Complete Summary

GUIDELINE TITLE

Behavioral counseling in primary care to promote a healthy diet: recommendations and rationale.

BIBLIOGRAPHIC SOURCE(S)

Behavioral counseling in primary care to promote a healthy diet: recommendations and rationale. Am J Prev Med 2003 Jan;24(1):93-100. [54 references] PubMed

COMPLETE SUMMARY CONTENT

SCOPE
METHODOLOGY - including Rating Scheme and Cost Analysis
RECOMMENDATIONS
EVIDENCE SUPPORTING THE RECOMMENDATIONS
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS
IMPLEMENTATION OF THE GUIDELINE
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES
IDENTIFYING INFORMATION AND AVAILABILITY

SCOPE

DISEASE/CONDITION(S)

Major diseases in which diet plays a role including coronary heart disease, some types of cancer, stroke, hypertension, obesity, osteoporosis, and non-insulin-dependent diabetes mellitus

GUIDELINE CATEGORY

Counseling
Prevention

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Dietitians
Nurses
Physician Assistants
Physicians
Public Health Departments

GUIDELINE OBJECTIVE(S)

- To summarize the current U.S. Preventive Services Task Force (USPSTF) recommendations for counseling to promote a healthy diet in primary care patients and the supporting evidence
- To update the 1996 recommendations contained in the Guide to Clinical Preventive Services, second edition

TARGET POPULATION

Adult patients with hyperlipidemia and other known risk factors for cardiovascular and diet-related chronic disease

INTERVENTIONS AND PRACTICES CONSIDERED

1. Behavioral dietary counseling (low-, medium-, and high-intensity counseling were considered)
2. Nutrition education in combination with dietary counseling
3. Dietary assessment questionnaires were considered

MAJOR OUTCOMES CONSIDERED

Dietary change, as measured by net change in consumption (defined as change in the intervention group from baseline to follow-up minus the change in the control group from baseline to follow-up)

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Note from the National Guideline Clearinghouse (NGC): A systematic evidence review was prepared by the Research Triangle Institute-University of North Carolina Evidence-based Practice Center for the Agency for Healthcare Research and Quality (AHRQ) for use by the U.S. Preventive Services Task Force (USPSTF) (see the "Companion Documents" field).

Literature Search Strategy

To identify studies examining the question of the relationship between diet and health, existing systematic reviews were identified from MEDLINE, the Cochrane Database of Systematic Review, and the University of York Database of Reviews of Effectiveness (DARE) from 1990 to the present; formal searches of the primary literature were not conducted. When systematic reviews were unavailable, representative individual observational studies and randomized trials were included.

To find articles relevant to the questions about dietary assessment and the effectiveness of diet counseling in the primary care setting, the MEDLINE database was searched for citations to articles published between 1996 and 2001. The information on searches provided below pertains to key questions about dietary behavior.

The following Medical Subject Headings (MeSH) terms were employed for the three main types of searches (diet, primary care, and counseling):

- Diet: "diet," "nutrition," "food frequency," "food habits," "dietary assessment," "diet records," "diet surveys," and "nutrition assessment"
- Primary care: "family practice," "primary health care," "primary care setting"
- Counseling: "counseling," "dietary counseling" (textword), "diet counseling" (textword), and "nutrition counseling" (textword)

Additional searches were carried out to identify articles regarding brief dietary assessment methodology and existing systematic reviews about dietary counseling interventions. Bibliographies of pertinent articles were reviewed and experts in the field were consulted to assure completeness.

Inclusion and Exclusion Criteria

All searches were limited to "human" populations and "English language." For counseling interventions, searches were restricted to randomized controlled trials (RCTs).

For the diet counseling literature related to patient dietary outcomes, articles were included if they evaluated a nutrition intervention delivered to a primary care population either within a primary care setting or after referral. Studies were included that assessed impact on dietary change among those at risk for chronic disease (e.g., elevated cholesterol). Excluded were studies of individuals with a diagnosed illness that (a) might directly affect their dietary intake (e.g., cancer), (b) required a specialized diet (e.g., diabetes or renal disease), or (c) required entry into the study immediately following a life-threatening, disease-related event (e.g., during hospitalization for an acute myocardial infarction).

All included articles used a RCT design with baseline and follow-up measures of relevant dietary outcomes. Excluded were studies that reported physiologic measures or biomarkers associated with dietary change (e.g., serum vitamin levels) but no direct measure of diet behavior. Studies were not used in which the diet was externally controlled (provided by researchers or in a residential

institution). To be included, it was required that a study have a retention rate of at least 50% and be at least 3 months in duration.

