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PHYSICAL ACTIVITY AND PUBLIC HEALTH GUIDELINES
FREQUENTLY ASKED QUESTIONS AND FACT SHEET
PHYSICAL ACTIVITY FOR THE HEALTHY ADULT

WHAT IS THE CORE RECOMMENDATION OF THE ACSM/AHA PHYSICAL ACTIVITY GUIDELINES?

To promote and maintain health, all healthy adults aged 18 to 65 years need moderate-intensity aerobic (endurance) physical activity for a minimum of 30 minutes on five days each week or vigorous-intensity aerobic physical activity for a minimum of 20 minutes on three days each week.

Do moderately intense cardio 30 minutes a day, 5 days a week.
Or, do vigorously intense cardio 20 minutes a day, 3 days a week.
Do 8-10 strength training exercises, 8-12 repetitions of each exercise twice a week

The preventive recommendation specifies how adults, by engaging in regular physical activity, can promote and maintain health, and reduce risk of chronic disease and premature mortality.

WHAT KIND OF PHYSICAL ACTIVITY MEETS THIS RECOMMENDATION?

Combinations of moderate- and vigorous-intensity activity can be performed to meet this recommendation. For example, a person can meet the recommendation by walking briskly for 30 minutes twice during the week and then jogging for 20 minutes on two other days. Moderate-intensity aerobic activity, which is generally equivalent to a brisk walk and noticeably accelerates the heart rate, can be accumulated toward the 30-minute/day minimum by performing bouts each lasting 10 or more minutes.

Vigorous-intensity activity is exemplified by jogging, and causes rapid breathing and a substantial increase in heart rate. In addition, every adult should perform activities that maintain or increase muscular strength and endurance a minimum of two days each week.

WHY ARE PHYSICAL ACTIVITY GUIDELINES BEING UPDATED?

This is an update from the 1995 Centers for Disease Control and Prevention (CDC) and the American College of Sports Medicine (ACSM) public health recommendation that “Every U.S. adult should accumulate 30 minutes or more of moderate-intensity physical activity on most, preferably all, days of the week.”

While the recommendation remains fundamentally unchanged, more than 10 years have passed since it was issued. New science has added to our understanding of the biological mechanisms by which physical activity provides health benefits and the physical activity profile (type, intensity, amount) that is associated with enhanced health and quality of life. This publication reflects a review of evidence published since the issuance of the CDC/ACSM recommendation in 1995 and considers key issues not fully clarified in the original recommendation.

Specifically, it is an update and clarification of the 1995 recommendations on the types and amounts of physical activity needed by healthy adults to improve and maintain health. The intent is to provide a more comprehensive and explicit public health recommendation for adults based upon available evidence of the health benefits of physical activity.

An expert panel of scientists, including physicians, epidemiologists, exercise scientists, and public health specialists reviewed advances in pertinent physiologic, epidemiologic, and clinical scientific data, including primary research articles and reviews published since the original recommendation was issued in 1995.

The panel considered new scientific evidence relating physical activity to health, physical activity recommendations by various organizations in the interim, and communications issues.

EIGHT IMPROVEMENTS FROM THE 1995 RECOMMENDATIONS

The updated recommendation is improved in several ways.

1. Moderate-intensity physical activity has been clarified.
The 1995 document simply specified "most, preferably all days per week" as the recommended frequency while the new recommendation identifies five days per week as the recommended minimum.

2. Vigorous-intensity physical activity has been explicitly incorporated into the recommendation.
To acknowledge both the preferences of some adults for vigorous-intensity physical activity and the substantial science base related to participation in such activity, the recommendation has been clarified to encourage participation in either moderate- and/or vigorous-intensity physical activity. Vigorous-intensity physical activity was implicit in the 1995 recommendation. It is now explicitly an integral part of the physical activity recommendation.

3. Specified: Moderate- and vigorous-intensity activities are complementary in the production of health benefits and that a variety of activities can be combined to meet the recommendation.
This combining of activities is based on the amount (intensity x duration) of activity performed during the week and uses the concept of METs (metabolic equivalents) to assign an intensity value to a specific activity.

4. Specified: Aerobic activity needed is in addition to routine activities of daily life.
The updated recommendation now clearly states that the recommended amount of aerobic activity (whether of moderate- or vigorous-intensity) is in addition to routine activities of daily living which are of light intensity, such as self care, casual walking or grocery shopping, or less than 10 minutes in duration such as walking to the parking lot or taking out the trash. Few activities in contemporary life are conducted routinely at a moderate intensity for at least 10 minutes in duration. However, moderate- or vigorous-intensity activities performed as a part of daily life (e.g., brisk walking to work, gardening with shovel, carpentry) performed in bouts of 10 minutes or more can be counted towards the recommendation. Although implied, this concept was not effectively communicated in the original recommendation.

