Clinical Practice Guideline: **Physical Activity**

Date of Implementation: **June 19, 2014**

Product: **Specialty**

GUIDELINES

Among portal of entry practitioners, screening at risk and/or symptomatic patients for level of physical activity is considered best practices. Providing a direct intervention (e.g., lifestyle and/or dietary changes) for patients for whom the screening results indicated a need for intervention, will depend upon the practitioner's education, training, experience, and scope of practice. In the absence of such a direct intervention, providing a referral intervention (e.g., to the patient's medical physician) is necessary for adult patients identified with low levels of physical activity or when other concerns arise regarding the patient's physical activity history. The screening described in this policy may be outside the education, training, experience, or scope of some practitioner types. In the context of best practices for these practitioners, a level of awareness that risk factors and/or signs/symptoms of a physical activity issue are present is required and a subsequent referral for appropriate evaluation is necessary and within the purview of all.

INTRODUCTION

Inadequate physical activity is epidemic in the U.S. Sedentary behavior and physical inactivity are among the leading modifiable risk factors worldwide for cardiovascular disease and all-cause mortality (Mokdad, 2004; Danaei et al., 2009; Johnson et al., 2014; Lavie et al., 2019; Zhang and Liu, 2024; O'Brien et al., 2024). The Centers for Disease Control and Prevention (CDC) analyzed the data from a 2020 national survey of American adults (National Health Interview Survey) and concluded most are not meeting the federal physical activity recommendations. Only 24% meet the minimum guidelines for aerobic exercise and muscle-strengthening activity. However, 47% met the aerobic activity recommendations.

Sedentary lifestyle contributes to risk of cardiovascular disease, hypertension, type 2 diabetes, obesity, and osteoporosis. Conversely, regular physical activity has been shown to help prevent these conditions. Furthermore, some evidence also indicates that regular physical activity contributes to a reduction in all-cause morbidity and to an increase in cognition, brain function, and lifespan (CDC, 2022).

ASSESSING PHYSICAL ACTIVITY STATUS

Generally, physical activity is assessed by objective findings and/or self-reported activities (e.g., questionnaires or a patient diary). Objective, direct measurement methods include instruments such as pedometers or motion detectors which can be used by individuals to

record activities over a specified period of time or point of service monitored exercise tests. Among self-reported activities, questionnaires are the most feasible method for clinical practice. The patient is questioned on recall of recent or usual activities or in sedentary behaviors, usually over a specific period of time.

National surveys conducted by government agencies usually question respondents about compliance with national standards such as those of the CDC discussed earlier or Healthy People 2020. No standards have been set for how physical activity assessment should be conducted in clinical practice; in most trials of physical activity counseling in clinical practice, self-reported measures were used.

Recommendations for physical activity from the first national physical activity guidelines put forth by the U.S. Department of Health and Human Services in 2018 continue to apply today. These guidelines are summarized below:

Adults

- Adults should move more and sit less throughout the day. Some physical activity is better than none. Adults who sit less and do any amount of moderate-to-vigorous physical activity gain some health benefits.
- For substantial health benefits, adults should do at least 150 minutes (2 hours and 30 minutes) to 300 minutes (5 hours) a week of moderate-intensity, or 75 minutes (1 hour and 15 minutes) to 150 minutes (2 hours and 30 minutes) a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity. Preferably, aerobic activity should be spread throughout the week.
- Additional health benefits are gained by engaging in physical activity beyond the equivalent of 300 minutes (5 hours) of moderate intensity a week.
- Adults should also do muscle-strengthening activities of moderate or greater intensity and that involve all major muscle groups on 2 or more days a week, as these activities provide additional health benefits.

Children and Adolescents

- It is important to provide young people opportunities and encouragement to participate in physical activities that are appropriate for their age, that are enjoyable, and that offer variety.
- Children and adolescents ages 6 through 17 years should do 60 minutes (1 hour) or more of moderate-to-vigorous physical activity daily:
    - Aerobic: Most of the 60 minutes or more per day should be either moderate or vigorous-intensity aerobic physical activity and should include vigorous intensity physical activity on at least 3 days a week.
    - Muscle-strengthening: As part of their 60 minutes or more of daily physical activity, children and adolescents should include muscle-strengthening

physical activity on at least 3 days a week. Muscle-strengthening includes activities like climbing or doing push-ups.

- Bone-strengthening: As part of their 60 minutes or more of daily physical activity, children and adolescents should include bone-strengthening physical activity on at least 3 days a week. Bone-strengthening includes activities such as jumping or running.

