

## **Questions and Answers on the 2010 Dietary Guidelines Advisory Committee Report**

**(In-depth Questions Can Be Referred to Dr. Robert Post, Center for Nutrition Policy and Promotion, 703-305-7600)**

### **Dietary Guidelines -- Mandate, Process, and Timeline**

#### **What are the Dietary Guidelines?**

As mandated by Congress, the Dietary Guidelines for Americans (DGA) are developed and released jointly by USDA and HHS every five years to assure the public that they receive the most current, scientifically sound nutrition advice available. [Public Law 101-445, Section 301 (7 U.S.C. 5341), the National Nutrition Monitoring and Related Research Act of 1990, Title III]. The *Dietary Guidelines for Americans (DGA)* are at the very core of federal dietary guidance and nutrition-related public health efforts. They are evidence-based Federal recommendations designed to prevent and reduce diet-related chronic diseases, while promoting good health and healthy weight among Americans ages two and older. The Guidelines form the basis for government nutrition initiatives and nutrition education and consumer outreach used by consumers, industry, and health professionals. Therefore:

- We want to base the Dietary Guidelines on the best available scientific evidence.
- We rigorously solicited public participation in the Dietary Guidelines Advisory Committee process and look forward to receiving comments on its report.
- We ensure that the highest possible level of transparency is employed in the process.
- We will continue to ensure that the Dietary Guidelines for Americans serve as the foundation for government nutrition programs and initiatives so that all agencies speak with “one nutrition voice.”

#### **What is the Dietary Guidelines Advisory Committee Report?**

An advisory committee is appointed jointly by the secretaries of USDA and HHS to advise them on whether to the 2005 Dietary Guidelines for Americans are needed and if so to recommend updates. The Committee Report presents the recommendations of the 2010 Dietary Guidelines Advisory Committee to the Secretaries of USDA and HHS for use in updating the Guidelines. The Committee Report is advisory in nature and not the actual 2010 Dietary Guidelines for Americans. This is a scientific report from an independent panel of recognized experts, whose recommendations will inform the Federal policy on dietary guidance and be used in updating the Federal guidelines.

### **Who manages the Dietary Guidelines process?**

Within USDA, the Center for Nutrition Policy and Promotion (CNPP) is the administrative lead for the 2010 DGA activities, with the support of HHS's Office of Disease Prevention and Health Promotion (ODPHP). Included in its leadership role, CNPP develops and disseminates the DGA through promotion, education, and outreach programs.

### **Why are the Dietary Guidelines important?**

The DGA are the cornerstone upon which all Federal nutrition policy, education, and food assistance programs are based. The DGA build on over 100 years of food guidance history in USDA, dating back to 1894 when USDA first published tables of food composition and dietary standards for the U.S. population. All Federal dietary guidance for the public is required to be consistent with the evidence-based Dietary Guidelines. The Dietary Guidelines allow the government to speak in a consistent and uniform manner. The *Dietary Guidelines for Americans* serve as the basis for nutrition educators and health professionals to communicate to the public about healthy eating and physical activity, and they inform the development of messages, tools, and programs targeted to consumers.

### **What is the process for reviewing the current science in order to develop the Dietary Guidelines Advisory Committee Report?**

Key to understanding and appreciating the Committee Report is the fact that it is based on the latest and best evidence-based science available. To ensure this, USDA relied on its new Nutrition Evidence Library (NEL) in the Center for Nutrition Policy and Promotion (CNPP), which uses the "gold standard" of systematic evidence-based reviews to assess the quality of the nutrition research..

The systematic review process has been employed in the medical community over the past two decades to review and analyze the latest science. NEL nutritionists and experts in systematic evidence review assisted the Committee in synthesizing the scientific evidence to answer the research questions it raised, and these research syntheses formed the foundation of the Committee's Report.