Studies were retained that evaluated physician training programs to improve physician counseling practices if a control or comparison group was a part of the evaluation and if the counseling approach tested was relevant to the primary care setting.

NUMBER OF SOURCE DOCUMENTS

Key Question No. 1: Relationship Between Dietary Patterns and Health Outcomes: 58 references

Key Question No. 2: Valid, Feasible Tools for Assessment of Dietary Risk and Patterns: 18 articles

Key Question No. 3: Adverse Effects of Dietary Assessment: No studies were identified.

Key Question No. 4: Efficacy of Primary Care Counseling and Dietary Behavior Change Interventions: 33 articles

Key Question No. 5: Adverse Effects and Associated Costs of Behavioral Interventions to Promote Healthy Diets: Not stated

Key Question No. 6: System Influences that Facilitate or Impede Dietary Intervention: Not stated

Key Question No. 7: Nutritional Supplementation: Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

The U.S. Preventive Services Task Force (USPSTF) grades the quality of the overall evidence for a service on a 3-point scale (good, fair, or poor).

Good

Evidence includes consistent results from well-designed, well-conducted studies in representative populations that directly assess effects on health outcomes.

Fair

Evidence is sufficient to determine effects on health outcomes, but the strength of the evidence is limited by the number, quality, or consistency of the individual

studies; generalizability to routine practice; or indirect nature of evidence on health outcomes.

Poor

Evidence is insufficient to assess the effects on health outcomes because of limited number or power of studies, important flaws in their design or conduct, gaps in the chain of evidence, or lack of information on important health outcomes.

Note: See the companion document titled "Current Methods of the U.S. Preventive Services Task Force: a Review of the Process" (Am J Prev Med 2001 Apr;20[3S]:21-35) for a more detailed description of the methods used to assess the quality and strength of the evidence for the three strata at which the evidence was reviewed.

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Note from the National Guideline Clearinghouse (NGC): A systematic evidence review was prepared by the Research Triangle Institute-University of North Carolina Evidence-based Practice Center for the Agency for Healthcare Research and Quality (AHRQ) for use by the U.S. Preventive Services Task Force (USPSTF) (see the "Companion Documents" field).

Senior investigators reviewed titles and abstracts to identify which full manuscripts to review and made the final decisions about inclusion or exclusion. Other team members then reviewed individual articles and abstracted selected information into evidence tables. When multiple articles described the same study, the most complete article was used as the main source of data; the other articles were used for supplemental information. Team members discussed disagreements with reviewers and made final decisions by consensus.

Net change in consumption, defined as change in the intervention group from baseline to follow-up minus the change in the control group from baseline to follow-up, was used as the main outcome. Unadjusted outcomes from the article were reported when they were presented. In some cases when necessary data were not presented in the article, they were calculated from other information presented.

To facilitate comparison of effectiveness of counseling on dietary change across studies that used a variety of different outcome measures, two investigators independently classified the magnitude of dietary change in each study as "small," "medium," or "large." The study team resolved disagreements by consensus. Definitions of small, medium, and large changes based on the distribution of findings from the studies and the limited information available about the relationship between dietary change and health outcomes were developed.

For saturated fat, small was defined as an absolute net difference between intervention and control groups of 0 to 1.2 percentage points, medium as a difference of 1.3 to 3.0 percentage points, and large as a difference of greater than 3.0 percentage points. When studies reported only change in proportion of calories from total fat, large was classified as a difference of greater than 10 percentage points, medium as a difference of 5.1 to 9.9 percentage points and small as a difference of less than or equal to 5 percentage points. Effect sizes were classified based on the difference in the number of servings of fruit and vegetables per day consumed by the intervention and control groups. Small was defined as a difference of less than 0.3 servings per day, medium as a difference of 0.4 to 0.9 servings per day, and large as a difference of greater than or equal to 1.0 serving per day. For fiber, a small effect size was defined as a net difference of less than 2.0 grams (g) per day of fiber, medium as 2.0 to 4.0 g per day, and large as greater than 4.0 g per day.

If studies did not provide data on main outcomes of interest, the relative change in the outcome reported (e.g., grams of fat consumed, dietary risk scores) was used to guide the definition of magnitude of change. The relative change was defined as the net change divided by the baseline value in the control group. A relative change of 25% or greater was considered large, 10% to 24% medium, and less than 10% small.

