Process to Develop the *2020-2025 Dietary Guidelines for Americans*

Topics and Scientific Questions to be Examined by the 2020 Dietary Guidelines Advisory Committee

List A: Organized by Life Stage

Note: For full transparency, USDA and HHS are providing the refined topics and scientific questions to the public in two formats:

- This list, List A, is organized by life stage, which follows the format of the topics and questions posted for public comment. This format makes it as easy as possible for the public to see what has changed.
- List B provides the identical topics and questions, reorganized to reduce redundancy and better reflect how the Departments will ask the Committee to proceed with its scientific review. The Committee will be asked to maintain the life stages approach in its scientific report for USDA and HHS.

The 2020 Dietary Guidelines Advisory Committee will be established to review the current totality of evidence on the following topics and supporting scientific questions and, based on its review, provide independent, science-based advice in these areas related to nutrition and health from birth into older adulthood. These topics and questions were identified by USDA and HHS with consideration of public and agency comments, and were prioritized based on relevance, importance, potential Federal impact, and avoiding duplication. The Committee will limit its review and advice to dietary guidance for human nutrition on the topics and scientific questions specified by the Departments. Throughout the Committee's review, evidence will be stratified and reviewed by age, sex, race, ethnicity, culture, location, and/or socioeconomic status, when possible, to identify and describe similarities and differences that may exist among individuals.

Current dietary intake and nutrients of public health concern

- *For each stage of life*, the following will be described/evaluated:
  - Current dietary patterns and beverage consumption
  - Current intakes of food groups and nutrients
  - Nutrients of public health concern
  - Prevalence of nutrition-related chronic health conditions
- How does dietary intake, particularly dietary patterns, track across life stages from the introduction of foods, into childhood, and through older adulthood?

Infants and toddlers from birth to 24 months (healthy, full-term infants)

Topic	Question(s)
Recommended duration of exclusive human milk and/or infant formula feeding	What is the relationship between the duration of exclusive human milk and/or infant formula consumption and 1) growth, size, and body composition; 2) food allergies and atopic allergic diseases; 3) long-term health outcomes; 4) micronutrient status; and 5) developmental milestones, including neurocognitive development?
Frequency and volume of human milk and/or infant formula feeding	What is the relationship between the frequency and volume of human milk and/or infant formula consumption and 1) micronutrient status; and 2) growth, size, and body composition?
Dietary supplements (e.g., iron, vitamin D, vitamin B_{12}, omega-3 fatty acids)	What is the relationship between specific nutrients from supplements and/or fortified foods consumed and 1) nutrient status; 2) growth, size, and body composition; and 3) bone health?

Infants and toddlers from birth to 24 months (healthy, full-term infants) – continued

Topic	Question(s)
Complementary feeding	What is the relationship between complementary feeding[1] and 1) micronutrient status; 2) growth, size, and body composition; 3) developmental milestones, including neurocognitive development; 4) food allergies and atopic allergic diseases; and 5) bone health? Can USDA Food Patterns be established based on the relationships identified? If so, how well do USDA Food Pattern variations meet nutrient recommendations?[2] If nutrient needs are not met, is there evidence to support supplementation and/or consumption of fortified foods to meet nutrient adequacy?
Beverages	What is the relationship between beverage[3] consumption and 1) achieving nutrient and potential food group recommendations; and 2) growth, size, and body composition?
Added sugars	What is the relationship between added sugars consumption and 1) achieving nutrient and potential food group recommendations; 2) growth, size, and body composition; 3) risk of cardiovascular disease; and 4) risk of type 2 diabetes? How much added sugars can be accommodated in a healthy diet while still meeting food group and nutrient needs?
Types of dietary fats	What is the relationship between types of dietary fat[4] consumed and 1) neurocognitive development; 2) risk of cardiovascular disease; 3) risk of certain types of cancer; and 4) all-cause mortality?
Seafood	What is the relationship between seafood consumption and 1) neurocognitive development; and 2) risk of cardiovascular disease?