Committee members developed research questions on specific topics and the procedure for a literature search to address each question. For example, one research question was "What are the effects of potassium intake on blood pressure in adults?" Based on the weight of the evidence in the scientific literature, the Committee developed summaries and conclusion statements, graded each conclusion, and translated these findings to form recommendations.

To add to the transparency of the process, the NEL staff is making publicly accessible all of the questions, literature, evidence summaries, and graded conclusion statements that form the Committee's recommendations, at the same time the Committee report is posted. This NEL information will be available at [www.dietaryguidelines.gov](http://www.dietaryguidelines.gov).

**What is the timeline and process for the entire 2010 Dietary Guidelines development process?**

First DGAC meeting	October 30-31, 2008
Written public comments to the DGAC	October 2008 to April 2010
Oral public comments to DGAC	January 2009
Sixth and last DGAC meeting	May 12, 2010
DGAC Advisory Report to Secretaries of USDA and HHS	June 2010
Public comments to USDA and HHS on the DGAC report	June 15 to July 15, 2010
Public meeting to comment on Advisory Report	July 8, 2010
Preparation of 2010 DGA Policy Document	June-November 2010
--for Nutrition Educators/Health Professionals	
--with Tested Consumer Messages	
--OMB Quality of information Act Review	
Release of final 2010 DGA Policy Document	December 2010
Launch of 2010 DGA Multi-modal Consumer Outreach Materials	Spring 2011

**What is the process for developing the Dietary Guidelines?**

The DGA are developed through a rigorous, transparent, systematic review process designed to minimize bias, facilitate public participation, and ensure that the Guidelines are shaped by the best-available scientific evidence. First, a Dietary Guidelines Advisory Committee (DGAC) is appointed through a transparent process that is focused on selecting leading experts from the relevant fields of study. Committee deliberations are open and transparent with meetings viewable by the general public and written comments and testimony invited throughout. The Committee's report was completed and submitted to the Secretaries of Agriculture and HHS in June 2010. This report will be reviewed by the Departments of Agriculture and Health and Human Services and will help inform the development of the formal DGA policy, along with public comments invited throughout the process. The policy document is scheduled to be released to the public by December 2010 and consumer-focused outreach to broadly publicize DGA-related educational materials is being planned for Spring 2011.

**How are DGAC members nominated?**

The DGAC operates according to the FACA requirements (Federal Advisory Committee Act) for openness and transparency. Nominations were solicited publicly, proceedings were open to the public, and committee members were obligated to adhere to all relevant ethics requirements. A call for nominations was published in a *Federal Register* Notice on April 10, 2008, and closed on May 24, 2008. A Dear Colleague letter was also disseminated to solicit nominations via listserves and electronic mail. Prospective nominees were expected to be respected and published experts in their fields such as the prevention of chronic diseases (eg., cancer, cardiovascular diseases, type 2 diabetes, obesity, and osteoporosis); energy balance, including physical activity; epidemiology; food safety and technology; general medicine; gerontology; nutrient bioavailability; nutritional biochemistry and physiology; nutrition education; pediatrics; public health; and evidence review methodology. These fields of interest were specified in the *Federal Register* call for nominations. Nominees were to be familiar with the purpose,

communication, and application of the Dietary Guidelines. Expertise was sought in the specific areas listed above, but was not limited to these fields.

### **How were the DGAC members selected?**

Over one hundred nominations were received from many sectors and organizations. Consideration of nominees was based on the degree to which credentials matched the criteria listed, with more attention paid to individuals with a greater experience in the expertise areas listed above. The bulk of the nominations were submitted from research, university, trade, food, and professional organizations. The source of nominations played no part in selecting Committee members; the selection was based on credentials matching as many of the expertise areas as possible. Consideration was also given to selecting a diverse committee, including regional representation, sex, and ethnicity.

