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Physician's guide to the new 2005 dietary guidelines: How best to counsel patients

ABSTRACT

The *Dietary Guidelines for Americans 2005* encourage most Americans to eat fewer calories, be more active, and make wiser food choices. Health care providers can influence patients' food and activity choices by providing specific counseling and presenting straightforward information.

KEY POINTS

Effective counseling begins by evaluating the patient's diet and activity level, using new tools designed to assess and discuss nutrition.

The important aspects of the key recommendations are reflected in the easy-to-remember acronym "CQE": cut calories, choose quality foods, and exercise daily for good health and weight loss.

Half of one's intake of grains should be in the form of whole grains. The new recommended intake of fruits and vegetables is at least 4½ cups a day for a reference 2,000-calorie diet.

People should be physically active at least 30 minutes every day to prevent chronic disease, or 60 to 90 minutes to manage weight.

PATIENT INFORMATION
Nutrition: Know the facts, page 619

The *Dietary Guidelines for Americans 2005* provide evidence-based advice to promote health and to reduce the risk of major chronic diseases through diet and physical activity. The key recommendations can be summarized as follows: most Americans should take in fewer calories, be more physically active, and make wiser food choices.[1,2]

This paper addresses the way health care providers can become agents of change and give patients practical suggestions for following the new recommendations. Effective counseling during the routine office visit is key. Because patients are more likely to follow concrete advice, a structured, practical plan is most likely to be successful.

BACKGROUND TO THE GUIDELINES

The 2005 dietary guidelines, published jointly by the US Departments of Agriculture and Health and Human Services, serve as the foundation for federal nutrition policy and education. They are based on recommendations from a 13-member advisory committee. Revised every 5 years, the guidelines are designed to provide the public with sound information to improve health through proper nutrition. The full 70-page report and a 9-page consumer pamphlet are available at **http://www.healthierus.gov/dietaryguidelines/**.

Compared with past editions, the 2005 guidelines are more specific about what to eat and how much to exercise (**TABLE 1**). Among the key differences, the 2005 guidelines encourage Americans to:

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- Shift half of their grain intake (bread, cereals, and pasta) to whole grains instead of white, refined grains. In a 2,000-calorie diet, this would mean 3 slices of whole grain bread or at least 3 ounces of whole grains per day.
- Consume 4 1/2 cups (5–9 servings) of fruits and vegetables per day, nearly double the previous recommendation.
- Boost their daily physical activity: 30 minutes to reduce the risk of chronic disease, 60 minutes to keep from gaining weight, and up to 90 minutes to lose weight and keep it off.

PHYSICIANS AS AGENTS OF CHANGE

Physicians can be agents of change in their patients' lives. Manson et al[3] report that patients solicit and respect advice from their primary care physicians; others[4–6] indicate that physicians can motivate patients to make healthy lifestyle changes.

Steps clinicians can take to intervene include:

- Assessing a patient's eating and activity status using two helpful assessment tools (see below)
- Setting realistic expectations
- Using the prescription pad to write specific recommendations for physical activity and diet
- Reviewing patients' weight changes at office visits and providing individualized care
- Monitoring patients' efforts at selecting healthier foods, controlling portion sizes, and achieving sufficient physical activity.

Write your prescriptions for diet and exercise on your prescription pad

Communication is key. When initiating a conversation about nutrition status or weight loss, ask your patient's permission first and then actively listen[7] without interrupting. Remember that people often need to hear a message several times and in a variety of ways before it becomes an impetus to change a behavior.[8]

CALORIE CONTROL REQUIRES UNDERSTANDING THE FOOD LABEL

The major function of food is to provide energy, which is measured in calories. The physician should explain what a calorie is and how it affects body weight. Then, the physician or an allied health professional can spend a few minutes teaching the patient how to read and understand the "Nutrition Facts" panel[9] of a food label, starting with serving size and calories (*see the patient education page that follows this article*). It may be useful to keep a food package in the office to use as a visual aid.

