

# 2020 DIETARY GUIDELINES ADVISORY COMMITTEE MEETING 2

*Convened by the*  
U.S. Department of Agriculture (USDA)  
U.S. Department of Health and Human Services (HHS)

July 10 and 11, 2019

## **Dietary Guidelines Advisory Committee members present:**

Dr. Barbara Schneeman (Chair)  
Dr. Ronald Kleinman (Vice-Chair)  
Dr. Jamy Ard  
Dr. Regan Bailey  
Dr. Lydia Bazzano  
Dr. Carol Boushey  
Dr. Sharon Donovan  
Dr. Heather Leidy  
Dr. Richard Mattes  
Dr. Timothy Naimi  
Dr. Rachel Novotny  
Dr. Joan Sabaté  
Dr. Linda Snetselaar  
Dr. Elsie Taveras (July 10 only)  
Dr. Linda Van Horn

## **Also present:**

Mr. Brandon Lipps, Acting Deputy Under Secretary, USDA (July 11 only)  
Ms. Jackie Haven, Deputy Director, Center for Nutrition Policy and Promotion, USDA  
Dr. Eve Stoodly, Center for Nutrition Policy and Promotion, USDA, Designated Federal Officer and Co-Executive Secretary  
Dr. David Klurfeld, Agricultural Research Service, USDA, Co-Executive Secretary  
Dr. Richard Olson, Office of Disease Prevention and Health Promotion, HHS  
Ms. Janet de Jesus, Office of Disease Prevention and Health Promotion, HHS

The Advisory Committee met at the headquarters of the U.S. Department of Agriculture, 1400 Independence Avenue, Washington, DC, Barbara Schneeman, Chair, presiding. The meeting allowed for public viewing, both in-person and by Web.

The following is a summary of Day 1 of Meeting 2. Please see videos and/or transcripts on the [Meeting 2 page](#) at DietaryGuidelines.gov for details. Day 2 of the meeting consisted of Public Comments. A total of 76 members of the public provided oral testimony to the Committee during this session.

Day 1 of 2 – July 10, 2019

## **WELCOME AND OVERVIEW**

Day 1 of the 2020 Dietary Guidelines Advisory Committee (“Committee”), Meeting 2, was convened at 9:00am on Wednesday, July 10, 2019, at the Jefferson Auditorium, USDA South Building, Washington, DC. Dr. Eve Stoody, Co-Executive Secretary and Designated Federal Officer of the 2020 Dietary Guidelines Advisory Committee and a Lead Nutritionist in the USDA Center for Nutrition Policy and Promotion, introduced herself, welcomed everyone to the meeting, and noted that 15 of the 20 Committee members were present for the day's meeting. Drs. Davis, Dewey, Heymsfield, Mayer-Davis, and Stang were unable to attend and Dr. Taveras would be able to attend only on Day 1. Dr. Stoody noted that a quorum of the Committee was present.

Dr. Stoody reviewed the mandate and charge to the Committee, stating that its role is to conduct an independent review of current research on nutrition and health to be considered by USDA and HHS in developing the next edition of *Dietary Guidelines for Americans*. Each edition of the *Dietary Guidelines for Americans* builds on the previous edition, with scientific justification for changes informed by the Committee's review of the evidence, along with input from the public and federal agencies. She then reviewed the timeline for developing the Committee's report, noting that the Departments have requested that it be completed by May 2020, and reminded viewers of the dates for the remaining three public meetings of the Committee. She closed by encouraging the public to follow the work of the Committee on [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

## **CHAIR REMARKS**

Dr. Schneeman added her welcome to the Committee and the members of the public who were in attendance and listening by Webcast. She opened her remarks by summarizing the progress of the Committee to date and showing how the Committee has formed into Subcommittees to examine specific topics.

