



Doug Campos-Outcalt,
MD, MPA
Medical Director, Mercy
Care Plan, Phoenix, Ariz

campos-outcalt@mercyareplan.com

Diet, exercise, and CVD: When counseling makes the most sense

The USPSTF advises high-intensity counseling for those who are overweight or obese and have hypertension, hyperlipidemia, or other CVD risk factors.

In the past 2 years, the US Preventive Services Task Force (USPSTF) has released 2 recommendations on the primary prevention of cardiovascular disease (CVD). And it is proposing a third. The first recommendation, released in 2012, covered behavioral counseling on diet and physical activity to prevent CVD in individuals without documented CVD risks.¹ The second recommendation, released earlier this year, covered the use of vitamins and mineral supplements to prevent CVD.² A draft of the proposed third recommendation, which was posted for public review until early June, covers behavioral counseling to help adults with known CVD risk factors improve their diet and physical activity (TABLE).¹⁻³

Counseling can influence behavior, but does it affect outcomes?

CVD is the leading cause of death in the United States, accounting for >596,000 deaths per year with an age-adjusted rate of 191.4 per 100,000.⁴ Age-adjusted CVD mortality has been declining for decades thanks to improved medical care and a reduction in smoking and other risk factors. It is well documented that adults who follow national recommendations for a healthy diet and levels of physical activity have lower rates of CVD and CVD mortality.¹ The USPSTF agrees with the American Heart Association (AHA) and the American College of Cardiology (ACC) that everyone would benefit from a healthier diet and more exer-

cise.⁵ However, the Task Force reviewed the evidence on behavioral counseling in the primary care setting and found that, for adults who do *not* have known CVD, hypertension, hyperlipidemia, or diabetes, even high-intensity behavioral counseling resulted in only a small benefit in intermediate outcomes, which would translate into very small population-wide improvements.

In the evidence report prepared by the Task Force, the intensity of counseling intervention was defined as low, medium, or high if it lasted, respectively, 1 to 30 minutes, 31 to 360 minutes, or ≥ 361 minutes. Low-intensity interventions involved brief counseling sessions performed by primary care clinicians or mailing educational materials to patients or both. Medium- and high-intensity interventions usually were conducted by health educators, nutritionists, or other professionals instead of primary care clinicians. These interventions improved patients' consumption of a healthier diet and participation in physical activity, but yielded only modest reductions in body mass index (BMI), blood pressure (BP), and lipid levels. Moreover, no direct evidence exists for improved CVD outcomes with these interventions.

The recent AHA/ACC guideline on lifestyle modifications recommends that clinicians advise all adults on healthy dietary choices and exercise, based on the known benefits of these behaviors. The guideline developers recognized that the evidence for benefits appears in the highest risk groups, and

TABLE

Current and pending USPSTF statements on preventive measures for CVD in adults¹⁻³

<p>Behavioral counseling interventions to promote a healthful diet and physical activity for CVD prevention in adults (released June 2012)</p> <p>Population: General adult population without a known diagnosis of hypertension, diabetes, hyperlipidemia, or CVD.</p> <p>“C” recommendation: Although the correlation among healthful diet, physical activity, and the incidence of CVD 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 small. Clinicians may choose to selectively counsel patients rather than incorporate counseling into the care of all adults in the general population.</p>
<p>Vitamin, mineral, and multivitamin supplements for the primary prevention of CVD and cancer (released February 2014)</p> <p>Population: Healthy adults without special nutritional needs.</p> <p>“I” statement: Current evidence is insufficient to assess the balance of benefits and harms of the use of multivitamins for the prevention of CVD or cancer.</p> <p>“I” statement: Current evidence is insufficient to assess the balance of benefits and harms of the use of single- or paired-nutrient supplements (except β-carotene and vitamin E) for the prevention of CVD or cancer.</p> <p>“D” recommendation: Recommends against the use of β-carotene or vitamin E supplements for the prevention of CVD or cancer.</p>
<p>Behavioral counseling to promote a healthy diet and physical activity for CVD prevention in adults with known risk factors (under consideration)</p> <p>Population: Adults ≥ 18 years in primary care settings with known CVD risk factors (eg, hypertension, dyslipidemia, impaired fasting glucose) and who are overweight or obese.</p> <p>“B” recommendation (proposed): Recommends offering or referring overweight and obese adults who have additional CVD risk factors to intensive behavioral counseling interventions to promote a healthy diet and physical activity for CVD prevention.</p>