Possibly the two most important (and overlooked) numbers on the Nutrition Facts panel are the serving size and the number of servings per package. "Portion distortion," ie, the expansion in serving size that has occurred over the last 2 decades in America (**http://hin.nhlbi.nih.gov/portion/**),[10] hinders our ability to estimate accurate portion sizes. The 2005 dietary guidelines define 1 serving of cooked pasta as 1/2 cup, which is smaller than a tennis ball. Yet, many restaurants serve individual dinner portions four to eight times larger. Gauging sizes in terms of recognizable, everyday items such as a tennis ball or a deck of cards may be easier for patients to visualize than cups and ounces (**TABLE 2**).

Patients may not realize that many individual-size products (eg, 20-ounce soft drinks) contain more than 1 serving. The "Calories Count" campaign[11] of the US Food and Drug Administration's Obesity Working Group intends to improve this aspect of the food label.[12]

To help patients comprehend caloric intake, you can mention that a 250-calorie candy bar would take a 154-lb person about 1 hour of moderate walking at 3.5 mph to burn. A teaching tool that links high-calorie, moderate-calorie, and low-calorie foods with red, yellow, and green lights, respectively, is widely used with children and may also be useful for adults.[13] Similarly, assigning foods to "always," "sometimes," and "seldom" categories can be a valuable exercise for both children and adults.

PRACTICAL SUGGESTIONS

The thrust of the 2005 guidelines is to direct consumers away from the typical American diet, which is high in saturated fats, red meat, and refined flours, and toward a healthier diet rich in fruits, vegetables, whole grains, lean meats, and low-fat dairy products.[14] Telling

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TABLE 1

Comparison of US dietary guidelines, 2000 and 2005

2000	2005
Weight management	
Aim for a healthy weight. Evaluate weight using body mass index.	Balance calories from food and beverages with calories expended. Follow the United States Department of Agriculture (USDA) Food Guide for appropriate calorie requirements based on age and physical activity level.
Adequate nutrients	
Let the pyramid guide food choices.	Consume a variety of nutrient-dense foods and beverages. Follow a balanced eating pattern such as the USDA food guide or Dietary Approaches to Stop Hypertension (DASH) Eating Plan.
Food groups to encourage	
Consume 2 to 4 servings of fruits, 3 to 5 servings of vegetables.	Consume enough fruits and vegetables while staying within energy needs: 2 cups of fruit and 2 1/2 cups of vegetables per day for a reference 2,000-calorie intake. Make adjustments for various calorie levels.
Choose a variety of grains, especially whole grains.	Include 3 ounces or more of whole grains with at least half of grain intake from whole grains.
Consume 2 to 3 cups of milk or equivalent.	Consume 3 cups per day of fat-free or low-fat milk or equivalent.
Fat intake	
Choose a diet low in saturated fat and cholesterol and moderate in total fat	Keep total fat between 20% and 35% of calories, with most fats coming from sources of polyunsaturated and monounsaturated fats such as fish, nuts, and vegetable oils; limit saturated fats, *trans*-fats, and cholesterol.
Salt intake	
Choose and prepare foods with less salt.	Consume less than 2,300 mg of sodium per day (1 level teaspoon of table salt) and include potassium-rich foods such as fruits and vegetables.
Sugar intake	
Choose beverages and foods that will moderate intake of sugars	Choose and prepare foods low in added sugars or caloric sweeteners.
Physical activity	
Be physically active each day. Aim to accumulate 30 minutes of activity per day.	Engage in at least 30 minutes of moderate physical activity on most days of the week. To help manage weight, engage in about 60 minutes of moderate to vigorous activity on most days of the week, while not exceeding calorie requirements.