5. "More is better."
The new recommendation emphasizes the important fact that physical activity above the recommended minimum amount provides even greater health benefits. The point of maximum benefit for most health benefits has not been established but likely varies with genetic endowment, age, sex, health status, body composition and other factors. Exceeding the minimum recommendation further reduces the risk of inactivity-related chronic disease. Although the dose-response relation was acknowledged in the 1995 recommendation, this fact is now explicit.

6. Short bouts of exercise.
Although the original recommendation introduced the concept of accumulating short bouts of physical activity toward the 30-minute goal, there was confusion regarding how short these episodes could be. For consistency and clarity, the minimum length of these short bouts is clarified as being 10 minutes.

7. Muscle-strengthening recommendation now included.
Muscle-strengthening activities have now been incorporated into the physical activity recommendation. Although the 1995 recommendation mentioned the importance of muscular strength and endurance, it stopped short of making specific declarations in this area. Available evidence now allows the integration of muscle strengthening activities into the core recommendation.

8. Clarification in wording.
Minor wording changes in the recommendation have been made to enhance clarity in communications. For example, the term "aerobic," or endurance, has been added to clarify the type of physical activity being recommended and to differentiate it from muscle-strengthening exercises, which are now part of the core recommendation.

WHY DO OTHER PHYSICAL ACTIVITY GUIDELINES CALL FOR MORE ACTIVITY, SUCH AS 60 TO 90 MINUTES PER DAY?

Physical activity recommendations have been published by several national organizations in the interim that could be interpreted to be in conflict with the 1995 recommendation. However, it is very important that there are more agreements than differences when it comes to current physical activity recommendations.

Differences appear because they are intended for different groups or purposes, with a primary emphasis of these other recommendations being on preventing unhealthy weight gain or producing weight loss.

Relatively modest amounts of physical activity will improve health; physical activity for high-level cardiorespiratory fitness and expanded health gains, such as weight loss, may require more than a minimum of 30 minutes of moderate-intensity activity five days of the week.

Some reports recommend 60 minutes each day of moderately-intense physical activity as necessary to prevent weight gain and achieve the full health benefits of activity. This supports the "more is better" concept included in the current recommendations.

30 minutes	= general health benefits
60 to 90 minutes	= prevention of weight gain and weight maintenance for some people, expanded health benefits

Further, some guidelines are expanded recommendations on lifestyle factors beyond physical activity, and may include recommendations on nutrition and smoking cessation, as well as more in-depth recommendations on drug treatments or other interventions for chronic disease prevention and treatment.

Other factors that may have contributed to some confusion include people who have not accepted, and others who have misinterpreted, the original recommendation. Some people continue to believe that only vigorous-intensity activity will improve health while others believe that the light activities of their daily lives are sufficient to promote health.

WHAT IS MODERATE-INTENSITY PHYSICAL ACTIVITY?

Moderate-intensity aerobic activity is described in this paper as generally equivalent to a brisk walk, or activity that noticeably accelerates the heart rate. Examples of this type of activity include brisk walking, cycling at moderate speeds, mopping or walking with a purpose. Moderate-intensity activity is also indicative of "breaking a sweat" while remaining capable of carrying on a conversation.

HOW IS STRENGTH TRAINING ADDRESSED OR DEFINED?

To promote and maintain good health and physical independence, adults will benefit from performing activities that maintain or increase muscular strength and endurance for a minimum of two days each week. It is recommended that 8-10 exercises be performed on two non-consecutive days using the major muscle groups. To maximize strength development, a resistance (weight) should be used that allows 8-12 repetitions of each exercise resulting in volitional fatigue. Muscle-strengthening activities include a progressive weight-training program, weight bearing calisthenics, stair climbing, and similar resistance exercises that use the major muscle groups.

Resistance training at least twice per week provides a safe and effective method to improving muscular strength and endurance by 25% to 100% or more. It is recommended that 8-10 exercises be performed on two non-consecutive days using the major muscles. A resistance (weight) should be used that results in substantial fatigue after 8-12 repetitions of each exercise. The emerging evidence on musculoskeletal health benefits and the potential population-wide effects of promoting skeletal health support the need for a public health recommendation that includes resistance exercise.

The recommendations also summarize new research that links muscular strength to health benefits, such as protection against bone loss and a decreased risk of all-cause mortality.

EXPLAIN THE "MORE IS BETTER" CONCEPT

Because of the dose-response relation between physical activity and health, persons who wish to further improve their personal fitness, reduce their risk for chronic diseases and disabilities or prevent unhealthy weight gain may benefit by exceeding the minimum recommended amounts of physical activity.

