U.S. Preventive Services Task Force

Behavioral Counseling to Promote a Healthful Diet and Physical Activity for Cardiovascular Disease Prevention in Adults Without Cardiovascular Risk Factors: Recommendation Statement

As published by the U.S. Preventive Services Task Force.

This summary is one in a series excerpted from the Recommendation Statements released by the USPSTF. These statements address preventive health services for use in primary care clinical settings, including screening tests, counseling, and preventive medications.

The complete version of this statement, including supporting scientific evidence, evidence tables, grading system, members of the USPSTF at the time this recommendation was finalized, and references, is available on the USPSTF website at http://www.uspreventiveservicestaskforce.org/.

This series is coordinated by Sumi Sexton, MD, Associate Deputy Editor.

A collection of USPSTF recommendation statements published in *AFP* is available at http://www.aafp.org/afp/uspstf.

Summary of Recommendation and Evidence

The USPSTF recommends that primary care professionals individualize the decision to offer or refer adults without obesity who do not have hypertension, dyslipidemia, abnormal blood glucose levels, or diabetes to behavioral counseling to promote a healthful diet and physical activity *(Table 1)*. Existing evidence indicates a positive but small benefit of behavioral counseling for the prevention of cardiovascular disease (CVD) in this population. Persons who are interested and ready to make behavioral changes may be most likely to benefit from behavioral counseling. **C recommendation.**

See the "Useful Resources" section for more information on how this recommendation fits into the USPSTF's suite of recommendations on CVD prevention.

Rationale

IMPORTANCE

CVD, which includes myocardial infarction and stroke, is the leading cause of death in the United States.[1] Adults who adhere to national guidelines for a healthful diet and physical activity have lower rates of cardiovascular morbidity and mortality than those who do not. All persons, regardless of their CVD risk status, can gain health benefits from healthy eating behaviors and appropriate physical activity.[2]

BENEFITS OF BEHAVIORAL COUNSELING INTERVENTIONS

The USPSTF found adequate evidence that behavioral counseling interventions provide at least a small benefit for reduction of CVD risk in adults without obesity who do not have the common risk factors for CVD (hypertension, dyslipidemia, abnormal blood glucose levels, or diabetes). Behavioral counseling interventions have been found to improve healthful behaviors, including beneficial effects on fruit and vegetable consumption, total daily caloric intake, salt intake, and physical activity levels. Behavioral counseling interventions led to improvements in systolic and diastolic blood pressure levels, low-density lipoprotein cholesterol levels, body mass index (BMI), and waist circumference that persisted over 6 to 12 months. The USPSTF found inadequate direct evidence that behavioral counseling interventions lead to a reduction in mortality or CVD rates.

HARMS OF BEHAVIORAL COUNSELING INTERVENTIONS

The USPSTF found adequate evidence that the harms of behavioral counseling interventions are small to none. Among 14 trials of behavioral interventions that reported on adverse events, none reported any serious adverse events.

USPSTF ASSESSMENT

The USPSTF concludes with moderate certainty that behavioral counseling interventions to promote a healthful diet and physical activity have a small net benefit in adults without obesity who do not have specific common risk factors for CVD (hypertension, dyslipidemia, abnormal blood glucose levels, and diabetes).

Although the correlation among healthful diet, physical activity, and CVD incidence is strong, existing evidence indicates that the health benefit of behavioral counseling to

Table 1. Behavioral Counseling to Promote a Healthful Diet and Physical Activity for CVD Prevention in Adults Without Cardiovascular Risk Factors: Clinical Summary of the USPSTF Recommendation