New items in 2005 dietary guidelines

- Discretionary calorie allowance in the USDA Food Guide and DASH Eating Plan
- Recommendations for special population groups
- Calorie requirements based on sex, age, and level of physical activity

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TABLE 2

Understanding portion sizes

THIS MUCH FOOD...	IS ABOUT THE SAME SIZE AS...
1 ounce meat	A match box
3 ounces meat	A deck of cards or bar of soap
8 ounces of meat	A thin paperback book
3 ounces of fish	A checkbook
1 ounce of cheese	A domino
Medium potato	A computer mouse
2 tablespoons peanut butter	A golf ball
1/2 cup pasta	Half a baseball
1 ounce bagel	A hockey puck

patients to follow a healthy diet is the best advice health care providers can give to reduce the risk of chronic disease[15] and even to facilitate modest weight changes.[16]

There are practical approaches to help patients make healthy choices.

Colorful food is usually good food. Physicians can encourage patients to make colorful choices when picking fruits and vegetables, eg, romaine lettuce and spinach instead of iceberg lettuce, sweet potatoes instead of regular potatoes.

Calories *do* count—not the proportions of carbohydrate, fat, and protein in the diet

Incorporating a tasty salad into a meal is an excellent way to consume multiple vegetable servings, and eating a salad as the first course of a meal has been shown to increase satiety so that people eat fewer calories during the entire meal.[17]

The new Food Guide Pyramid (**www.mypyramid.gov**) uses color to highlight the different food groups: orange for grains, green for vegetables, red for fruit, blue for dairy, yellow for oils, and purple for meat and beans.

The new Food Guide Pyramid and the Dietary Approaches to Stop Hypertension (DASH) Eating Plan illustrate how to eat in accordance with the dietary guidelines. The DASH Eating Plan is low in saturated fat, cholesterol, and total fat; it also emphasizes fruits, vegetables, and low-fat dairy foods. Information about the DASH Eating Plan[18] is available in Appendix A1 of the 2005 dietary guidelines and at **www.nhlbi.nih.gov/health/public/heart/hbp/dash/new_dash.pdf**. See also a recent review by Karanja et al in the *Cleveland Clinic Journal of Medicine* at **www.ccjm.org/pdffiles/karanja9_04.pdf.**[19]

GETTING STARTED: WAVE AND REAP

To assess patients' dietary and activity habits, physicians can use specific tools, which can be integrated with a general medical history during the routine office visit.

The Weight, Activity, Variety and Excess (WAVE) tool[20] is designed to spark a nutrition dialogue between patient and physician. It is formatted as a pocket card, with assessments on one side and recommendations on the other (FIGURE 1). The following Web site provides a downloadable version of the WAVE pocket guide along with comprehensive instructions for providers and patients: **http://outside.utsouthwestern.edu/chn/naa/wave/wave_instruct.htm**.

The Rapid Eating and Activity Assessment for Patients (REAP)[21] assesses dietary intake related to the 2005 dietary guidelines and the Food Pyramid.

Both tools,[20–23] developed by a Nutrition Academic Award recipient at Brown University, require only 1 to 9 minutes to complete in a clinical setting, depending on the time available. Patients can fill out the evaluations in the waiting room, but the tools are more effective when completed together with the health care provider. Both tools are succinct and user-friendly and help physicians to assess their patients' lifestyles, counsel them about nutrition, and communicate about diet and exercise.

Once the physician knows the patient's medical history, he or she can suggest specific lifestyle adjustments. For most people, these adjustments will focus on getting adequate nutrients within calorie needs, managing weight, and engaging in physical activity.

MANAGING WEIGHT

The 2005 dietary guidelines state that "when it comes to weight control, calories do count—not the proportions of carbohydrate, fat, and protein in the diet." In this respect, fad diets may be less helpful in promoting

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FIGURE 1.

weight loss than is a general awareness of calories consumed and expended.

American adults gain an average of 1.8 to 2.0 pounds per year.[24] They could avoid this gain by consuming 100 to 200 fewer calories a day or by burning that many more calories.[25] However, because many patients overestimate portion sizes and underestimate daily caloric intake,[26] cutting out or burning 300 more calories each day may be better. A reduction of 500 calories per day is a common goal in weight-loss programs.