Analysis of Factors Influencing Effect Size

The effect of different intervention characteristics was examined, including intensity, the risk status of the patient populations studied, the study setting, and the use of well-proven counseling elements, on the magnitude of change in dietary behavior achieved. Trials were considered that examined multiple nutrients as separate studies for these analyses. Because of concern about double-counting studies, the authors repeated the analyses with each study´s effect counted only once (once using the largest effect and again using the smallest effect) and found similar results. Because of heterogeneity in the outcomes, meta-analysis was not attempted.

Two senior reviewers independently rated the intensity of the dietary intervention as "low," "medium," or "high" based on the number and length of counseling contacts. Interventions with only one contact of 30 minutes or less were considered low intensity, those with six or more contacts of 30 minutes or more each were considered high intensity, and all others were considered medium intensity.

Each study's intervention "setting" was classified as (1) performed within the primary care clinic (by the usual primary care provider or referral to a dietitian or nutritionist); (2) conducted in a special research clinic; or (3) conducted using self-help materials and/or interactive health communications (e.g., telephone messages or computer-generated mailings).

Finally, the studies were examined to determine whether they included as part of their intervention any of seven counseling elements (using a dietary assessment, enlisting family involvement, providing social support, using group counseling, emphasizing food interaction, encouraging goal setting, and using advice

appropriate to the patient group being studied) that have been effective in previous research on dietary behavior change.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Balance Sheets
Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

When the overall quality of the evidence is judged to be good or fair, the U.S. Preventive Services Task Force (USPSTF) proceeds to consider the magnitude of net benefit to be expected from implementation of the preventive service. Determining net benefit requires assessing both the magnitude of benefits and the magnitude of harms and weighing the two.

The USPSTF classifies benefits, harms, and net benefits on a 4-point scale: "substantial," "moderate," "small," and "zero/negative."

"Outcomes tables" (similar to 'balance sheets') are the USPSTF's standard resource for estimating the magnitude of benefit. These tables, prepared by the topic teams for use at USPSTF meetings, compare the condition specific outcomes expected for a hypothetical primary care population with and without use of the preventive service. These comparisons may be extended to consider only people of specified age or risk groups or other aspects of implementation. Thus, outcomes tables allow the USPSTF to examine directly how the preventive services affects benefits for various groups.

When evidence on harms is available, the topic teams assess its quality in a manner like that for benefits and include adverse events in the outcomes tables. When few harms data are available, the USPSTF does not assume that harms are small or nonexistent. It recognizes a responsibility to consider which harms are likely and judge their potential frequency and the severity that might ensue from implementing the service. It uses whatever evidence exists to construct a general confidence interval on the 4-point scale (e.g., substantial, moderate, small, and zero/negative).

Value judgments are involved in using the information in an outcomes table to rate either benefits or harms on the USPSTF's 4-point scale. Value judgments are also needed to weigh benefits against harms to arrive a rating of net benefit.

In making its determinations of net benefit, the USPSTF strives to consider what it believes are the general values of most people. It does this with greater confidence for certain outcomes (e.g., death) about which there is little disagreement about undesirability, but it recognizes that the degree of risk people are willing to accept to avert other outcomes (e.g., cataracts) can vary considerably. When the USPSTF perceives that preferences among individuals vary greatly, and that these variations are sufficient to make trade-off of benefits and harms a 'close-call', then it will often assign a C recommendation (see the

"Recommendation Rating Scheme" field). This recommendation indicates the decision is likely to be sensitive to individual patient preferences.

The USPSTF uses its assessment of the evidence and magnitude of net benefit to make recommendations. The general principles the USPSTF follows in making recommendations are outlined in Table 5 of the companion document cited below. The USPSTF liaisons on the topic team compose the first drafts of the recommendations and rationale statements, which the full panel then reviews and edits. Recommendations are based on formal voting procedures that include explicit rules for determining the views of the majority.

From: Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow, CD, Teutsch SM, Atkins D. Current methods of the U.S. Preventive Services Task Force: a review of the process. Methods Work Group, Third U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):21-35.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

The U.S. Preventive Services Task Force (USPSTF) grades its recommendations according to one of five classifications (A, B, C, D, or I), reflecting the strength of evidence and magnitude of net benefit (benefits minus harms).

A

The U.S. Preventive Services Task Force (USPSTF) strongly recommends that clinicians provide [the service] to eligible patients. (The USPSTF found good evidence that [the service] improves important health outcomes and concludes that benefits substantially outweigh harms.)