Older Adults

- As part of their weekly physical activity, older adults should do multicomponent physical activity that includes balance training as well as aerobic and muscle strengthening activities.
- Older adults should determine their level of effort for physical activity relative to their level of fitness.
- Older adults with chronic conditions should understand whether and how their conditions affect their ability to do regular physical activity safely.
- When older adults cannot do 150 minutes of moderate-intensity aerobic activity a week because of chronic conditions, they should be as physically active as their abilities and conditions allow.

For additional and more extensive health benefits, adults should increase their aerobic physical activity to 300 minutes (5 hours) a week of moderate-intensity, or 150 minutes a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity activity. Additional health benefits are gained by engaging in physical activity beyond this amount.

The following table summarizes aerobic activity with respect to health benefits.

Classification of Total Weekly Aerobic Activity		
Level	**Moderate intensity activity* (minutes/week)**	**Health Benefits**
Inactive	No activity beyond baseline	None
Low	> baseline but < 150 minutes	Some
Medium	150 - 300 minutes	Substantial
High	> 300 minutes	Additional

*Moderate intensity exercise increases heart and breathing rates, but the individual can carry on a conversation. Brisk walking is the most common example of moderate intensity.

Current guidelines highlight the following:

- High volumes of moderate-to-vigorous physical activity appear to remove the excess risk of all-cause mortality that is associated with high volumes of sitting.
- Very low time spent sitting reduces, but does not eliminate, the risk of no moderate-to-vigorous physical activity.
- Given the high levels of sitting and low levels of physical activity in the population, most people would benefit from both increasing moderate-to-vigorous physical activity and reducing time spent sitting.

Specifically, regular physical activity helps improve health by:

- Reducing the risk of developing diabetes, hypertension, or dying from heart disease
- Reducing blood pressure among people who have hypertension
- Helping to control weight and build/maintain healthy bones, muscles, and joints
- Increasing the likelihood of living longer
- Reducing the risk of developing several cancers
- Improving older adults' ability to perform daily activities and prevent falls
- Improving mental health and reducing feelings of depression or anxiety

Other key findings from the 2018 guidelines include:

For people who are inactive, that is, people who do not do any moderate- or vigorous-intensity physical activity beyond basic movement from daily life activities:

- Reducing sedentary behavior has health benefits. It reduces the risk of all-cause mortality, cardiovascular disease incidence and mortality, and the incidence of type 2 diabetes and some cancers. A good first step is to replace sedentary behavior with light-intensity physical activity. Previously, evidence that light intensity physical activity could provide health benefits was not sufficient to support a recommendation.
- No matter how much time they spend in sedentary behavior or light-intensity activity, inactive people can reduce their health risks by gradually increasing their moderate-intensity physical activity.

For people who are insufficiently active, that is, people who do some moderate- or vigorous-intensity physical activity, but who do not yet meet the key guidelines target range (150 to 300 minutes a week of moderate-intensity physical activity for adults):

- Even small increases in moderate-intensity physical activity provide health benefits. There is no threshold that must be exceeded before benefits begin to occur.
- Greater benefits can be achieved by reducing sedentary behavior, increasing moderate-intensity physical activity, or a combination of both.
- For any given increase in moderate-to-vigorous physical activity, the relative gain in benefits is greater for insufficiently active people than for people who are already meeting the key guidelines.

For people who are active, that is, people who already meet the key guidelines (150 to 300 minutes a week of moderate-intensity physical activity for adults):

- Although those within the target range already have substantial benefits from their current volume of physical activity, more benefits can be gained by doing additional moderate-to-vigorous physical activity or reducing sedentary behavior.

For people who are highly active, that is, people who do more than the equivalent of 300 minutes a week of moderate-intensity physical activity:

- These people should maintain or increase their activity level by doing a variety of activities.

INTERVENTIONS

Although the correlation among healthful diet, physical activity, and the incidence of cardiovascular disease is strong, existing evidence indicates that the health benefit of initiating behavioral counseling in the primary care setting to promote a healthful diet and physical activity is minimal (Moyer, 2012). The USPSTF (2022) recommends selectively offering or providing behavioral counseling interventions to patients based on clinician professional judgment and patient preferences. Behavioral counseling interventions may promote physical activity, healthy diet, reducing sedentary time, or some combination thereof. Common dietary counseling advice promotes increased consumption of fruits, vegetables, and fiber; reduced consumption of saturated fats, sodium, and sugar-sweetened beverages; or both. Patient-tailored approaches to enhance skills with reading food labels, preparing healthy meals, and recognizing appropriate caloric intake and portion size are often used. Physical activity counseling often encourages patients to gradually increase aerobic activity (walking is often emphasized) to achieve at least 150 minutes (2 hours and 30 minutes) per week of equivalent moderate-intensity activity. Reducing sedentary time aims to limit time spent engaging in low-energy behaviors while awake such as sitting or reclining while watching television or using a computer.