She then explained that the Committee is using three approaches to examine the evidence— data analysis, food pattern modeling, and systematic reviews (supported by USDA's Nutrition Evidence Systematic Review [NESR] team). She stated that over the course of the day, the Subcommittees would present a total of 40 evidence review protocols, or plans for how they will use these approaches to address the Committee's questions. Of the 40 protocols, 35 are NESR systematic reviews and 5 are data analyses. Dr. Schneeman went on to explain more about the analytic frameworks and inclusion and exclusion criteria that would be presented for the NESR systematic reviews and the analytic frameworks and analytic plans that would be presented for the data analyses. Dr. Schneeman concluded her remarks by reviewing the agendas for both days of the meeting.

## **DATA ANALYSIS AND FOOD PATTERN MODELING CROSS-CUTTING WORKING GROUP UPDATE**

Dr. Regan Bailey, chair of the Data Analysis and Food Pattern Modeling Cross-Cutting Working Group, reviewed five data analysis protocols: current intakes of food groups and nutrients; prevalence of nutrition-related chronic health conditions; nutrients of public health concern;

current dietary patterns and beverages; and tracking of dietary intake, particularly dietary patterns, across life stages. She then reviewed several definitions for terms of relevance to the Working Group's topics, explained the populations that could be included in the nationally representative samples covered by the analyses, and noted the Federal, nationally representative sources of dietary data that will be examined.

Dr. Bailey explained the strategy for examining each of the five topic areas by reviewing which specific issues are included in the analytic framework, what data sources will be used in the analyses, and which specific population subgroups will be included. She also provided additional key definitions, as relevant. The Working Group will use a three-pronged approach that considers nutrient intakes, biological endpoints, and clinical health consequences to determine which nutrients are of public health concern.

She concluded her presentation by summarizing the Working Group's next steps, which are to develop protocol's for the Working Group's remaining questions (i.e., relationship between achieving nutrient and food group recommendations and (1) beverage consumption, (2) alcohol consumption, and (3) added sugars consumption, and (4) frequency of eating; whether changes to USDA Food Patterns are necessary for those ages 2 years and older; and whether a USDA Food Pattern for children younger than age 2 years can be established), implement the data analyses for the protocols already developed, work closely with other Subcommittees as needed, and integrate nutrient intakes from dietary supplement data.

During the discussion that followed, Committee members asked Dr. Bailey to elaborate on several points from her presentation, including the age groups that will be used, whether additional sources of national data could be used (such as data from the Special Supplemental Nutrition Program for Women, Infants, and Children [WIC]), and how to include data on breastfed infants and nutrient values for human milk. Committee members also discussed how Subcommittees dealing with overlapping issues can work together most efficiently, and the need to carefully consider which nutrients should fall under the rubric of "public health concern" and the rationale for including them in that category.

Note: The Data Analysis and Food Pattern Modeling Working Group protocols discussed are available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

## **DIETARY PATTERNS SUBCOMMITTEE UPDATE**

Dr. Carol Boushey, chair of the Dietary Patterns Subcommittee, reviewed the protocols for six NESR systematic reviews, which will examine the relationship between dietary patterns and: (1) all-cause mortality, (2) sarcopenia, (3) neurocognitive health, (4) growth, size, body composition and risk of overweight and obesity, (5) cardiovascular disease, and (6) type 2 diabetes. During her presentation of the protocols, Dr. Boushey defined key terms relevant to the Subcommittee's work and presented the analytic framework for each review. She described the intervention/exposure, comparators, and endpoint outcomes; described intermediate outcomes, if pertinent; specified the populations of interest; and listed key confounders. She noted that the Birth to 24 Month population was excluded in several reviews, such as neurocognitive health, because it will be included in the Birth to 24 Month Subcommittee's reviews.

Dr. Boushey also reviewed the inclusion and exclusion criteria, noting which of these criteria have been modified from the standard criteria to fit the unique circumstances for each Dietary Patterns review. She concluded her presentation by summarizing the Subcommittee's next

steps, which are to develop protocols for the Subcommittee's remaining questions (i.e., dietary patterns and certain types of cancer, dietary patterns and bone health), and implement the protocols already developed.