B

The U.S. Preventive Services Task Force (USPSTF) recommends that clinicians provide [the service] to eligible patients. (The USPSTF found at least fair evidence that [the service] improves health outcomes and concludes that benefits outweigh harms.)

C

The U.S. Preventive Services Task Force (USPSTF) makes no recommendation for or against routine provision of [the service]. (The USPSTF found at least fair evidence that [the service] can improve health outcomes but concludes that the balance of benefits and harms it too close to justify a general recommendation.)

D

The U.S. Preventive Services Task Force (USPSTF) recommends against routinely providing [the service] to asymptomatic patients. (The USPSTF found at least fair evidence that [the service] is ineffective or that harms outweigh benefits.)

I

The U.S. Preventive Services Task Force (USPSTF) concludes that the evidence is insufficient to recommend for or against routinely providing [the service]. (Evidence that [the service] is effective is lacking, of poor quality, or conflicting and the balance of benefits and harms cannot be determined.)

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups
External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Peer Review. Before the U.S. Preventive Services Task Force makes its final determinations about recommendations on a given preventive service, the Evidence-based Practice Center and the Agency for Healthcare Research and Quality send a draft systematic evidence review to 4 to 6 external experts and to federal agencies and professional and disease-based health organizations with interests in the topic. They ask the experts to examine the review critically for accuracy and completeness and to respond to a series of specific questions about the document. After assembling these external review comments and documenting the proposed response to key comments, the topic team presents this information to the Task Force in memo form. In this way, the Task Force can consider these external comments and a final version of the systematic review before it votes on its recommendations about the service. Draft recommendations are then circulated for comment from reviewers representing professional societies, voluntary organizations and Federal agencies. These comments are discussed before the whole U.S. Preventive Services Task Force before final recommendations are confirmed.

Recommendations of Others. Recommendations for healthy diets, nutritional counseling or dietary advice from the following groups were discussed: the U.S. Department of Agriculture (USDA), Department of Health and Human Services (DHHS), American Heart Association (AHA), American Cancer Society (ACS), American College of Preventive Medicine (ACPM), American Academy of Family Physicians (AAFP), American Academy of Pediatrics (AAP), American College of Obstetricians and Gynecologists (ACOG), Canadian Task Force on Preventive Health Care (CTFPHC), American Dietetic Association (ADA), and two panels sponsored by the National Institutes of Health (NIH) National Heart, Lung, and Blood Institute (NHLBI), specifically, the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure and the National Cholesterol Education Program.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Note from the US Preventive Services Task Force (USPSTF) and the National Guideline Clearinghouse: In updating its recommendations, the USPSTF did not reevaluate the benefits of a healthy diet, which are detailed in many other reports. Instead, it focused on new controlled studies of the efficacy of counseling for changing dietary behavior in patients similar to those found in primary care practices. The review did not include studies of dietary interventions for specific chronic illnesses (eg, heart disease, diabetes, renal failure) but included studies enrolling patients with common risk factors such as elevated cholesterol, hypertension, obesity, or family history of heart disease. Counseling interventions with a primary focus on weight loss, weight management, and/or the treatment of obesity are covered in a separate review and are outside the scope of this recommendation. Studies of diet interventions focusing on lowering cholesterol levels in patients with elevated cholesterol or other lipid abnormalities are addressed in a separate USPSTF report entitled Screening for Lipid Disorders in Adults available from the USPSTF Web site. See also the National Guideline Clearinghouse (NGC) guideline summary. Studies of breastfeeding will also be addressed in a future USPSTF report.

The U.S. Preventive Services Task Force (USPSTF) grades its recommendations (A, B, C, D, or I) and the quality of the overall evidence for a service (good, fair, poor). The definitions of these grades can be found at the end of the "Major Recommendations" field.

- The U.S. Preventive Services Task Force (USPSTF) concludes that the evidence is insufficient to recommend for or against routine behavioral counseling to promote a healthy diet in unselected patients in primary care settings. I recommendation.