Primary care clinicians can deliver in-person behavioral counseling interventions or refer patients to other settings. Interventions can be delivered individually, in a group, or both, with or without follow-up (telephone calls or emails), or delivered remotely through a combination of print materials, telephone calls, technology-based activities, or some combination thereof. Typical counseling techniques include behavioral change techniques such as goal setting, problem solving, and self-monitoring; approaches including motivational interviewing principles or portions of the "5 A's" model (assess, advise, agree, assist, and arrange) are common. In determining whether behavioral counseling interventions are appropriate, patients and clinicians should consider the following.

- Persons who are interested and ready to make behavioral changes may be most likely to benefit from behavioral counseling
- Higher-intensity counseling interventions may vary in availability and feasibility in clinical settings

- Adoption of healthy behavior advice may be increased by tailoring behavioral counseling to consider patient motivations and goals, activity level and ability, circumstances, preferences, and overall health status, as well as availability of healthy eating establishments, grocery stores, parks, sidewalks, bicycle trails, safe/pleasant walking paths close to home or workplace; traffic; public transportation; crime; and pollution levels

Encouraging patients to increase their baseline activity is sensible for several reasons:

- Increasing baseline activity burns calories, which can help in maintaining a healthy body weight
- Some baseline activities are weight-bearing and may improve bone health
- Short episodes of activity are appropriate for people who were inactive and have started to gradually increase their level of activity, and for older adults whose activity may be limited by chronic conditions.
- There are reasons other than health to encourage more baseline activity. For example, walking short distances instead of driving can help reduce traffic congestion and the resulting air pollution
- Encouraging baseline activities helps build a culture where physical activity in general is the social norm

The USPSTF found sufficient evidence that behavioral counseling interventions for a healthy diet, physical activity, or both were associated with modest increases in physical activity levels and some improvements in dietary health behaviors. On average, participants of physical activity interventions (87 trials) increased physical activity by approximately 33 minutes per week and had higher odds of meeting physical activity recommendations after 6 to 12 months compared with participants in the control group. Participants of healthy diet interventions (45 trials) increased fruit and vegetable intake and fiber intake and decreased saturated fat intake compared with participants in the control group. The USPSTF found little evidence of the effectiveness of sedentary behavior interventions. Overall, sedentary behavior interventions did not demonstrate statistically significant differences in sedentary behaviors in participants compared with control groups.

The USPSTF found sufficient evidence that behavioral counseling interventions for a healthy diet, physical activity, or both were associated with lower blood pressure, low-density lipoprotein cholesterol (LDL-C), and adiposity measures (BMI, weight, and waist circumference) after 6 to 12 months. Diet and physical activity interventions were associated with lower systolic blood pressure, diastolic blood pressure, LDL-C level, and adiposity-related outcomes such as weight, BMI, and waist circumference. Generally, high-intensity interventions (>360 minutes) were associated with greater changes in intermediate outcomes, specifically lower LDL-C and adiposity measures.

Because of the extremely important health benefits of physical activity, many Federal agencies and organizations recommend that all healthcare providers counsel individuals about physical activity. These include Healthy People 2030 (USDHHS), the CDC, and the American Academy of Family Physicians.

SCREENING RECOMMENDATIONS

USPSTF Recommendation Levels:

Grade	Definition	Suggestions for Practice
A	The USPSTF *recommends* the service. There is high certainty that the net benefit is substantial.	Offer or provide this service.
B	The USPSTF *recommends* the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer or provide this service.
C	The USPSTF recommends *selectively* offering or providing this service based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.	Offer or provide this service for selected patients depending on circumstances.
D	The USPSTF recommends *against* the service. There is moderate or high certainty of either no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I	The USPSTF concludes that the current evidence is *insufficient* to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

A comprehensive review of the USPSTF rating process can be found in the ASH policy *Preventive Care Guidelines* (CPG 140 – S) or at the USPSTF website: http://www.uspreventiveservicestaskforce.org/Page/Name/grade-definitions.