### **Who made the final appointments?**

Former Secretary of Agriculture Edward T. Schafer and former Secretary of Health and Human Services Michael O. Leavitt jointly selected and appointed the Committee members in October 2008, having reviewed the submissions of nominees with the broadest experience and credentials in public health-related areas listed above. The individuals selected are identified and brief biographical sketches are provided at the end of this document. This information has been posted on the [www.dietaryguidelines.gov](http://www.dietaryguidelines.gov) website since the Committee's first meeting in October 2008.

### **Before making their selections did the Secretaries know who nominated the individuals?**

The information provided to the Secretaries did not include the source of the nominations, but rather focused on the nominees' resumes, publication lists, and depth and breadth of their credentials in the discipline areas listed above. It should also be noted that the roster of nominees had been cleared through the USDA Office of Ethics to check for any conflicts of interest or other disqualifying issues before being submitted to the Secretaries. In addition, the committee members were required to complete ethics training prior to starting their work.

### **Dietary Guidelines Advisory Committee Work**

#### **How often did the Dietary Guidelines Advisory Committee meet?**

The 2010 Dietary Guideline Advisory Committee (DGAC) met during six public meetings over a 20 month period. Between public meetings, Committee members met in subcommittees via conference calls to develop questions and review, in detail, the weight of the scientific evidence that addressed these questions. The public meetings were announced to the public through the Federal Register and the proceedings of the meetings are made available on the website [www.dietaryguidelines.gov](http://www.dietaryguidelines.gov).

#### **How many scientific questions did the Committee consider?**

The Committee members evaluated the weight of the most credible scientific evidence to address some 180 questions in the following areas: Nutrient Adequacy; Energy Balance & Weight

Management; Fatty Acids and Cholesterol; Carbohydrates and Protein; Sodium, Potassium & Water; Alcohol; Food Safety & Technology.

### **What types of questions did the Committee consider?**

The Committee considered questions related to the relationships of specific aspects of food and nutrition to particular health outcomes. These aspects included consumption of nutrients (eg., potassium, fiber, folate), food groups (eg., whole grains, milk, vegetables), other dietary components (eg., saturated fat, alcohol, water), and dietary behaviors (eg., eating breakfast, snacking, eating out, and practicing safe food preparation behaviors). For each of these, the health outcomes of concern were identified and the question was written to address the specified relationship.

Three examples of the nearly 200 questions that the DGAC considered are:

- What is the relationship between eating out and body weight in children and adults?
- What is the effect of potassium intake on blood pressure in adults?
- What are the health benefits of fiber?

### **What is the total number of research articles that were reviewed by the Committee?**

The Committee reviewed approximately 1950 research articles, and approximately 900 met the criteria for use in answering the research questions. Over 100 of these studies were systematic reviews or meta-analyses which represent a larger number of studies.

### **How did the Subcommittees work?**

The subcommittees met frequently, often weekly. Members reported at public meetings to the full committee, in detail, the questions they posed and the preponderance of the evidence that exists to respond to the questions, as well as their analysis leading to the grading of the evidence and final conclusions they make.

### **How did the full Committee reach the final conclusions?**

The full Committee discussed and agreed upon conclusions based on the review of the evidence and open discussions at public meetings. These discussions formed the basis for the chapters covering the topic areas above in their Advisory Report. At the final meeting of the DGAC on May 12, 2010, the members came to consensus on the Advisory Report.

### **How is the process of reviewing the evidence different from 2005?**

While the 2005 Committee used a modified evidence-based review process, the 2010 DGAC has benefited from the systematic review process employed in the medical community over the past two decades to review and analyze the latest science. The 2010 DGAC was supported by USDA's new Nutrition Evidence Library (NEL), which was inaugurated at the time of the first DGAC meeting. NEL nutritionists and experts in systematic evidence review assisted the

Committee in synthesizing the scientific evidence to answer the research questions it raised, and these research syntheses formed the foundation of the Committee's Report.