  The USPSTF found fair evidence that brief, low- to medium-intensity behavioral dietary counseling in the primary care setting can produce small to medium changes in average daily intake of core components of an overall healthy diet (especially saturated fat and fruit and vegetables) in unselected patients (see the "Scientific Evidence" section of the original guideline document for discussion of patient populations and intensity of interventions). The strength of this evidence, however, is limited by reliance on self-reported diet outcomes, limited use of measures corroborating reported changes in diet, limited follow-up data beyond 6 to 12 months, and enrollment of study participants who may not be fully representative of primary care patients. In addition, there is limited evidence to assess possible harms (see "Clinical Considerations" below). As a result, the USPSTF concluded that there is insufficient evidence to determine the significance and magnitude of the benefit of routine counseling to promote a healthy diet in adults. Although community-based studies have evaluated measures to reduce dietary fat intake in children, no controlled trials of routine behavioral dietary counseling for children or adolescents in the primary care setting were identified.

- The USPSTF recommends intensive behavioral dietary counseling for adult patients with hyperlipidemia and other known risk factors for cardiovascular and diet-related chronic disease. Intensive counseling can be delivered by primary care clinicians or by referral to other specialists, such as nutritionists or dietitians. B recommendation.

The USPSTF found good evidence that medium- to high-intensity counseling interventions can produce medium to large changes in average daily intake of core components of a healthy diet (including saturated fat, fiber, fruit, and vegetables) among adult patients at increased risk for diet-related chronic disease. Intensive counseling interventions that have been examined in controlled trials among at-risk adult patients have combined nutrition education with behavioral dietary counseling provided by a nutritionist, dietitian, or specially trained primary care clinician (e.g., physician, nurse, or nurse practitioner). The USPSTF concluded that such counseling is likely to improve important health outcomes and that benefits outweigh potential harms. No controlled trials of intensive counseling in children or adolescents that measured diet were identified.

Clinical Considerations

- Several brief dietary assessment questionnaires have been validated for use in the primary care setting. These instruments can identify dietary counseling needs, guide interventions, and monitor changes in patients´ dietary patterns. However, these instruments are susceptible to the bias of the respondent. Therefore, when used to evaluate the efficacy of counseling, efforts to verify self-reported information are recommended since patients receiving dietary interventions may be more likely to report positive changes in dietary behavior than control patients.
- Effective interventions combine nutrition education with behaviorally-oriented counseling to help patients acquire the skills, motivation, and support needed to alter their daily eating patterns and food preparation practices. Examples of behaviorally-oriented counseling interventions include teaching self-monitoring, training to overcome common barriers to selecting a healthy diet, helping patients to set their own goals, providing guidance in shopping and food preparation, role playing, and arranging for intra-treatment social support. In general, these interventions can be described with reference to the 5-A behavioral counseling framework: Assess dietary practices and related risk factors, Advise to change dietary practices, Agree on individual diet change goals, Assist to change dietary practices or address motivational barriers, and Arrange regular follow-up and support or refer to more intensive behavioral nutritional counseling (e.g., medical nutrition therapy) if needed.
- Two approaches appear promising for the general population of adult patients in primary care settings: (1) medium-intensity face-to-face dietary counseling (two to three group or individual sessions) delivered by a dietitian or nutritionist or by a specially trained primary care physician or nurse practitioner, and (2) lower-intensity interventions that involve 5 minutes or less of primary care provider counseling supplemented by patient self-help materials, telephone counseling, or other interactive health communications. However, more research is needed to assess the long-term efficacy of these treatments and the balance of benefits and harms.
- The largest effect of dietary counseling in asymptomatic adults has been observed with more intensive interventions (multiple sessions lasting 30 minutes or longer) among patients with hyperlipidemia or hypertension, and among others at increased risk for diet-related chronic disease. Effective interventions include individual or group counseling delivered by nutritionists, dietitians, or specially trained primary care practitioners or health educators in the primary care setting or in other clinical settings by referral. Most

studies of these interventions have enrolled selected patients, many of whom had known diet-related risk factors such as hyperlipidemia or hypertension. Similar approaches may be effective with unselected adult patients, but adherence to dietary advice may be lower, and health benefits smaller, than in patients who have been told they are at higher risk for diet-related chronic disease.

- Office-level systems supports (prompts, reminders, and counseling algorithms) have been found to significantly improve the delivery of appropriate dietary counseling by primary care clinicians.
- Possible harms of dietary counseling have not been well defined or measured. Some have raised concerns that if patients focus only on reducing total fat intake without attention to reducing caloric intake, an increase in carbohydrate intake (e.g., reduced-fat or low-fat food products) may lead to weight gain, elevated triglyceride levels, or insulin resistance. Nationally, obesity rates have increased despite declining fat consumption, but studies did not consistently examine effects of counseling on outcomes such as caloric intake and weight.
- Little is known about effective dietary counseling for children or adolescents in the primary care setting. Most studies of nutritional interventions for children and adolescents have focused on non-clinical settings (such as schools) or have used physiologic outcomes such as cholesterol or weight rather than more comprehensive measures of a healthy diet.