Participation in aerobic and muscle-strengthening physical activities above minimum recommended amounts provides additional health benefits and results in higher levels of physical fitness. Many adults, including those who wish to improve their personal fitness or further reduce their risk for premature chronic health conditions and mortality related to physical inactivity, should exceed the minimum recommended

amounts of physical activity. In addition, to further promote and maintain skeletal health, adults will benefit by engaging in extra weight-bearing activity and higher-impact activity such as stair-climbing or jogging, as tolerated. To help prevent unhealthy weight gain, some adults will need to exceed minimum recommended amounts of physical activity to a point that is individually effective in achieving energy balance, while considering their food intake and other factors that affect body weight.

WHAT IS THE DOSE-RESPONSE OF PHYSICAL ACTIVITY AND EXERCISE?

Research supports a dose-response relation between physical activity and health benefits, in particular the lowering of risk of cardiovascular disease and premature mortality. Significantly lower risks have been observed with as little as 45-150 minutes per week of brisk walking, and this reinforces the original 1995 recommendation for ≥30 min/day of moderate-intensity activity on most days. Also, it is well documented that physical activity of longer duration or higher intensity is associated with additional risk decrements, but the exact shape of the dose-response curve remains unclear and may vary depending on health outcome of interest and the baseline physical activity level of the population being evaluated.

HOW IS WEIGHT MAINTENANCE AND WEIGHT LOSS ADDRESSED BY THESE RECOMMENDATIONS?

For many people, more than 30 minutes of moderate-intensity activity may be necessary to maintain weight or contribute to significant weight loss. People with relatively high daily energy expenditures tend to be less likely to gain weight over time, compared with those who have low energy expenditures. Since the control of body weight responds to both calories consumed as well as the number of calories expended during activity, both intake and expenditure have to be considered by the individual trying to prevent unhealthy weight gain or achieve weight loss.

Adults regardless of body size or shape should be encouraged to meet the moderate-intensity, minimum of 30 minutes per day on 5 days/week guideline. For individuals who achieve this level of activity, but remain overweight, an increase in their physical activity is a reasonable component of any strategy to lose weight.

SHORT BOUTS OF ACTIVITY

The 1995 recommendation advocated the accumulation of physical activity in “intermittent bouts of physical activity, as short as 8-10 minutes, totaling 30 minutes or more.” Since that original recommendation, experimental research has been conducted evaluating the effects of increasing physical activity in short bouts on chronic disease risk factors.

Evidence to date suggests that moderate-intensity physical activity in shorter bouts (lasting at least 10 minutes) that is accumulated toward the 30-minute minimum can be as effective as single, longer bouts in affecting chronic disease risk factors. Cardiorespiratory fitness, lipid/lipoprotein profiles, blood pressure, fasting plasma insulin, postprandial lipidemia, and weight control all appear to be affected beneficially with intermittent bouts of physical activity. In several studies the effects of accumulated short bouts are similar to those seen with continuous bouts of physical activity lasting ≥30 minutes.

WHAT EMPHASIS IS GIVEN TO THE IMPORTANCE OF AVOIDING SEDENTARY BEHAVIOR?

The recommendations address a broad range of evidence to underscore concern that U.S. adults are still not active enough. Physical inactivity remains a pressing public health issue. Technology and economic incentives tend to discourage activity, technology by reducing the energy needed for activities of daily living, and economics by paying more for sedentary than active work.

Disease outcomes related to physical inactivity include cardiovascular disease, thromboembolic stroke, hypertension**,** type 2 diabetes mellitus, osteoporosis, obesity, colon cancer**,** breast cancer, anxiety and depression.

Favorable trend data from 1990 to 2004 in the United States based on the CDC Behavioral Risk Factor Surveillance System indicate that over time fewer men and women reported no moderate or vigorous intensity leisure-time physical activity. The prevalence of leisure-time physical inactivity remained fairly constant through 1996, but more recently has declined in both genders. In 2005, 23.7% of adults reported no moderate or vigorous intensity leisure-time activity.

WHAT DOES THIS RECOMMENDATION DO TO ADDRESS OVERCOMING THE BIGGEST BARRIER TO PHYSICAL ACTIVITY: TIME?

All you need to be active is a pair of walking or running shoes. In other words, you do not necessarily need an expensive gym membership or home exercise equipment in order to accumulate 30 minutes of physical activity a day.

ACSM and AHA have a variety of public education resources that may help people devise a plan to fit physical activity into busy lives and schedules. For more information, please visit <PAPH landing page.>