### **What is the NEL process?**

DGAC members developed research questions on specific topics and the procedure for a literature search to address each question. For example, one research question was "What are the effects of potassium intake on blood pressure in adults?" With DGAC oversight, the NEL staff searched the scientific literature to identify appropriate studies, extract key information from each, and evaluate the methodological strength of each included study. Staff developed summary paragraphs describing each study and developed tables to assist the DGAC in synthesizing the overall evidence.

To add to the transparency of the process, the NEL staff is making publicly accessible all of the questions, literature, evidence summaries, and graded conclusion statements that form the Committee's recommendations, at the same time the Committee report is posted. This NEL information will be available at [www.dietaryguidelines.gov](http://www.dietaryguidelines.gov).

### **Dietary Guidelines Process and Public Access**

#### **Did the public have an opportunity to give input?**

Ensuring public participation is a key goal of the DGA process. At the second meeting of the DGAC the public was invited to give oral testimony. About 60 people gave testimony at that time. The public was also invited to submit comments and data to the Committee during its entire deliberative process. The Dietary Guidelines website received nearly 1,000 public comments. All comments were sent to the relevant Subcommittee for their review.

#### **How was the DGAC deliberation process made transparent for the public?**

Up-to-date webinar technology was used for DGAC meetings 3 through 6. This increased access to the DGAC deliberations. The format afforded access to a much larger audience than could be accommodated in a conference room in Washington, DC. Use of the webinar was well-received according to feedback from surveys of online attendees. Where attendance at the 2005 meetings averaged 140, online participation for 2010 via webinar averaged 350 with attendees representing as many as 15 foreign countries.

Meeting minutes have been made available on the Internet at [www.dietaryguidelines.gov](http://www.dietaryguidelines.gov). Transcripts of each public meeting and recordings of the webinars (including presentations given by invited speakers and Committee members) for meetings 3 through 6 are at this website.

To add to the transparency of the process, all of the questions, literature, evidence summaries, etc., from the Committee's work will be publicly accessible on the Dietary Guidelines website.

#### **How was access to the process improved over 2005?**

Various improvements were made over the 2005 review of Guidelines in terms of access to information. The key goals in these efforts is to make it easier for the public to understand how

the Dietary Guidelines are being shaped and to enhance their capacity to participate in the process.

In order to achieve these goals, CNPP created a dedicated online database to receive, sort, and manage all public comments related to the work of the DGAC during the past two years by topic area for quick reference by the public. It also created [www.dietaryguidelines.gov](http://www.dietaryguidelines.gov). This website contains all the information that relates to the DGAC meetings: (1) presentations and transcripts containing the Committee's questions while they are being developed and discussed; (2) the Committee's synthesis of the literature sources, search and sort strategies, abstracting, evidence summaries, grading of the quality of the evidence, and conclusion statements, on which responses to the questions and the ultimate recommendations are based; and (3) archived recordings of the public meeting webinars.

### **Findings and Conclusions of the 2010 Report**

#### **Will the Departments be issuing comments on the report findings?**

The Departments are reviewing the report and will not be commenting or providing their views on any of the specific recommendations at this time.

#### **What is the overall theme of the 2010 Report?**

The Committee noted that this report is unprecedented in addressing the obesity epidemic, and stated that the obesity epidemic is the single greatest threat to public health in this century. Every section of the report was developed in a way that addresses the challenges of obesity. They noted that this was especially true for children, whose prevalence of obesity has tripled in the past 30 years.

#### **Does the Report have new sections?**

A new report chapter focused on the total diet and on health-promoting dietary patterns. While individual chapters of the report examine the relationship of single nutrients or food groups to health and risk for disease, the committee noted that the evidence for examining total dietary patterns has advanced to the point that they can be evaluated. The chapter encourages a flexible approach to the total diet that incorporates a wide range of individual tastes and food preferences. In keeping with the focus on obesity, the total diet chapter also identifies how all of the individual recommendations from the Report can be integrated into a dietary pattern without exceeding one's energy needs.