During the discussion that followed, a Committee member asked whether the Subcommittee considered including sodium as a key confounder in their reviews. Dr. Boushey replied that some studies do not include a good measure of sodium, but that adding sodium as another factor to be considered should be possible. Members also discussed which dietary patterns the Subcommittee would examine. Dr. Boushey clarified that the patterns she mentioned, such as Dietary Approaches to Stop Hypertension (DASH), vegan, and "low carb," were examples of possible patterns, not intended to be a complete list. The Subcommittee will include a variety of patterns, so long as the foods or macronutrient content is described in the study and other criteria defined in the protocols are met. NESR staff noted that they will be extracting all reported data and that the terms used to determine the literature search strategy for each protocol will be helpful in defining the patterns. Members agreed that it will be important to clearly describe the patterns and clarify what is meant when a pattern is defined by its macronutrient content (e.g., for "low carb", documenting the percentage of calories from the macronutrients). Members also asked about the type 2 diabetes endpoint and discussed the inclusion/exclusion criterion for dates of publication and the advisability of harmonizing the beginning and end dates of systematic reviews across Subcommittees. Finally, two members asked Dr. Boushey about the Subcommittee's decisions regarding total energy intake and alcohol as key confounders and why alcohol was included as a key confounder in only one protocol, when smoking was included in all the protocols. Dr. Boushey agreed that consistency across the key confounders was an important consideration for the Subcommittee to discuss.

Note: The Dietary Patterns Subcommittee protocols discussed are available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

## **FREQUENCY OF EATING SUBCOMMITTEE UPDATE**

Dr. Heather Leidy, member of the Frequency of Eating Subcommittee, presented for Dr. Steven Heymsfield, Subcommittee chair, who was unable to attend the meeting. Dr. Leidy reviewed the protocols for all six of the Subcommittee's NESR systematic reviews, which will examine the relationship between frequency of eating and: (1) all-cause mortality, (2) growth, size, body composition, overweight, and obesity, (3) gestational weight gain, (4) postpartum weight loss, (5) cardiovascular disease, and (6) type 2 diabetes. During her presentation of the protocols, Dr. Leidy defined key terms relevant to the Subcommittee's work and reviewed inclusion and exclusion criteria, noting which criteria have been modified from the standard criteria to fit the unique circumstances for each Frequency of Eating review. She then presented the analytic framework for each review. She described the intervention/exposure, comparators, and endpoint outcomes; described intermediate outcomes, if pertinent; specified the populations of interest; and listed key confounders. She also noted the potential confounders and potential covariates that the Subcommittee will consider for each review.

Dr. Leidy concluded her presentation by summarizing the Subcommittee's next steps, which are to implement the protocols for the systematic reviews.

During the discussion that followed, members asked Dr. Leidy whether the Subcommittee had considered issues that may be related to frequency of eating, such as including a monthly time frame (to account for low-income individuals who may skip meals at the end of the month when

financial resources are limited), sleep duration and schedule, eating patterns during pregnancy and lactation, screen use, and differences between meal skipping and fasting. Dr. Leidy agreed that these were valuable issues for the Subcommittee to consider. Members also discussed differences in the ability of diet assessment instruments to capture nuances around frequency of eating and issues involved in defining “eating occasion,” especially whether consumption of a non-calorie-containing food or beverage—specifically water—constitutes an eating occasion. Dr. Leidy replied that the Subcommittee did discuss this early on and agreed that water consumption would be counted because the focus of the review is on the frequency and timing of eating, not the source or caloric content of what is consumed. In response to a question about how to consider appetite regulation in children, specifically how their beverage consumption affects subsequent meals and how their responses differ from adults, Dr. Leidy noted that these issues also were relevant to the Beverages and Added Sugars Subcommittee and the Dietary Patterns Subcommittee. The Frequency of Eating Subcommittee will work collaboratively with them on these topics. A member raised the need to carefully consider whether factors such as total energy intake should be included as mediators or confounders.