Definitions

USPSTF grades its recommendations according to one of 5 classifications (A, B, C, D, I) reflecting the strength of evidence and magnitude of net benefit (benefits minus harms).

A

The USPSTF strongly recommends that clinicians provide [the service] to eligible patients. The USPSTF found good evidence that [the service] improves important health outcomes and concludes that benefits substantially outweigh harms.

B

The USPSTF recommends that clinicians provide [this service] to eligible patients. The USPSTF found at least fair evidence that [the service] improves important health outcomes and concludes that benefits outweigh harms.

C

The USPSTF makes no recommendation for or against routine provision of [the service]. The USPSTF found at least fair evidence that [the service] can improve health outcomes but concludes that the balance of benefits and harms is too close to justify a general recommendation.

D

The USPSTF recommends against routinely providing [the service] to asymptomatic patients. The USPSTF found at least fair evidence that [the service] is ineffective or that harms outweigh benefits.

I

The USPSTF concludes that the evidence is insufficient to recommend for or against routinely providing [the service]. Evidence that [the service] is effective is lacking, of poor quality, or conflicting and the balance of benefits and harms cannot be determined.

The U.S. Preventive Services Task Force (USPSTF) grades the quality of the overall evidence for a service on a 3-point scale (good, fair, poor).

Good

Evidence includes consistent results from well-designed, well-conducted studies in representative populations that directly assess effects on health outcomes.

Fair

Evidence is sufficient to determine effects on health outcomes, but the strength of the evidence is limited by the number, quality, or consistency of the individual studies, generalizability to routine practice, or indirect nature of the evidence on health outcomes.

Poor

Evidence is insufficient to assess the effects on health outcomes because of limited number or power of studies, important flaws in their design or conduct, gaps in the chain of evidence, or lack of information on important health outcomes.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence supporting each recommendation is identified in the "Major Recommendations" field.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Effectiveness of Dietary Counseling

The ideal evidence to support behavioral dietary counseling would link counseling directly to improved health outcomes in randomized controlled clinical trials. In the absence of such evidence, the clinical logic behind counseling is based on a chain of critical assumptions: (1) the clinician must be able to assess whether a patient is consuming a healthy diet, (2) critical components of counseling must be routinely replicable, (3) counseling must lead to sustained improvements in diet, and (4) the health benefits of these changes in diet must be established and known to exceed the potential harms of intervention. A review conducted for the USPSTF identified 21 fair to good quality randomized controlled clinical trials of dietary counseling among patients without existing diet-related chronic disease (eg, coronary heart disease or cancer).

During analysis of the studies, effects of counseling were classified as "large," "medium," or "small" for each component of diet measured (see the "Description of Methods Used to Analyze the Evidence" field). With reference to these specific, defined categories, the USPSTF concluded that large effects sustained over time were likely to produce important health benefits (reductions in morbidity and mortality). Given the large attributable risk associated with these dietary components, it is possible that medium or even small changes in diet would yield important health benefits across a large population. However, to date, there is little direct evidence about the effect of small and medium dietary changes on the future risk for coronary heart disease, making it difficult to determine with certainty whether such changes will translate into changes in the incidence of chronic disease. Better data about these linkages are needed.

Effectiveness of Intensive Counseling in Patients at Risk for Chronic Disease

The USPSTF found 10 fair to good quality randomized controlled trials that tested whether medium- to high-intensity interventions delivered in primary care or other clinical settings led to improved dietary outcomes among adults who were identified as being at increased risk for diet-related chronic disease. For 2 of these trials, 2 research reports for each were reviewed. No controlled trials with children or adolescents at risk for chronic disease were identified that reported dietary outcomes.

In summary, interventions for patients at risk for chronic disease resulted in dietary behavior changes that were small (n=3), medium (n=6), and large (n=4), most of which were statistically significant. The magnitude and duration of these changes were greater with higher intensity interventions than with interventions of lower intensity. More than one-half of these studies found that self-reported dietary changes were accompanied by significant improvements in serum lipids, weight, or BMI. These findings help corroborate patients' self-reported dietary changes and confirm the overall health benefits of the observed changes in diet.