#### **What else is new in the Report?**

In several topic areas, questions with a specific focus on children were also included for the first time. These included questions on the relationship between dietary intake and childhood adiposity and the effects of sodium intake on blood pressure in children

For the first time, the Committee explicitly addressed the importance of eating behaviors, such as breakfast eating, snacking, and eating fast foods, particularly in relation to weight control. For

example, evidence that was reviewed indicates that children and adults who eat fast food are at increased risk of weight gain, overweight, and obesity. Also, evidence reviewed by the Committee indicates that screen time (especially television), among both adults and children, is directly associated with increased overweight and obesity

For the first time, the Committee also explicitly recommended that the consumption of sugar-sweetened beverages among children and adolescents should be discouraged. Adults who need to lower their body weight are also advised to reduce consumption.

The Committee also included recommendations to increase consumption of plant-based foods for the first time, especially vegetables, cooked dry beans and peas, fruits, whole grains, and nuts and seeds. These foods are notably under-consumed by Americans. This was a topic of much interest among the public, and the Committee received many public comments on the need to increase consumption of plant-based foods.

### **What are some major findings in the Report?**

The Committee noted that currently, 35% of all calories consumed by Americans are solid fats and added sugars. If these calories are greatly reduced, intake of underconsumed nutrient-dense foods—vegetables, fruits, whole grains, milk and milk products— can be increased without increasing overall energy intake.

The Committee identified four nutrients as nutrients of public health concern for Americans: fiber, potassium, vitamin D, and calcium. These nutrients were singled out from a longer list of nutrients that are consumed in amounts less than is recommended, because of the evidence that their low intake is directly related to health issues of public health importance.

Using the results of the evidence-based reviews, the Committee was able to strengthen their recommendations for decreased consumption of some food components that are over-consumed by Americans, including sodium, saturated fats, and trans fats.

- Attention to **sodium** has increased in recent years. The DGAC recommends that the current goal of less than 2300 milligrams of sodium intake per day should be further reduced to 1500 milligrams. The Committee acknowledged that an immediate change of this magnitude would be difficult, given product standards and consumer taste preferences. Therefore, they refer to the recent Institute of Medicine report, “*Strategies to Reduce Sodium Intake in the United States*,” for a roadmap on how to achieve gradual reductions at the population level.
- The Committee also recommended a decrease from previous standards for **saturated fat** intake. Specifically, they advise Americans to consume “less than 7%” of their calories from saturated fat; this is a decline from previous recommendations of “less than 10% of calories.” The Committee further clarifies that risk for both cardiovascular disease and type 2 diabetes can be substantially reduced if saturated fats are replaced by mono- and poly-unsaturated fats.



- Discussion of saturated fats and *trans* fats often go hand-in-hand. The Committee recommended avoidance of artificial ***trans* fatty acids**, but a small amount of naturally-occurring *trans* fatty acids (such as in meats) are acceptable.

Seafood consumption is explicitly recommended. The Committee encourages consumption of eight ounces of seafood per week; this eight ounces, or two servings, should provide an average of 250 milligrams of omega-3 fatty acids per day. The Committee emphasized that, even for pregnant women, the benefits of consuming seafood far outweigh the risks.

### **Are there specific action steps for the American public in the Report?**

The Committee summarized their recommendations by highlighting four major priority action steps for Americans. They are:

1. *Reduce overweight and obesity of the US population by reducing overall calorie intake and increasing physical activity.*
2. *Shift food intake patterns to a more plant-based diet that emphasizes vegetables, cooked dry beans and peas, fruits, whole grains, nuts, and seeds. In addition, 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.*
3. *Significantly reduce intake of foods containing added sugars and solid fats because these dietary components contribute excess calories and few, if any, nutrients. Reduce sodium. Eat fewer refined grains, especially those in foods with added sugar, solid fat, and sodium.*
4. *Meet the 2008 Physical Activity Guidelines for Americans.*