Note: The Frequency of Eating Subcommittee protocols discussed are available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

## **PREGNANCY AND LACTATION SUBCOMMITTEE UPDATE**

Dr. Sharon Donovan, chair of the Pregnancy and Lactation Subcommittee, opened her presentation by explaining that the Subcommittee has three primary topic areas under its purview: (1) dietary patterns during pregnancy and lactation, (2) dietary supplements and fortified foods during pregnancy and lactation, and (3) maternal diet and food allergies and atopic allergic diseases. She reviewed the protocols for four sets of NESR systematic reviews. Two concern the relationship between dietary patterns during pregnancy and gestational weight gain, and dietary patterns during lactation and postpartum weight loss. Two concern the relationship between folic acid from dietary supplements and fortified foods consumed before and during pregnancy and lactation and five outcomes, and between iron from dietary supplements consumed before and during pregnancy and lactation and four outcomes. The five folic acid outcomes are: micronutrient status; gestational diabetes; hypertensive disorders during pregnancy; human milk composition; and developmental milestones, including neurocognitive development. The four iron outcomes are: micronutrient status; gestational diabetes; hypertensive disorders during pregnancy; and developmental milestones, including neurocognitive development.

During her presentation of the protocols, Dr. Donovan defined key terms relevant to the Subcommittee’s work and presented the analytic framework for each review. She described the intervention/exposure, comparators, and endpoint outcomes; described intermediate outcomes, if pertinent; specified the populations of interest; and listed key confounders. Dr. Donovan also reviewed the inclusion and exclusion criteria, noting which criteria have been modified from the standard criteria to fit the unique circumstances for each Pregnancy and Lactation review. She concluded her presentation by summarizing the Subcommittee’s next steps, which are to develop protocols for the remaining five sets of questions on dietary patterns during pregnancy (i.e., dietary patterns and (1) risk of gestational diabetes, (2) hypertensive disorders, (3) gestational age at birth, (4) birth weight, and (5) micronutrient status); the remaining two sets of questions on dietary patterns during lactation (i.e., dietary patterns and (1) human milk composition and quantity, and (2) infant developmental milestones); and the remaining four sets

of questions on consumption of vitamin D, omega-3 fatty acids, vitamin B12, and iodine from dietary supplements and fortified foods and specific health outcomes.

During the discussion that followed, Dr. Donovan agreed with members that it would be useful to include iron from fortified foods in the set of questions related to iron. She also confirmed that the Subcommittee would address the role of omega-3 fatty acids when considering neurocognitive development, and would consider some of the dietary factors that could influence common problems in pregnancy that are related to gestational hypertension and gestational diabetes.

Note: The Pregnancy and Lactation Subcommittee protocols discussed are available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

## **BIRTH TO 24 MONTHS SUBCOMMITTEE UPDATE**

Dr. Elsie Taveras, member of the Birth to 24 Month Subcommittee, presented for Dr. Kay Dewey, Subcommittee chair, who was unable to attend the meeting. This Subcommittee's reviews cover three primary topic areas: (1) human milk and infant formula, (2) specific nutrients (including iron, vitamin D, vitamin B12 and omega-3 fatty acids) from dietary supplements and fortified foods, and (3) complementary foods and beverages (CFB). Dr. Taveras reviewed eight systematic review protocols that presented 17 analytic frameworks for NESR systematic reviews examining the relationship between: (1) duration, frequency, and volume of exclusive human milk and/or infant formula consumption and growth, size, and body composition, (2) duration, frequency, and volume of exclusive human milk and/or infant formula consumption and micronutrient status, (3) duration of exclusive human milk and/or infant formula consumption and developmental milestones including neurocognitive development, (4) duration of exclusive human milk and/or infant formula consumption and food allergy and atopic allergic diseases, (5) duration of exclusive human milk and/or infant formula consumption and long-term health outcomes, (6) specific nutrients (iron, vitamin D, vitamin B12, or omega-3 fatty acids) from supplements and fortified foods and nutrient status, (7) specific nutrients from supplements and fortified foods and growth, size, and body composition, and (8) specific nutrients from supplements and fortified foods and bone health.