To quickly estimate a patient's energy needs on the basis of sex, age, and activity level, physicians can use a table contained in the guidelines (TABLE 3). The Web site of the National Heart, Lung, and Blood Institute,[27] **http://hin.nhlbi.nih.gov/menuplanner/menu.cgi**, offers an interactive menu planning guide to help gauge appropriate food selection.

Understanding and controlling portion sizes (TABLE 2) is key to limiting caloric intake, especially when consuming energy-dense foods, ie, foods that are high in calories for a given amount. Strategies that can help control portion size include:

- Leaving 25% of one's meal behind
- Taking at least 20 minutes to eat each meal
- Using a smaller dinner plate, and ensuring that foods do not touch each other on the plate

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FIGURE 1. *continued*

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TABLE 3

Estimated caloric requirements (in kilocalories), by sex, age, and level of physical activity

GROUP	AGE (YEARS)	ACTIVITY LEVEL*		
		SEDENTARY†	MODERATELY ACTIVE‡	ACTIVE§
Children	2–3	1,000	1,000–1,400‖	1,000–1,400‖
Girls and women	4–8	1,200	1,400–1,600	1,400–1,800
	9–13	1,600	1,600–2,000	1,800–2,200
	14–18	1,800	2,000	2,400
	19–30	2,000	2,000–2,200	2,400
	31–50	1,800	2,000	2,200
	≥ 51	1,600	1,800	2,000–2,200
Boys and men	4–8	1,400	1,400–1,600	1,600–2,000
	9–13	1,800	1,800–2,200	2,000–2,600
	14–18	2,200	2,400–2,800	2,800–3,200
	19–30	2,400	2,600–2,800	3,000
	31–50	2,200	2,400–2,600	2,800–3,000
	≥ 51	2,000	2,200–2,400	2,400–2,800

*These levels are based on estimated energy requirements from the Intitute of Medicine Dietary Reference Intakes Macronutrient report, 2002, calculated by sex, age, and activity level for reference-sized individuals. "Reference size" is based on median height and weight for ages up to age 18 years and median height and weight for that height to give a body mass index of 21.5 for women and 22.5 for men.

†Sedentary means a lifestyle that includes only the light physical activity associated with typical day-to-day life.

‡Moderately active means a lifestyle that includes physical activity equivalent to walking about 1.5 to 3 miles per day at 3 to 4 miles per hour, in addition to the light physical activity associated with typical day-to-day life.

§Active means a lifestyle that includes physical activity equivalent to walking more than 3 miles per day at 3 to 4 miles per hour, in addition to the light physical activity associated with typical day-to-day life.

‖The calorie ranges shown are to accommodate needs of different ages within the group. For children and adolescents, more calories are needed at older ages. For adults, fewer calories are needed at older ages.

FROM DIETARY GUIDELINES FOR AMERICANS 2005, TABLE 3, PAGE 12.

- Starting meals with appetizers of low energy density, such as salads and broth-based soups.[17]

Behavioral methods that patients can practice at home include recording their weight frequently, keeping a food diary, and monitoring their physical activity levels. Wing and Hill[28] report that of the "successful losers" in the National Weight Control Registry (who had lost an average of 30 lb [14 kg] and kept if off for at least 1 year), 75% weighed themselves weekly; 96% ate breakfast on most days of the week; and 91% exercised regularly. People who adhere to these behavioral strategies and communicate regularly with their practitioners maintain the most substantial weight losses.[29]

Even modest weight loss provides beneficial health effects and is both achievable and valued by overweight and obese patients.[30]

Reduce sweets, desserts, and other empty calories

A common problem is consuming too many empty calories. The 2005 dietary guidelines characterize these nonessential, calories as "discretionary calories." Discretionary calories are equal to daily energy requirements minus daily essential calories, ie, calories that remain after nutritional needs have been met and

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TABLE 4

Walking as a measure of physical activity

STEPS/DAY	MILES/DAY	MINUTES/DAY	ACTIVITY CATEGORY
2,000	1	15–20	Sedentary
5,000	2.5	30–40	Moderately active
10,000	5	60–100	Active

before energy requirements are exceeded. For a reference 2,000-calorie diet, there are 267 discretionary calories available each day. Discretionary calories should amount to less than 15% of a person's daily caloric intake and can be earned throughout the day by consuming nutritious foods of low energy density and by increasing physical activity. More information about discretionary calories is available in Appendix A3 on page 55 of the *Dietary Guidelines for Americans 2005*.