### **DGAC Member Backgrounds**

#### **What are the backgrounds of the Committee members?**

The following are biographical sketches of the 2010 Dietary Guidelines Advisory Committee Members:

#### **Linda V. Van Horn, PhD, RD, LD, Chair**

Dr. Van Horn is a Professor in the Department of Preventive Medicine, and the Associate Dean for Faculty Development at the Feinberg School of Medicine at Northwestern University, Chicago. Dr. Van Horn received her doctorate from the School of Public Health at the University of Illinois, Chicago and her master's in exercise physiology from the University of Pittsburgh. Her undergraduate degree is in dietetics, from Purdue University, West Lafayette. She also is a registered and licensed dietitian.

Dr. Van Horn's expertise extends across many areas of nutrition research, medical nutrition education and public health policy relevant to the work of the Dietary Guidelines Advisory Committee. She is a clinical nutrition epidemiologist who has conducted population level research and clinical trials in the prevention and treatment of cardiovascular disease, obesity, and breast cancer. She specializes in research on women and children and is currently the principal investigator

in the Women's Health Initiative Extension Study and the Dietary Intervention Study in Children follow-up study. Her research focuses on the benefits of a fat-modified diet that is high in fruits, vegetables, and fiber-rich whole grains as part of a low risk lifestyle to prevent cardiovascular disease, obesity and cancer. In addition to her comprehensive nutrition expertise, she has demonstrated successful leadership through multiple research teams.

### **Naomi K. Fukagawa, MD, PhD, Vice Chair**

Dr. Fukagawa is a Professor of Medicine, the Acting Director of Gerontology, and the Associate Program Director for the Clinical Research Center at the University of Vermont and Fletcher Allen Health Care. She received her medical degree from Northwestern University and her doctorate in nutritional biochemistry and metabolism from the Massachusetts Institute of Technology. She is a board-certified pediatrician, but has focused her research on age-related issues.

Dr. Fukagawa is an expert in nutritional biochemistry and metabolism. Her expertise spans several areas including protein and energy metabolism; oxidants and antioxidants; and the role of diet in aging and chronic diseases, such as diabetes mellitus. She has chaired the National Institutes of Health Clinical Research Centers' Committee and is currently a member of the National Institutes of Health Integrative Physiology of Diabetes and Obesity Study Section.

### **Cheryl Achterberg, PhD**

Dr. Achterberg is the Dean and Professor of the College of Education and Human Ecology at The Ohio State University. She received her doctorate in nutrition from Cornell University and her master's in human development from the University of Maine at Orono.

Dr. Achterberg is an expert in health behavior research. Her studies have evaluated consumer understanding of the dietary guidelines as well as the impact of behavior on the dietary patterns of varying groups, including low-income, young children and elderly Americans. She has served as a Panel member for World Health Organization for setting international guidelines for Developing Food Based Dietary Guidance. She has been a resource to Institute of Medicine as an invited panelist for numerous workshops. She has also worked with the United Nations as an expert in nutrition education and community interventions.

### **Lawrence J. Appel, MD, MPH**

Dr. Lawrence Appel is a Professor of Medicine, Epidemiology, and International Health (Human Nutrition), Division of General Internal Medicine, and Director of the ProHealth Clinical Research Unit at the Johns Hopkins Medical Institutions. Dr. Appel received his medical degree from the New York University School of Medicine and his master's of public health from Johns Hopkins University. He is also a practicing internist and a certified specialist in hypertension.

The focus of Dr. Appel's career has been to conduct research pertaining to the prevention of hypertension, cardiovascular disease, and kidney disease, typically through lifestyle modification. His research evaluates the health effects of dietary patterns, macronutrient intake, weight loss, and dietary electrolytes, such as sodium and potassium. He has a strong interest in research methods, particularly the evaluation of scientific evidence. Dr. Appel served on the 2005 Dietary Guidelines Advisory Committee where he was a member of the science review subcommittee and was the Chair of the electrolytes subcommittee. In addition, he has served on several committees for the Institute

of Medicine, including the Dietary Reference Intake Panel for electrolytes and water, which he chaired.