POTENTIAL HARMS

Possible harms of dietary counseling have not been well defined or measured. Some have raised concerns that if patients focus only on reducing total fat intake without attention to reducing caloric intake, an increase in carbohydrate intake (e.g., reduced-fat or low-fat food products) may lead to weight gain, elevated triglyceride levels, or insulin resistance.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

The experiences of the first and second U.S. Preventive Services Task Force (USPSTF), as well as that of other evidence-based guideline efforts, have highlighted the importance of identifying effective ways to implement clinical recommendations. Practice guidelines are relatively weak tools for changing clinical practice when used in isolation. To effect change, guidelines must be coupled with strategies to improve their acceptance and feasibility. Such strategies include enlisting the support of local opinion leaders, using reminder systems for clinicians and patients, adopting standing orders, and audit and feedback of information to clinicians about their compliance with recommended practice.

In the case of preventive services guidelines, implementation needs to go beyond traditional dissemination and promotion efforts to recognize the added patient and clinician barriers that affect preventive care. These include clinicians' ambivalence about whether preventive medicine is part of their job, the psychological and practical challenges that patients face in changing behaviors, lack of access to health care or of insurance coverage for preventive services for some patients, competing pressures within the context of shorter office visits, and the lack of organized systems in most practices to ensure the delivery of recommended preventive care.

Neither the resources nor the composition of the U.S. Preventive Services Task Force equip it to address these numerous implementation challenges, but a number of related efforts seek to increase the impact of future U.S. Preventive Services Task Force reports. The U.S. Preventive Services Task Force convened representatives from the various audiences for the Guide "Put Prevention Into Practice. A Step-by-Step Guide to Delivering Clinical Preventive Services: A Systems Approach" - clinicians, consumers and policy makers from health plans, national organizations and Congressional staff - about how to modify the content and format of its products to address their needs. With funding from the Robert Wood Johnson Foundation, the U.S. Preventive Services Task Force and Community Guide effort have conducted an audience analysis to further explore implementation needs. The Put Prevention into Practice initiative at the Agency for Healthcare Research and Quality (AHRQ) has developed office tools such as patient booklets, posters, and handheld patient mini-records, and a new implementation guide for state health departments.

Dissemination strategies have changed dramatically in this age of electronic information. While recognizing the continuing value of journals and other print formats for dissemination, the Agency for Healthcare Research and Quality will make all U.S. Preventive Services Task Force (USPSTF) products available through its Web site. The combination of electronic access and extensive material in the public domain should make it easier for a broad audience of users to access U.S. Preventive Services Task Force materials and adapt them for their local needs. Online access to U.S. Preventive Services Task Force products also opens up new possibilities for the appearance of the third edition of the Guide to Clinical Preventive Services. Freed from having to serve as primary repository for all of

U.S. Preventive Services Task Force work, the next Guide may be much slimmer than the almost 1000 pages of the second edition.

To be successful, approaches for implementing prevention have to be tailored to the local level and deal with the specific barriers at a given site, typically requiring the redesign of systems of care. Such a systems approach to prevention has had notable success in established staff-model health maintenance organizations, by addressing organization of care, emphasizing a philosophy of prevention, and altering the training and incentives for clinicians. Staff-model plans also benefit from integrated information systems that can track the use of needed services and generate automatic reminders aimed at patients and clinicians, some of the most consistently successful interventions. Information systems remain a major challenge for individual clinicians' offices, however, as well as for looser affiliations of practices in network-model managed care and independent practice associations, where data on patient visits, referrals and test results are not always centralized.

RELATED QUALITY TOOLS

- Pocket Guide to Good Health for Adults

- A Step-by-Step Guide to Delivering Clinical Preventive Services: A Systems Approach

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Behavioral counseling in primary care to promote a healthy diet: recommendations and rationale. Am J Prev Med 2003 Jan;24(1):93-100. [54 references] PubMed

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1996 (revised 2003)

GUIDELINE DEVELOPER(S)

United States Preventive Services Task Force - Independent Expert Panel

GUIDELINE DEVELOPER COMMENT

The U.S. Preventive Services Task Force (USPSTF) is a Federally-appointed panel of independent experts. Conclusions of the USPSTF do not necessarily reflect policy of the U.S. Department of Health and Human Services (DHHS) or DHHS agencies.