USPSTF Recommendations:

Healthy Diet and Physical Activity for Cardiovascular Disease Prevention in Adults Without Cardiovascular Disease Risk Factors: Behavioral Counseling Interventions (2022):

Grade C Recommendation: For adults 18 years or older without known cardiovascular disease risk factors, the USPSTF recommends that clinicians individualize the decision to offer or refer adults without cardiovascular disease risk factors to behavioral counseling interventions to promote a healthy diet and physical activity.

This recommendation applies to adults 18 years or older without known CVD risk factors, which include hypertension or elevated blood pressure, dyslipidemia, impaired fasting glucose, or glucose tolerance, or mixed or multiple risk factors such as metabolic syndrome or an estimated 10-year CVD risk of 7.5% or greater. While obesity is a risk factor for CVD, a separate recommendation statement addresses individuals with a body mass index (BMI) of 30 or greater (calculated as weight in kilograms divided by the square of height in meters). Behavioral interventions to reduce CVD risk in adults with known modifiable risk factors (i.e., hypertension or dyslipidemia) and weight management interventions are addressed in separate USPSTF recommendations.

Clinical Management Interventions

The American Heart Association recommends that practitioners use cognitive-behavioral counseling interventions to promote healthful diet and physical activity that combine 2 or more of the following strategies (Artinian et al., 2010):

Cognitive-behavioral strategies for promoting behavior change

- Design interventions to target dietary and physical activity behaviors with specific, proximal goal setting.
- Provide feedback on progress toward goals.
- Provide strategies for self-monitoring.
- Establish a plan for frequency and duration of follow-up contacts (e.g., in-person, oral, written, electronic) in accordance with individual needs to assess and reinforce progress toward goal achievement.
- Utilize motivational interviewing strategies, particularly when an individual is resistant or ambivalent about dietary and physical activity behavior change.
- Incorporate strategies to build self-efficacy into the intervention.
- Use a combination of two of the above strategies (e.g., goal setting, feedback, self-monitoring, follow-up, motivational interviewing, and self-efficacy) in an intervention.

Additionally, health care practitioners may offer healthy diet and physical activity interventions by referring the patient to community-based organizations. Strong links between the practitioner and community-based resources may improve the delivery of these services.

PRACTITIONER SCOPE AND TRAINING

Practitioners should practice only in the areas in which they are competent based on their education, training, and experience. Levels of education, experience, and proficiency may vary among individual practitioners. It is ethically and legally incumbent on a practitioner to determine where they have the knowledge and skills necessary to perform such services and whether the services are within their scope of practice.

It is best practice for the practitioner to appropriately render services to a patient only if they are trained, equally skilled, and adequately competent to deliver a service compared to others trained to perform the same procedure. If the service would be most competently delivered by another health care practitioner who has more skill and training, it would be best practice to refer the patient to the more expert practitioner.

Best practice can be defined as a clinical, scientific, or professional technique, method, or process that is typically evidence-based and consensus driven and is recognized by a majority of professionals in a particular field as more effective at delivering a particular outcome than any other practice (Joint Commission International Accreditation Standards for Hospitals, 2020).

Depending on the practitioner's scope of practice, training, and experience, a patient's condition and/or symptoms during examination or the course of treatment may indicate the need for referral to another practitioner or even emergency care. In such cases it is prudent for the practitioner to refer the patient for appropriate co-management (e.g., to their primary care physician) or if immediate emergency care is warranted, to contact 911 as appropriate. See the *Managing Medical Emergencies (CPG 159 – S)* clinical practice guideline for information.

Practitioner Resources

- Centers for Disease Controls & Prevention (CDC) Physical Activity Resources http://www.cdc.gov/physicalactivity/
- US Dept of Health & Human Services – Healthy People 2030 https://health.gov/healthypeople/objectives-and-data/browse-objectives/physical-activity

Member Resources

- US Department of Health and Human Services: Physical Activity Guidelines http://www.health.gov/paguidelines/

- American Heart Association's Getting Active: https://www.heart.org/en/healthy-living/fitness/getting-active
- NIH's Physical Activity Tools and Resources: http://www.nhlbi.nih.gov/health/public/heart/obesity/wecan/tools-resources/physical-activity.htm
- President's Council on Fitness, Sports & Nutrition http://www.fitness.gov/be-active/
- US Health & Human Services – Girls Health: Fitness http://www.girlshealth.gov/fitness/
- National Institute on Aging (NIA)'s Exercise & Physical Activity: Your Everyday Guide https://www.nia.nih.gov/health/publication/exercise-physical-activity/introduction
- NIH's Your Guide to Physical Activity and Your Heart http://www.nhlbi.nih.gov/health/public/heart/obesity/phy_active.pdf

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