



Health Connections

LINKING NUTRITION RESEARCH TO PRACTICE

A NEED FOR ACTION

Dietary Guidelines for (Unhealthy) Americans

First published in 1980, federal Dietary Guidelines have been revised every five years. However, in spite of their intended use for establishing our nation's food and nutrition policies designed to help consumers lower their risk of chronic disease through healthful food choices, nearly everyone fails to meet the Dietary Guidelines.¹ For the first time, the 2010 Dietary Guidelines Advisory Committee (DGAC) Report addresses the needs of an *unhealthy* American public. This issue of *Health Connections* examines how consumer adoption of the Dietary Guidelines must be in the context of a complex food environment, and how health professionals and all sectors of society must work together to successfully implement the report's four key findings that have public health impact (see page 2 Side Bar).

Overfed and Undernourished

According to the DGAC report, American food patterns bear little resemblance to the recommendations of the 2005 Dietary Guidelines for Americans. Data from the National Health and Nutrition Examination Survey (NHANES) document that Americans eat too many calories, solid fats, added sugars, refined grains and sodium. Currently, Americans consume less than 20 percent of the recommended intakes for whole grains, less than 50 percent for fruits, less than 60 percent for vegetables and less than 60 percent for milk and milk products. Inadequate intakes from these nutrient-rich basic food groups place individuals at risk for lower than recommended levels of vitamin D, calcium, potassium and dietary fiber.

The Dietary-Patterns Approach

To achieve dietary goals within energy balance, Americans are encouraged to become more physically active and mindfully choose what and how much they eat in a lifestyle approach that is portion controlled, nutrient rich, low in solid fats and sugars and reduced in sodium.

The DGAC defines "total diet" as the *combination of foods and beverages* that provide energy and nutrients and constitute an individual's complete dietary intake, on average, over time. A healthful total diet is flexible and incorporates a wide range of individual tastes and preferences.

The application of dietary patterns to implement the Dietary Guidelines helps facilitate their adoption as realistic and feasible foundation diets for individual food choices. See <http://www.cnpp.usda.gov/Publications/DietaryGuidelines/2010/DGAC/Report/B-2-TotalDiet.pdf> for a description, nutrient composition and food-group amounts for the various food patterns: DASH With Reduced Sodium; Usual U.S. Intake for Adults; USDA Base; Plant-Based; Lacto-Ovo Vegetarian; and Vegan. Health professionals can further individualize these patterns based on a client's life stage, culture, health goals, financial resources and readiness to change eating behaviors.

The Food Landscape

Although the message to eat a nutrient-rich diet within energy needs has been consistent for decades, consumers live in a greatly changed food landscape. The food supply makes available an additional 600 kcal a day per person, compared to 30 years ago.² Consumers spend 45 percent less time preparing food at home than previously (1975 – 2006 data) or sharing meals at the family table—trends associated with an increased risk of weight

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- ¹ Krebs-Smith S et al. *J Nutr* 2010. 140:1832-1838.
- ² Van Horn L. *J Am Diet Assn*. 2010. Nov. 1638-1645.
- ³ Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2010 <http://www.cnpp.usda.gov/DGAs2010-DGACReport.htm>.
- ⁴ Lichtenstein AH and Ludwig DS. *JAMA*, May 12, 2010. Vol 303; 18:1857-1858.

gain and poor diet quality.³ Health professionals working within this landscape can identify ways for their clients to adopt and implement healthy food choices based on individual situations.

As the family dinner has become the exception rather than the rule, the DGAC maintains that it is time to re-establish the value of preparing and enjoying healthful food. Instruction in basic food preparation and meal-planning skills need to be part of any long-term solution to stem the obesity epidemic—particularly in children and adolescents. There has been a call for a

reinvigorated “home economics” curriculum—teaching students basic principles to feed themselves and their families within the current food environment: a version of hunting and gathering for the 21st century.⁴

Health professionals’ influence in the workplace, school environment, retail food and hospitality industries and public-health arenas make them key to facilitating partnerships important to support consumer adoption of healthful food choices consistent with dietary guidance.

Side Bar: Four Main Integrated Findings to be Used in Developing the 2010 Dietary Guidelines for Americans

By focusing on the major findings that have crosscutting impact, health professionals can provide guidance on how to implement the changes necessary to enhance the health and well-being of the population.

- Reduce the incidence and prevalence of overweight and obesity of the U.S. population by reducing overall calorie intake and increasing physical activity.
- Shift food-intake patterns to a nutrient-rich diet that emphasizes vegetables, cooked dry beans and peas, fruits, whole grains, nuts and seeds. Increase the intake of seafood and fat-free and low-fat milk and milk products and consume only moderate amounts of lean meats, poultry and eggs.
- Significantly reduce intake of foods containing added sugars and solid fats, because these dietary components contribute excess calories and few, if any, nutrients. In addition, reduce sodium intake and lower intake of refined grains, especially refined grains that are coupled with added sugar, solid fat and sodium.
- Meet the 2008 Physical Activity Guidelines for Americans.

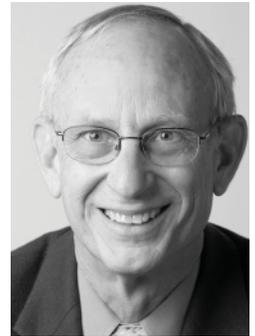
Modified slightly from source: (<http://www.cnpp.usda.gov/DGAs2010-DGACReport.htm>).