Sadly, Americans obtain 25% to 30% of their calories from junk food,[31] particularly sweets, desserts, and salty snacks such as potato chips. The 2005 dietary guidelines suggest that the healthiest way to cut calories is to consume less saturated fat, added sugars, and alcohol. These items provide calories without providing essential nutrients.

Americans get up to 30% of their calories from junk food

Studies confirm the success of this dietary approach. The Women's Intervention Nutrition Study (WINS), a large-scale trial launched in 1994 and funded by the National Cancer Institute, is investigating the effect of a low-fat diet on the recurrence of breast cancer in postmenopausal women with stage I and II disease. Evidence from a subset of the WINS trial[32] shows that an effective way to reduce dietary fat intake, and hence, a practical way to cut calories, is by decreasing the number of servings of fats, oils, and sweets, as well as by eating less red meat and processed meat. These WINS subjects achieved a daily fat intake of around 20% of total calories, which is within the 20% to 35% total fat intake recommendation put forth by the 2005 dietary guidelines. Thus, cutting out baked goods, processed meats, and snack foods is an effective way to decrease fat intake while avoiding excess empty calories.

In fact, the newest data from the WINS trial indicate that a low-fat diet may affect breast cancer outcome.[33] Women in the low-fat diet arm experienced a 24% reduction in recurrence risk over 5 years compared with their control counterparts.

INCREASE PHYSICAL ACTIVITY

The 2005 dietary guidelines recommend that adults engage in:

- 30 minutes a day of moderate activity to reduce the risk of chronic disease
- 60 minutes a day of moderate-to-vigorous activity to prevent weight gain
- 60 to 90 minutes a day of moderate activity to sustain weight loss.

Twenty-eight percent of American adults lead sedentary lifestyles,[34] which implies that doctors may face challenges in getting their patients to start exercising.

Practical things physicians can do to encourage patients to be more physically active include:

- Suggest they accumulate 30 minutes of exercise per day in incremental bouts, which are just as beneficial as sustained exercise and may be easier to achieve than longer sessions. Three 10-minute brisk walks throughout the workday are equal to one 30-minute walking session. Presented this way, the daily physical activity requirements may seem less daunting.
- Use the WAVE card to make physical activity recommendations based on the patient's initial status.
- Write your prescription for exercise on the prescription pad[3]; giving patients concrete advice to follow may increase compliance.
- Give patients pedometers and encourage them to increase the number of steps they take gradually. Ten thousand steps per day is a reasonable, long-term goal. Steps (distance) can be equated into minutes (time) easily (**TABLE 4**).
- Encourage patients who are more active to increase their exercise intensity, vary their routine, and engage in group fitness activities.

LIMIT SODIUM

The new guidelines recommend consuming less than 2,300 mg of sodium per day (about 1

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teaspoon of salt) for the general population and no more than 1,500 mg per day for people with hypertension, for African Americans, and for middle-aged and older adults. Patients who monitor their sodium intake should beware of processed and fast foods and should learn how to identify sodium content on the Nutrition Facts panel of the food label. Patients with hypertension may be advised to follow the DASH Eating Plan.[18]

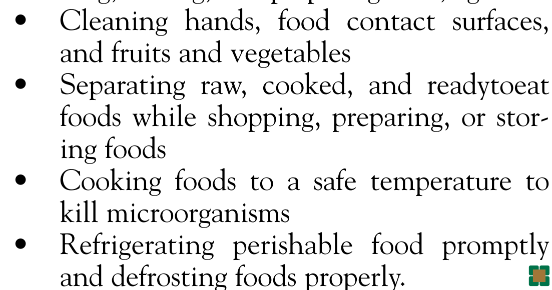
ALCOHOL IN MODERATION

Those who choose to drink alcoholic beverages should do so sensibly and in moderation—up to one drink per day for women or up to two drinks per day for men.