### **Roger A. Clemens, DrPH**

Dr. Clemens is the Associate Director of Regulatory Science and an Adjunct Professor of Pharmacology and Pharmaceutical Science at the University of Southern California. In addition, he is the Vice President of Science & Technology for PolyScience Consulting LLC (consultants) and consulting Scientific Advisor for E.T. Horn (sales organization of raw materials and ingredients). He received his doctorate of public health in nutrition and biological chemistry and his master's of public health in nutrition at the University of California, Los Angeles.

Dr. Clemens has extensive experience at the interface of nutrition, food science and technology, and health. He has expertise in food toxicology and food safety, as well as practical knowledge of food production and food regulations. He is a spokesperson for the American Society for Nutrition and the Institute of Food Technologists.

### **Miriam E. Nelson, PhD**

Dr. Nelson is the founder and Director of the John Hancock Research Center on Physical Activity, Nutrition, and Obesity Prevention and an Associate Professor at the Friedman School of Nutrition Science and Policy at Tufts University. She is an Adjunct Professor in the Tisch College of Citizenship and Public Service. Dr. Nelson received her doctorate and master's degrees in nutrition from Tufts University.

Dr. Nelson recently served as Vice Chair of the first Physical Activity Guidelines for Americans Advisory Committee (PAGAC) chartered by HHS. She is a leading authority on physical activity and energy balance. Her work with the PAGAC provides continuity by bridging the work of the PAGAC and the Dietary Guidelines Advisory Committee.

### **Sharon (Shelly) M. Nickols-Richardson, PhD, RD**

Dr. Nickols-Richardson is an Associate Professor and Coordinator of the Graduate Program in Nutrition in the Department of Nutritional Sciences at The Pennsylvania State University. She received her doctorate and her master's in foods and nutrition at The University of Georgia. She is also a registered dietitian.

Dr. Nickols-Richardson's expertise focuses on dietary and physical activity determinants of bone density. She also has expertise in dietary intervention for obesity and nutrition over the lifecycle from child nutrition to older adults. She served the Institute of Medicine as a consultant on the Dietary Reference Intake book *The Essential Guide to Nutrient Requirements*.

### **Thomas A. Pearson, MD, PhD, MPH**

Dr. Pearson is the Senior Associate Dean for Clinical Research and the Albert D. Kaiser Professor in the Department of Community and Preventive Medicine and Director of the Rochester Clinical and Translational Science Institute at the University of Rochester School of Medicine and Dentistry.

He received his medical degree, his doctoral degree in epidemiology, and his master's in public health from Johns Hopkins University.

Dr. Pearson is an epidemiologist specializing in lipid metabolism and the prevention of cardiovascular disease. He contributed significantly to the American Heart Association's guidelines for prevention of heart disease and stroke. His public health interests include investigating the impact of these guidelines on Americans. His expertise spans both nationally and internationally, as is evident in his contributions as current Chair of the National Forum for Heart Disease and Stroke Prevention.

### **Rafael Pérez-Escamilla, PhD**

Dr. Perez-Escamilla is a Professor of Epidemiology and Public Health and the Director of the Office of Community Health at the Yale University School of Public Health. He is also the Director and Principal Investigator of the Connecticut NIH EXPORT Center of Excellence for Eliminating Health Disparities among Latinos (CEHDL). Dr. Perez-Escamilla received his doctorate in nutrition and his master's in food science from the University of California at Davis.