Practice Points for Health Professionals

- The new Dietary Guidelines are meant to be aspirational, rather than a rigid prescription or an all-or-nothing approach to eating. Consumers may be overwhelmed trying to adopt too many changes at once. Develop simple and targeted messages about one food improvement rather than perfection.
- Nutrient-rich food choices are important for an overweight yet undernourished population. Shortfall nutrients under consumed by all ages include dietary fiber, vitamin D, calcium and potassium. Food patterns emphasizing whole grains, low-fat milk and milk products, nuts and seeds, fruits and vegetables help provide these shortfall nutrients.
- Craft messages that communicate positive benefits (strong bones, enhanced immune system, improved cardiovascular health) of dietary patterns as recommended by the committee rather than focusing on disease conditions. Emphasize what people should *include* as nutrient-rich food choices, not what they must exclude.
- Encourage preparing and sharing meals with family and friends. Even those with limited time, cooking skills or interest can ‘assemble’ supermarket “kitchen-ready” meals or improve the nutrient quality of take-out food with minimal effort by including a salad, fruit dessert or glass of low-fat milk.
- Keep current on the coordinated efforts of multiple sectors in implementing the Dietary Guidelines. See the topic of professional interest entitled “Translating the Dietary Guidelines for Americans 2010 to Bring about Real Behavior Change” in the January 2011 issue of *Journal of the American Dietetic Association*, and “Food Science Challenge: Translating the Dietary Guidelines for Americans to Bring About Real Behavior Change” in the Jan/Feb issue of *Journal of Food Science*.

INTERVIEW

Roger A. Clemens, Dr. PH, President-Elect, IFT, Adjunct Professor, Pharmacology and Pharmaceutical Sciences, USC School of Pharmacy



Roger A. Clemens, Dr. PH

Q. What were some challenges in developing the 2010 Dietary Guidelines?

- A. We needed sufficient quantity and high-quality evidence to address questions unresolved by the 2005 DGA Committee, proposed by the 2010 DGA Committee, or submitted by the public. Grading the quality of the research is no easy task. There is a need to balance public comments—some based on less rigorous science lacking randomized clinical trials—with our evidence-based research approach. The challenge remains—who will fund the research needed?

We addressed challenges of implementation and unintended consequences of the adoption of the recommendations—from agriculture production through food distribution to consumer behavior. It may be difficult for health professionals to relate to some of the agriculture issues. For example, millions of additional acres of cropland planted/harvested annually will be needed to achieve the recommended levels of vegetables, fruits, whole grains and seeds and milk/milk products—acres that will compete with recreation, commercial or residential interests, environmental conservation and resources.

We needed to consider consumer perception of the meaning of the recommendations—which could result in opposite behavior. For example, consumers viewed the concept of ‘discretionary calories’ as fun calories to strive for rather than a maximum. It isn’t easy to communicate the impact that food has on health. Food often is ‘organized’ by nutrients, so we had to do a lot of modeling to reassemble nutrients into food choices and patterns. We will need to monitor the potentially undesired consequences of the recommendation to shift to plant-based diets so that consumers do not forget the need for nutrients in high-quality protein sources like seafood, eggs, lean meats and low-fat or fat-free dairy products.

Q. How can food science and nutrition science avoid a potential collision course to improve consumers’ health?

- A. Implementation of the Dietary Guidelines depends on multi-sector involvement. However, academic programs in food and nutrition science, engineering, food law/regulation and public health often are taught in isolation. In the real world, industry, government, academe,

and the community must work in teams—which rely heavily on cross-discipline communication.

I was the only one on the DGAC with food-industry experience and served as the sole food scientist. There has been a nominal appreciation for food science, which only recently (first with the Dietary Guidelines of 2005) has been represented, along with the experts in clinical and basic nutrition in the deliberations and recommendations. Change either in the food supply or in consumer behavior (and subsequent health outcome) won’t happen overnight—and change at one level has implications in others. Take, for example, the call to lower the sodium content in the food supply. If it were easy, it would have been accomplished 30 years ago. The technology to reduce sodium in the food supply continues to emerge, but has not been implemented at the expense of food safety and consumer acceptance. I contend that only by understanding the nuances of what change means along a continuum will we bring safe, nutritious foods to consumers. It may mean we do it by ‘titration’ little by little, but successfully, as suggested in the 2010 Institute of Medicine’s report on sodium reduction.

Q. How can various sectors of our society implement the new Dietary Guidelines and improve compliance over previous versions?

- A. To do it right in the future will take everyone. Implementation and compliance require a coordinated approach—agriculture, availability of food, access to food and consumer attitude/behavior are all involved in a ‘feedback’ system of what works and what doesn’t, whether in the home, school, or public or private sector.

Health professionals can help discover the behavioral, cultural, traditional or other barriers that prevent these efforts from being supported. Educators can help improve food and nutrition literacy and encourage healthier food choices and greater physical activity. Community and corporate dietitians, nutritionists, food scientists and communicators can work with the retail sector to increase availability of nutrient-rich foods in local markets—and remind consumers of their importance. We’re now in the mode of shifting from *knowing* we can do these efforts to realizing that *we must* take action to curb obesity and improve health.