CVD, cardiovascular disease; USPSTF, US Preventive Services Task Force.

they did not assess the evidence for effectiveness of behavioral counseling itself.⁶

The Task Force rationale for recommending counseling

In the draft of its third recommendation addressing those at highest risk for CVD, the Task Force does advise high-intensity behavioral counseling for those who are overweight or obese and who have other CVD risk factors such as hypertension, hyperlipidemia, or impaired fasting glucose levels. This proposed new recommendation replaces one from 2003 that advised intensive dietary counseling for those with CVD risks including hyperlipidemia. The draft focuses attention in primary care on those who are overweight or obese. It

complements another Task Force recommendation to provide or to refer patients for intensive multicomponent behavioral interventions if they are obese, defined as a BMI ≥ 30 kg/m².⁷

The Task Force cited 2 examples of behavioral interventions that can improve outcomes in those with CVD risks—the Diabetes Prevention Program and PREMIER, a set of interventions to lower BP.^{8,9} These programs have improved intermediate outcomes after 12 to 24 months, decreasing total cholesterol by 3 to 6 mg/dL and low-density lipoprotein cholesterol by 1.5 to 5 mg/dL; systolic and diastolic BP by 1 to 3 mm Hg and 1 to 2 mm Hg, respectively; fasting glucose by 1 to 3 mg/dL; and weight by approximately 3 kg. The Task Force felt that while hard evidence is lacking for reducing CVD with counseling, epidemio-

 The potential benefit of behavioral counseling for those without documented CVD risks is relatively small.

logic studies demonstrate that, in those at high risk, reductions in CVD rates generally reflect the magnitude of improvement in intermediate measures.

Half of all adults in the United States have at least one documented CVD risk factor. But the potential benefit of behavioral counseling for those without documented CVD risks is relatively small. Rather than expending effort for only modest gain in the lower risk group, the Task Force recommends focusing on those with highest CVD risk. Thus the non-high risk group received a “C” recommendation, while the group of overweight and obese patients with other CVD risks received a “B” recommendation for essentially the same interventions. (For more on the grade definitions, see <http://www.uspreventiveservicestaskforce.org/uspstf/grades.htm>.)

In addition to counseling...

The Task Force also recommends other interventions for the primary prevention of CVD:

- screening for and treating hypertension
- selectively screening for hyperlipidemia
- using aspirin to prevent CVD in those at high risk
- intensive counseling on weight management for those who are obese

- advising children and adolescents to avoid tobacco, and using brief interventions for tobacco cessation for smokers.

The recent Task Force recommendation on the use of vitamins, minerals, and multivitamins² states that, while many adults take vitamin and mineral supplements in the belief that they prevent both heart disease and cancer, there is no evidence to support that belief. And there is good evidence that both β -carotene and vitamin E do not prevent disease. For other vitamins and minerals, singly or in combination, there is insufficient evidence to recommend for or against their use.²

The Community Preventive Services Task Force—a separate expert panel established by the US Department of Health and Human Services to complement the USPSTF—makes recommendations on population-level interventions and has a series of recommendations on ways to improve the population’s nutrition and physical activity.¹⁰ These community-based interventions, if widely implemented, would probably yield greater improvements in healthy eating and increased activity levels than resource-intensive clinical interventions based on individual patients with low risk. **JFP**

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There is good evidence that both β -carotene and vitamin E do not prevent CVD or cancer.

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