Dr. Taveras explained that in the human milk/infant formula topic area, the Subcommittee will conduct new NESR systematic reviews for the growth, size, and body composition; micronutrient status; and developmental milestones questions. For the food allergies and atopic allergic diseases and long-term health outcomes questions, the Subcommittee will update existing NESR systematic reviews.

During her presentation of the protocols, Dr. Taveras defined key terms relevant to the Subcommittee's work and presented the analytic framework for each review. She described the intervention/exposure, comparators, and endpoint outcomes; described intermediate outcomes, if pertinent; specified the populations of interest; and listed key confounders and potential confounders. Dr. Taveras also reviewed the inclusion and exclusion criteria, noting which criteria have been modified from the standard criteria to fit the unique circumstances for each Birth to 24 Months review. She concluded her presentation by summarizing the Subcommittee's next steps, which are to develop protocols for the Subcommittee's remaining questions (i.e., complementary feeding and (1) micronutrient status; (2) growth, size, and body composition; (3) developmental milestones; (4) food allergies and atopic allergic disease; and (5) bone health), and implement the protocols already developed. The Subcommittee also plans to meet

with the Data Analysis and Food Pattern Modeling Work Group to discuss assessing food group and nutrient intakes among infants and children Birth to 24 Months.

During the discussion that followed, members asked about differences in the definition of exclusive or predominant breastfeeding and CFB, with respect to the inclusion of water. Dr. Taveras noted that the Subcommittee's definition of CFB does not include water and that this definition is consistent with that of the World Health Organization. Staff acknowledged that not all studies include clear definitions and descriptions so that determining what constitutes "exclusive" or "predominant" breastfeeding can be challenging, but that the data extraction process is designed to capture as much information as possible. Members also had questions about the parent education, race/ethnicity, and biomarker key confounders, and NESR staff clarified that they would be extracting information on either parent or infant, depending on what is reported. In response to a question, Dr. Taveras noted that the Subcommittee would examine clinical status biomarkers to the extent possible. Staff added that they would extract any relevant data that are reported. Dr. Taveras also agreed with members that the Subcommittee may want to consider dietary calcium in the bone health question and may want to include adolescents in the population of interest for the growth question, similar to the bone health question.

Note: The Birth to 24 Months Subcommittee protocols discussed are available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

## **BEVERAGES AND ADDED SUGARS SUBCOMMITTEE UPDATE**

Dr. Richard Mattes, member of the Beverages and Added Sugars Subcommittee, presented for Dr. Elizabeth Mayer-Davis, Subcommittee chair, who was unable to attend the meeting. Dr. Mattes reviewed the protocols for four NESR systematic reviews. The first review concerns the relationship between beverage consumption across the life span and growth, size, body composition, and risk of overweight and obesity. The second and third reviews concern the relationship between beverage consumption during pregnancy and: (1) birth weight standardized for gestational age and sex, and (2) gestational weight gain. The fourth review concerns the relationship between beverage consumption during lactation and postpartum weight loss.

During his presentation of the protocols, Dr. Mattes defined key terms and types of beverages relevant to the Subcommittee's work and presented the analytic framework for each review. He described the intervention/exposure, comparators, and endpoint outcomes; specified the populations of interest; and listed key confounders. Dr. Mattes also reviewed the inclusion and exclusion criteria, noting which criteria have been modified from the standard criteria to fit the unique circumstances for each Beverages and Added Sugars review. He concluded his presentation by summarizing the Subcommittee's next steps, which are to develop protocols for the remaining questions (i.e., one question on beverage consumption during lactation and human milk composition and quality, five questions on alcohol consumption and specific health outcomes, three questions on alcohol consumption during lactation and specific outcomes, three questions on added sugars consumption and health outcomes, one question on added sugars during pregnancy and gestational weight gain, and one question on added sugars consumption during lactation and post-partum weight loss) and implement the protocols already developed.

