light-intensity activities of daily living (eg, self-care, washing dishes, or activities of very short duration, such as taking out trash or walking to the parking lot) are not counted toward the above requirement.

In addition to the updated requirements for aerobic activity, every adult should engage in activity that maintains or improves muscular strength and endurance on at least 2 days per week.

A dose-response relationship has been observed between physical activity and health. Exceeding the minimum recommended amounts of physical activity may therefore further improve personal fitness, decrease the risk of developing chronic diseases and disabilities, and help prevent unhealthy weight gain.

Although the updated guidelines for older adults resemble those issued for adults 18 to 64 years of age, differences reflect specific aerobic fitness of the older adult and the need for activities that promote flexibility and for balance exercises in older adults at risk for falls.

The activity plan for older adults should include preventive and therapeutic recommendations, emphasizing moderate-intensity aerobic activity, muscle-strengthening activity, decreasing sedentary behavior, and risk management.

On a 10-point scale (sitting = 0; maximal effort = 10), 5 or 6 indicates moderate-intensity activity, with noticeable increases in pulse and breathing rate; 7 or 8 indicates vigorous-intensity activity, with significant increases in pulse rate and breathing rate. This scale takes individual fitness differences into account.

Older adults should perform 8 to 10 muscle strengthening exercises using major muscle groups twice weekly or more often, on nonconsecutive days, using weight that allows 10 to 15 repetitions for each exercise, with a moderate to high level of effort.

They should also perform activities to enhance flexibility for at least 2 days each week for at least 10 minutes each day, as well as exercises that maintain or improve balance.

Older adults who are not yet performing at recommended levels should have a stepwise approach to increase physical activity gradually over time. Self-monitoring and reevaluating the activity plan as their health status changes are also recommended.

Pearls for Practice

Healthy adults who are 18 years or older should perform moderate-intensity aerobic (endurance) physical activity for 30 minutes or more for 5 days per week or vigorous-intensity aerobic physical activity for 20 minutes or more for 3 days per week.

Differences in the guidelines for older adults (65 years or older) include specific definitions of moderate- and vigorous-intensity exercise based on fitness level and inclusion of flexibility and balance exercises.