If patients need counseling regarding alcohol intake, the National Institute for Alcohol Abuse and Alcoholism (NIAAA) offers health practitioners a comprehensive guide entitled "Helping Patients with Alcohol Problems," available at **http://www.niaaa.nih.gov/publications/Practitioner/HelpingPatients.htm**.

KEEP FOOD SAFE TO EAT

For all populations, food-borne illnesses such as *Salmonella* and *Escherichia coli* infections can be avoided by taking proper precautions when cleaning, storing, and preparing food, eg:



- Cleaning hands, food contact surfaces, and fruits and vegetables
- Separating raw, cooked, and readytoeat foods while shopping, preparing, or storing foods
- Cooking foods to a safe temperature to kill microorganisms
- Refrigerating perishable food promptly and defrosting foods properly.

REFERENCES

1. **U.S. Department of Health and Human Services and the U.S. Department of Agriculture.** Dietary Guidelines for Americans 2005. Available at: http://www.healthierus.gov/dietaryguidelines/. Accessed January 31, 2005.
2. **Blackburn GL, Waltman BA.** Expanding the limits of treatment—new strategic initiatives. J Am Diet Assoc 2005; 105:S131–S135.
3. **Manson JE, Skerrett PJ, Greenland P, VanItallie TB.** The escalating pandemics of obesity and sedentary lifestyle. A call to action for clinicians. Arch Intern Med 2004; 164:249–258.
4. **Silagy C, Stead LF.** Physician advice for smoking cessation (Cochrane Review). Cochrane Database Syst Rev 2001:CD000165.
5. **Kreuter MW, Chheda SG, Bull FC.** How does physician advice influence patient behavior? Evidence for a priming effect. Arch Fam Med 2000; 9:426–433.
6. **Bull FC, Jamrozik K.** Advice on exercise from a family physician can help sedentary patients to become active. Am J Prev Med 1998; 15:85–94.
7. **Lang F, Floyd MR, Beine KL.** Clues to patients' explanations and concerns about their illnesses: a call for active listening. Arch Fam Med 2000; 9:222–227.
8. **Gardner H.** Changing Minds. The Art and Science of Changing Our Own and Other People's Minds. Boston: Harvard Business School Press; 2004.
9. **U.S. Food and Drug Administration.** How to Understand and Use the Nutrition Facts Panel. Available at: http://www.cfsan.fda.gov/~dms/foodlab.html. Accessed April 20, 2005.
10. **National Institutes of Health.** National Heart, Lung, and Blood Institute (NHLBI). Portion Distortion Quiz. Available at: http://hin.nhlbi.nih.gov/portion/. Accessed February 7, 2005.
11. **U.S. Food and Drug Administration.** Counting Calories. Report of the Working Group on Obesity. March 12. Available at: http://www.cfsan.fda.gov/~dms/nutrcal.html. Accessed April 20, 2005.
12. **U.S. Food and Drug Administration.** Sample Labels: possible changes. Available at: http://www.cfsan.fda.gov/~acrobat/nutrcal.pdf. Accessed April 20, 2005.
13. New Behaviors for Obese Kids. University of Buffalo, Research Quarterly. Available at: http://www.research.buffalo.edu/quarterly/vol10/num02/f1.shtml. Accessed October 18, 2004.
14. **Fung TT, Rimm EB, Spiegelman D, et al.** Association between dietary patterns and plasma biomarkers of obesity and cardiovascular disease risk. Am J Clin Nutr 2001; 73:61–67.
15. **Eyre H, Kahn R, Robertson RM, et al.** Preventing cancer, cardiovascular disease, and diabetes: a common agenda for the American Cancer Society, the American Diabetes Association, and the American Heart Association. Stroke 2004; 35:1999–2010.
16. **Eckel RH.** The dietary approach to obesity; is it the diet or the disorder? JAMA 2005; 293:96–97.
17. **Rolls BJ, Roe LS, Meengs JS.** Salad and satiety: energy density and portion size of a first course salad affect energy intake at lunch. J Am Diet Assoc 2004; 104:1570–1576.
18. **National Institutes of Health.** National Heart, Lung, and Blood Institute (NHLBI). Facts about the DASH Eating Plan. Available at: http://www.nhlbi.nih.gov/health/public/heart/hbp/dash/. Accessed February 7, 2005.
19. **Karanja N, Erlinger TP, Pao-Hwa L, Miller EP 3rd, Bray GA.** The DASH diet for high blood pressure: from clinical trial to dinner table. Cleve Clin J Med 2004; 71:745–753.
20. **Barner CW, WylleRosett J, Gans K.** WAVE: a pocket guide for a brief nutrition dialogue in primary care. Diabetes Educ 2001; 27:352–358.
21. **Gans KM, Ross E, Barner CW, Wylie-Rosett J, McMurray J, Eaton C.** REAP and WAVE: new tools to rapidly assess/discuss nutrition with patients. J Nutr 2003; 133:556S–562S.
22. **Segal-Isaacson CJ, Wylie-Rosett J, Gans KM.** Validation of a short dietary assessment questionnaire: the Rapid Eating and Activity Assessment for Participants short version (REAP-S). Diabetes Educ 2004; 30:774–778.