During the discussion that followed, members discussed the complexity of accounting for beverages' contribution to total energy intake and of differentiating the impact of caloric versus non-caloric beverages on outcomes of interest. They also discussed the ability of different types of study designs to discern these effects.

Note: The Beverages and Added Sugars Subcommittee protocols discussed are available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

## **DIETARY FATS AND SEAFOOD SUBCOMMITTEE UPDATE**

Dr. Linda Snetselaar, chair of the Dietary Fats and Seafood Subcommittee, reviewed the protocols for all seven of the Subcommittee's NESR systematic reviews. These include three reviews examining the relationship between seafood consumption and selected outcomes. The first review considers seafood consumption during pregnancy and lactation and neurocognitive development of the infant. The second and third reviews consider seafood consumption during childhood and adolescence (up to age 18 years) and: (1) neurocognitive development, and (2) risk of cardiovascular disease. She also presented the protocols for four NESR systematic reviews examining the relationships between dietary fat consumption and: (1) neurocognitive development (birth to age 18 years) or neurocognitive health (ages 18 years and older), (2) risk of cardiovascular disease, (3) risk of certain types of cancer, and (4) all-cause mortality.

Dr. Snetselaar defined key acronyms and terms relevant to the Subcommittee's work and presented the analytic framework for each review. She described the intervention/exposure, comparators, and endpoint outcomes; described intermediate outcomes, if pertinent; specified the populations of interest; and listed key confounders and key covariates.

Dr. Snetselaar also reviewed the inclusion and exclusion criteria for each review, noting which criteria have been modified from the standard criteria to fit the unique circumstances for each Dietary Fats and Seafood review. She concluded her presentation of the protocols by summarizing the Subcommittee's next steps, which are to implement the protocols for these systematic reviews.

During the discussion that followed, Dr. Snetselaar clarified that freshwater fish is included in the definition of seafood to capture as diverse an array of fish and seafood as possible and so that findings from the reviews can be generalizable to the entire population. She agreed that including preparation method for seafood is important, and NESR staff clarified that data on preparation method would be extracted from studies and included in data tables. A member suggested that a possibly fruitful area for future investigation would be whether a pregnant woman's intake of dietary factors associated with adverse pregnancy outcomes (e.g., gestational diabetes or hypertension) may increase the risk of adverse outcomes, such as developmental problems, in the child.

Note: The Dietary Fats and Seafood Subcommittee protocols discussed are available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

## DISCUSSION

Dr. Barbara Schneeman (Chair) thanked the members for their presentations and opened the floor to the Committee members for general comments and questions.

Committee members generally agreed that an effort toward greater harmonization and consistency, to the extent possible, across the Subcommittees' analytic frameworks (e.g., definitions of key terms, listing of key confounders) would be useful. They also agreed that regular conversations across Subcommittees to align work efforts would be valuable. One member suggested that staff develop a grid of terms and confounders used by the Subcommittees to facilitate comparison and harmonization, and others agreed to this suggestion.

Members also noted that there may be unifying concepts or themes across the age groups that could be explored or recommended for future exploration. Another member encouraged the Subcommittees to keep the practical components of issues relevant to public health in mind (e.g., the relationship of calorie-containing beverages to risk of overweight and obesity) as they do their systematic reviews. Several members noted that the Committee, when considering specific nutrients, should remember that the ultimate goal is to understand the impact of the foods that people actually eat on health outcomes.

Dr. Schneeman thanked the members for their presentations and thoughtful contributions to the day's discussions. She also thanked the public for their participation in the meeting and reminded them to submit any comments on the analytic frameworks to [DietaryGuidelines.gov](https://www.dietaryguidelines.gov) by July 24. She then adjourned the meeting at 4:13pm.