Population	Adults without obesity who do not have known CVD risk factors
Recommendation	Individualize the decision to offer or refer adults to behavioral counseling to promote a healthful diet and physical activity. Grade: C
Risk assessment	Adults who adhere to national guidelines for a healthful diet and physical activity have lower rates of cardiovascular morbidity and mortality than those who do not. All persons, regardless of their CVD risk status, can gain health benefits from healthy eating behaviors and appropriate physical activity.
Interventions	Dietary counseling interventions typically focused on general heart-healthy eating patterns (increased consumption of fruits, vegetables, fiber, and whole grains; decreased consumption of salt, fat, and red and processed meats). Physical activity interventions emphasized gradually increasing aerobic activities to recommended levels, with many studies emphasizing walking. Interventions categorized as low intensity included print- or web-based materials with tailored feedback and tools for behavior change, ranging from 1-time mailings to monthly mailings over 3 years. Medium- and high-intensity interventions commonly included face-to-face individual or group counseling or both, with telephone, email, and text message follow-up.
Balance of benefits and harms	The USPSTF concludes with moderate certainty that behavioral counseling interventions to promote a healthful diet and physical activity have a small net benefit in adults without obesity who do not have specific common risk factors for CVD (hypertension, dyslipidemia, abnormal blood glucose levels, and diabetes).
Other relevant USPSTF recommendations	The USPSTF has recommendations on several aspects of CVD prevention in adults with and without common risk factors, including behavioral counseling interventions to promote a healthful diet and physical activity for CVD prevention in adults with cardiovascular risk factors, screening for and management of obesity in adults, screening for abnormal blood glucose levels and type 2 diabetes mellitus, screening for high blood pressure, use of statin medications in persons at risk for CVD, screening and counseling for tobacco smoking cessation, and aspirin use for CVD primary prevention. These recommendations are available on the USPSTF website (https://www.uspreventiveservicestaskforce.org).

NOTE: *For a summary of the evidence systematically reviewed in making this recommendation, the full recommendation statement, and supporting documents, go to http://www.uspreventiveservicestaskforce.org/.*

CVD = cardiovascular disease; USPSTF = U.S. Preventive Services Task Force.

promote a healthful diet and physical activity among adults without obesity who do not have these specific CVD risk factors is small.

Clinical Considerations

PATIENT POPULATION UNDER CONSIDERATION

This recommendation applies to adults 18 years or older who are of normal weight or overweight, with a BMI between 18.5 and 30 (calculated as weight in kilograms divided by the square of height in meters). It does not apply to persons who have known CVD risk factors (hypertension, dyslipidemia, abnormal blood glucose levels, or diabetes) or persons with obesity or who are underweight.

BEHAVIORAL COUNSELING INTERVENTIONS

The USPSTF reviewed 88 trials with more than 120 distinct interventions focused on promoting a healthful diet, physical activity, or both. Dietary messages documented in the interventions typically focused on general heart-healthy eating patterns (increased consumption of fruits, vegetables, fiber, and whole grains; decreased consumption of salt, fat, and red and processed meats).[3,4] This guidance is generally consistent with major dietary recommendations, including the U.S. Department of Health and Human Services' 2015-2020 Dietary Guidelines for Americans.[5] Similarly, national guidelines suggest that U.S. adults should perform at least 150 minutes of moderate-intensity or at least 75 minutes of vigorous-intensity physical activity per week, or an equivalent combination of moderate- and vigorous-intensity physical activity, and also should perform strengthening activities at least twice per week.[6] Physical activity messages used in the reviewed interventions emphasized gradually increasing aerobic activities to recommended levels, with many studies emphasizing walking.[3]

Interventions categorized as low intensity included print- or web-based materials with tailored feedback and tools for behavior change, ranging from 1-time mailings to monthly mailings over 3 years. Medium- and high-intensity interventions commonly included face-to-face individual or group counseling or both, with telephone, email, and text message follow-up. These more intensive interventions ranged in duration from 4 weeks to

6 years, with the active intervention period often lasting for 6 months. Interventions were delivered by primary care clinicians, health educators, behavioral health specialists, nutritionists or dieticians, exercise specialists, and lay coaches. Behavioral change techniques included goal setting and planning, monitoring and feedback, motivational interviewing, addressing barriers to change, increasing social support, and general education and advice. Adherence to all interventions was relatively high; adherence to high-intensity interventions was generally lower than for less-intensive interventions. Overall, there appeared to be a dose-response effect, with higher-intensity interventions demonstrating greater and statistically significant benefits. However, this dose-response effect was not seen for interventions targeting physical activity only, among which some low-intensity interventions demonstrated benefit.[3]

ADDITIONAL APPROACHES TO PREVENTION

The USPSTF recognizes the important contributions of public health approaches to improving diet, increasing physical activity levels, and preventing CVD. The Community Preventive Services Task Force recommends several community-based interventions to promote physical activity, including community-wide campaigns, social support interventions, school-based physical education, and environmental and policy approaches. It also recommends programs promoting healthful diet and physical activity for persons at increased risk for type 2 diabetes on the basis of strong evidence of the effectiveness of these programs in reducing the incidence of new-onset diabetes.[7]