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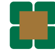

23. **Walker WA.** Innovative teaching strategies for training physicians in clinical nutrition: an overview. J Nutr 2003; 133:541S–543S.
24. **Hill JO, Wyatt HR, Reed GW, Peters JC.** Obesity and the environment: where do we go from here? Science 2003; 299:853–855.
25. **Hill JO, Wyatt HR, Reed GW, Peters JC.** Response to comment on "Obesity and the environment: where do we go from here?" Science 2003; 301:598c.
26. **Lichtman SW, Pisarska K, Berman ER, et al.** Discrepancy between self-reported and actual caloric intake and exercise in obese subjects. N Engl J Med 1992; 327:1893–1898.
27. **National Institutes of Health.** National Heart, Lung, and Blood Institute (NHLBI). Interactive Menu Planner. Available at: http://hin.nhlbi.nih.gov/menuplanner/menu.cgi. Accessed February 7, 2005.
28. **Wing RR, Hill JO.** Successful weight loss maintenance. Annu Rev Nutr 2001; 21:323–341.
29. **Tsai AG, Wadden TA.** Systematic review: an evaluation of commercial weight loss programs in the United States. Ann Intern Med 2005; 142:56–66.
30. **Wee CC, Hamel MB, Davis RB, Phillips RS.** Assessing the value of weight loss among primary care patients. J Gen Intern Med 2004; 19:1206–1211.
31. **Block G.** Foods contributing to energy intake in the US: data from NHANES III and NHANES 1999–2000. J Food Composit Analysis 2004; 17:439–447.
32. **Winters BL, Mitchell DC, Smiciklas-Wright H, Grosvenor MB, Liu W, Blackburn GL.** Dietary patterns in women treated for breast cancer who successfully reduce fat intake: The Women's Intervention Nutrition Study (WINS). J Am Diet Assoc 2004; 104:551–558.
33. **Chlebowski RT, Blackburn GL, Elashoff RE, et al.** Dietary fat reduction in postmenopausal women with primary breast cancer: Phase III Women's Intervention Nutrition Study (WINS) [abstract]. Proc Am Soc Clin Oncol 2005; 24:10.
34. **National Center for Chronic Disease Prevention and Health Promotion.** Behavioral Risk Factor Surveillance System. October 21, 2004. Available at: http://www.cdc.gov/brfss/. Accessed October 27, 2004.

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