SOURCE(S) OF FUNDING

United States Government

GUIDELINE COMMITTEE

U.S. Preventive Services Task Force (USPSTF)

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Task Force Members: Alfred O. Berg, MD, MPH, Chair; Janet D. Allan, PhD, RN, Vice-chair; Paul Frame, MD; Charles J. Homer, MD, MPH; Mark S. Johnson, MD, MPH; Jonathan D. Klein, MD, MPH; Tracy A. Lieu, MD, MPH*; Cynthia D. Mulrow, MD, MSc*; Tracy C. Orleans, PhD; Jeffrey F. Peipert, MD, MPH*; Nola J. Pender, PhD, RN*; Albert L. Siu, MD, MSPH; Steven M. Teutsch, MD, MPH; Carolyn Westhoff, MD, MSc; Steven H. Woolf, MD, MPH

*Member of the U.S. Preventive Services Task Force (USPSTF) at the time these recommendations were finalized.

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

The U.S. Preventive Services Task force has an explicit policy concerning conflict of interest. All members and evidence-based practice center (EPC) staff disclose at each meeting if they have an important financial conflict for each topic being discussed. Task Force members and EPC staff with conflicts can participate in discussions about evidence, but members abstain from voting on recommendations about the topic in question.

From: Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow, CD, Teutsch SM, Atkins D. Current methods of the U.S. Preventive Services Task Force: a review of the process. Methods Work Group, Third U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):21-35.

GUIDELINE STATUS

This is the current release of the guideline.

This release updates a previously published guideline: U.S. Preventive Services Task Force. Counseling to promote a healthy diet. In: Guide to clinical preventive services. 2nd ed; Baltimore (MD): Williams & Wilkins; 1996. p. 625-42.

GUIDELINE AVAILABILITY

Electronic copies: Available from the U.S. Preventive Services Task Force (USPSTF) Web site and the National Library of Medicine's Health Services/Technology Assessment Text (HSTAT) Web site.

Print copies: Available from the Agency for Healthcare Research and Quality (AHRQ) Publications Clearinghouse. For more information, go to www.ahrq.gov/news/pubsix.htm or call 1-800-358-9295 (U.S. only).

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

Evidence Reviews:

- Pignone MP, Ammerman A, Fernandez L, Orleans CT, Pender N, Woolf S, Lohr K, Sutton S. Counseling to promote a healthy diet in adults: a summary of the evidence for the U.S. Preventive Services Task Force. Am J Prev Med. 2003 Jan;24(1):75-92.
- Ammerman A, Pignone M, Fernandez L, Lohr K, Jacobs AD, Orleans T, Pender N, Woolf S, Sutton S, Lux LJ, Whitener L. Counseling to promote a healthy diet. Systematic evidence review. Rockville (MD); Agency for Healthcare Research and Quality; 2002 Dec. (Systematic evidence review).

Background Articles:

- Woolf SH, Atkins D. The evolving role of prevention in health care: contributions of the U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):13-20.
- Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow, CD, Teutsch SM, Atkins D. Current methods of the U.S. Preventive Services Task Force: a review of the process. Methods Work Group, Third U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):21-35.
- Saha S, Hoerger TJ, Pignone MP, Teutsch SM, Helfand M, Mandelblatt. The art and science of incorporating cost effectiveness into evidence-based recommendations for clinical preventive services. Cost Work Group of the Third U.S. Preventive Services Task Force. Am J Prev Med 2001 Apr;20(3S):36-43.

Electronic copies: Available from U.S. Preventive Services Task Force (USPSTF) Web site.

The following is also available:

- A step-by-step guide to delivering clinical preventive services: a systems approach. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ), 2001. 189 p. (Pub. No. APPIP01-0001). Electronic copies available from the AHRQ Web site.

Print copies: Available from the Agency for Healthcare Research and Quality Publications Clearinghouse. For more information, go to www.ahrq.gov/news/pubsix.htm or call 1-800-358-9295 (U.S. only).

The Preventive Services Selector, an application for Palm Pilots and other PDA's, is also available from the AHRQ Web site.

PATIENT RESOURCES

The following is available:

- The Pocket Guide to Good Health for Adults. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2003.

Electronic copies: Available from the U.S. Preventive Services Task Force (USPSTF) Web site. Copies also available in Spanish from the USPSTF Web site.

Print copies: Available from the Agency for Healthcare Research and Quality (AHRQ) Publications Clearinghouse. For more information, go to www.ahrq.gov/news/pubsix.htm or call 1-800-358-9295 (U.S. only).

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This summary was completed by ECRI on June 30, 1998. The information was verified by the guideline developer on December 1, 1998. This summary was updated by ECRI on December 13, 2002. The updated information was verified by the guideline developer on December 19, 2002.

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