USEFUL RESOURCES

The USPSTF has evaluated the evidence on several aspects of CVD prevention in adults with and without common risk factors, including behavioral counseling interventions to promote a healthful diet and physical activity for CVD prevention in adults with cardiovascular risk factors,[8] screening for and management of obesity in adults,[9] and screening for abnormal blood glucose levels and type 2 diabetes mellitus.[10]

In other recommendation statements, the USPSTF had recommended screening for high blood pressure,[11] use of statin medications in persons at risk for CVD,[12] screening and counseling for tobacco smoking cessation,[13] and aspirin use in certain persons for CVD primary prevention.[14]

In addition, the U.S. Department of Health and Human Services has published national dietary and physical activity guidelines for Americans.[5,6]

This recommendation statement was first published in *JAMA*. 2017; 318(2):167-174.

The "Other Considerations," "Discussion," "Update of Previous USPSTF Recommendations," and "Recommendations of Others" sections of this recommendation statement are available at https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/healthful-diet-and-physical-activity-for-cardiovascular-disease-prevention-in-adults-without-known-risk-factors-behavioral-counseling.

The USPSTF recommendations are independent of the U.S. government. They do not represent the views of the Agency for Healthcare Research and Quality, the U.S. Department of Health and Human Services, or the U.S. Public Health Service.

REFERENCES

1. Centers for Disease Control and Prevention, National Center for Health Statistics. Leading causes of death. 2015. https://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm. Accessed May 1, 2017.
2. Ford ES, Bergmann MM, Boeing H, Li C, Capewell S. Healthy lifestyle behaviors and all-cause mortality among adults in the United States. *Prev Med*. 2012;55(1):23-27.
3. Patnode CD, Evans CV, Senger CA, Redmond N, Lin JS. *Behavioral Counseling to Promote a Healthful Diet and Physical Activity for Cardiovascular Disease Prevention in Adults Without Known Cardiovascular Disease Risk Factors: An Updated Systematic Review for the US Preventive Services Task Force*. Evidence synthesis no. 152. AHRQ publication no. 15-05222-EF-1. Rockville, Md.: Agency for Healthcare Research and Quality; 2017.
4. Patnode CD, Evans CV, Senger CA, Redmond N, Lin JS. Behavioral counseling to promote a healthful diet and physical activity for cardiovascular disease prevention in adults without known cardiovascular disease risk factors: updated evidence report and systematic review for the US Preventive Services Task Force. *JAMA*. 2017;318(2):175-193.
5. US Department of Health and Human Services and US Department of Agriculture. 2015-2020 dietary guidelines for Americans, eighth edition. 2015. https://health.gov/dietaryguidelines/2015/guidelines/. Accessed May 1, 2017.
6. US Department of Health and Human Services. *2008 Physical Activity Guidelines for Americans*. ODPHP publication no. U0036. Washington, DC: US Department of Health and Human Services; 2008.
7. Community Preventive Services Task Force. Diabetes: combined diet and physical activity promotion programs to prevent type 2 diabetes among people at increased risk. 2014. https://www.thecommunityguide.org/findings/diabetes-combined-diet-and-physical-activity-promotion-programs-prevent-type-2-diabetes. Accessed May 1, 2017.
8. U.S. Preventive Services Task Force. Behavioral counseling to promote a healthful diet and physical activity for cardiovascular disease prevention in adults with cardiovascular risk factors: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med*. 2014;161(8):587-593.
9. U.S. Preventive Services Task Force. Screening for and management of obesity in adults: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med*. 2012;157(5):373-378.
10. U.S. Preventive Services Task Force. Screening for abnormal blood glucose and type 2 diabetes mellitus: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med*. 2015;163(11):861-868.
11. U.S. Preventive Services Task Force. Screening for high blood pressure in adults: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med*. 2015;163(10):778-786.
12. US Preventive Services Task Force. Statin use for the primary prevention of cardiovascular disease in adults: US Preventive Services Task Force recommendation statement. *JAMA*. 2016;316(19):1997-2007.
13. U.S. Preventive Services Task Force. Behavioral and pharmacotherapy interventions for tobacco smoking cessation in adults, including pregnant women: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med*. 2015;163(8):622-634.
14. U.S. Preventive Services Task Force. Aspirin use for the primary prevention of cardiovascular disease and colorectal cancer: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med*. 2016; 164(12):836-845. ■