Dr. Perez-Escamilla is a nationally and internationally recognized scholar in the area of community nutrition for his work in food safety, obesity, diabetes, and food security. He has specialized experience with Latinos and low-income Americans, as well as numerous international populations. Dr. Pérez-Escamilla was a member of the 2009 Institute of Medicine/National Academy of Sciences Pregnancy Weight Gain Guidelines Committee and has served on editorial boards of the *Journal of Nutrition*, the *Journal of Human Lactation*, and the *Journal of Hunger and Environmental Nutrition*. Dr. Pérez-Escamilla is a trustee of the Pan American Health and Education Foundation based in Washington DC, has been a senior advisor to a number of community nutrition programs as well as household food security measurement projects, and has been a major advisor to master's and doctoral students from all over the world.

### **F. Xavier Pi-Sunyer, MD, MPH**

Dr. Pi-Sunyer is Professor of Medicine at Columbia University College of Physicians and Surgeons and Chief of the Division of Endocrinology, Diabetes, and Nutrition at St. Luke's-Roosevelt Hospital. He received his medical degree from Columbia University and his master's of public health from Harvard University.

Dr. Pi-Sunyer has expertise in obesity, type 2 diabetes, carbohydrate and lipid metabolism, and general medicine with over 350 research papers on these topics. He chaired a National Heart Lung and Blood Institute obesity treatment and prevention guidelines committee and is now on the NHLBI's task force on Combined Heart Disease Prevention Guidelines. He has served on the Institute of Medicine Dietary Reference Intake Panel on macronutrients. He has also served on the Food and Drug Administration's Science Board Advisory Committee to the Commissioner. He was also a member of the 2005 Dietary Guidelines Advisory Committee.

### **Eric B. Rimm, ScD**

Dr. Rimm is an Associate Professor of Medicine at Harvard Medical School and an Associate Professor of Epidemiology and Nutrition at the Harvard School of Public Health. In addition, he is

the Director of the Program in Cardiovascular Epidemiology. Dr. Rimm received his doctorate in epidemiology at the Harvard School of Public Health.

Dr. Rimm is a nutritional epidemiologist who studies the impact of lifestyle factors, particularly diet, that relate to the risk for obesity, diabetes, heart disease, and stroke. He has published extensively on the health effects of moderate alcohol consumption, whole grains, fatty acids, dietary fiber, antioxidants, Vitamin D, and the B vitamins. He has published more than 400 peer-reviewed manuscripts and previously served on the Institute of Medicine Dietary Reference Intake Panel for macronutrients. He serves as an Associate Editor for the *American Journal of Clinical Nutrition* and the *American Journal of Epidemiology*.

### **Joanne L. Slavin, PhD, RD**

Dr. Slavin is a Professor in the Department of Food Science and Nutrition at the University of Minnesota. She received her doctorate and master's in nutrition science at the University of Wisconsin.

Dr. Slavin is an expert in carbohydrates and dietary fiber, and has published more than 150 articles in her field. Her research focuses on the impact of whole grain consumption in chronic diseases, such as cancer, cardiovascular disease, and diabetes, as well as the role of dietary fiber in satiety. Because of her expertise in the area of whole grains, she was an invited presenter to the 2005 Dietary Guidelines Advisory Committee.

### **Christine L. Williams, MD, MPH**

Dr. Williams is Vice President and Medical Director of Healthy Directions, Inc., a non-profit organization dedicated to the health and nutrition of children and families. She was formerly a Professor of Clinical Pediatrics, and Director of the Children's Cardiovascular Health Center in the Department of Pediatrics and Institute of Human Nutrition at Columbia University, College of Physicians and Surgeons. Dr. Williams earned her medical degree from the University of Pittsburgh, and a master's of public health from Harvard University. She is a board certified pediatrician and is also board certified in preventive medicine and public health.

Dr. Williams' expertise includes nutrition in cancer prevention and preventive cardiology, especially hypercholesterolemia in children. She has knowledge of dietary requirements of children, particularly dietary fiber and fat. She also has expertise in obesity and public health. In addition, she has received the prestigious Preventive Cardiology Academic Award from the National Heart Lung and Blood Institute for her work in preventive cardiology for children.