Children and adolescents, ages 2-18 years old (with data reviewed by age group)

Topic	Question(s)
Dietary patterns to help promote health and normal growth, decrease chronic disease risk, and meet nutrient needs	What is the relationship between dietary patterns[5] consumed and 1) growth, size, body composition, and risk of overweight and obesity; 2) risk of cardiovascular disease; 3) risk of type 2 diabetes; 4) risk of certain types of cancer; 5) bone health; 6) neurocognitive health; and 7) all-cause mortality? Are changes to the USDA Food Patterns needed based on the relationships identified? If so, how well do USDA Food Pattern variations meet nutrient recommendations? If nutrient needs are not met, is there evidence to support supplementation and/or consumption of fortified foods to meet nutrient adequacy?
Beverages	What is the relationship between beverage[3] consumption and 1) achieving nutrient and food group recommendations; and 2) growth, size, body composition, and risk of overweight and obesity?
Added sugars	What is the relationship between added sugars consumption and 1) achieving nutrient and food group recommendations; 2) growth, size, body composition, and risk of overweight and obesity; 3) risk of cardiovascular disease; and 4) risk of type 2 diabetes? How much added sugars can be accommodated in a healthy diet while still meeting food group and nutrient needs?

Children and adolescents, ages 2-18 years old (with data reviewed by age group) – continued

Types of dietary fats	What is the relationship between types of dietary fat[4] consumed and 1) neurocognitive development; 2) risk of cardiovascular disease; 3) risk of certain types of cancer; and 4) all-cause mortality?
Seafood	What is the relationship between seafood consumption and 1) neurocognitive development; and 2) risk of cardiovascular disease?
Frequency of eating	What is the relationship between the frequency of eating[6] and 1) achieving nutrient and food group recommendations; 2) growth, size, body composition, and risk of overweight and obesity; 3) risk of cardiovascular disease; 4) risk of type 2 diabetes; and 5) all-cause mortality?

Adults, ages 19-64 years old (with data reviewed by age group)

Topic	**Question(s)**
Dietary patterns to help promote health, decrease chronic disease risk, and meet nutrient needs	What is the relationship between dietary patterns[5] consumed and 1) body weight and risk of overweight and obesity; 2) risk of cardiovascular disease; 3) risk of type 2 diabetes; 4) risk of certain types of cancer; 5) bone health; 6) neurocognitive health; and 7) all-cause mortality? Are changes to the USDA Food Patterns needed based on the relationships identified? If so, how well do USDA Food Pattern variations meet nutrient recommendations? If nutrient needs are not met, is there evidence to support supplementation and/or consumption of fortified foods to meet nutrient adequacy?
Beverages	What is the relationship between beverage[3] consumption and 1) achieving nutrient and food group recommendations; 2) body weight and risk of overweight and obesity; and 3) for alcohol only, risk of certain types of cancer, risk of cardiovascular disease, neurocognitive health, and all-cause mortality?
Added sugars	What is the relationship between added sugars consumption and 1) achieving nutrient and food group recommendations; 2) body weight and risk of overweight and obesity; 3) risk of cardiovascular disease; and 4) risk of type 2 diabetes? How much added sugars can be accommodated in a healthy diet while still meeting food group and nutrient needs?
Types of dietary fats	What is the relationship between types of dietary fat[4] consumed and 1) neurocognitive health; 2) risk of cardiovascular disease; 3) risk of certain types of cancer; and 4) all-cause mortality?
Frequency of eating	What is the relationship between the frequency of eating[6] and 1) achieving nutrient and food group recommendations; 2) body weight and risk of overweight and obesity; 3) risk of cardiovascular disease; 4) risk of type 2 diabetes; and 5) all-cause mortality?

Pregnancy and lactation

Topic	Question(s)
How additional calorie needs should be met during pregnancy and lactation	What is the relationship between dietary patterns[5] consumed during pregnancy and 1) risk of gestational diabetes; 2) risk of hypertensive disorders during pregnancy; 3) gestational age at birth; 4) birth weight standardized for gestational age and sex; 5) gestational weight gain; and 6) micronutrient status? What is the relationship between dietary patterns[5] consumed during lactation and 1) human milk composition and quantity; 2) infant developmental milestones, including neurocognitive development; and 3) post-partum weight loss? Are changes to the USDA Food Patterns needed based on the relationships identified? If so, how well do USDA Food Pattern variations meet nutrient recommendations? If nutrient needs are not met, is there evidence to support supplementation and/or consumption of fortified foods to meet nutrient adequacy?
Dietary supplements (e.g., iron, folate, vitamin D, omega-3 fatty acids, vitamin B_{12}, iodine, and nutrients of public health concern)	What is the relationship between specific nutrients from supplements and/or fortified foods consumed before and during pregnancy and lactation and 1) micronutrient status; 2) risk of gestational diabetes; 3) risk of hypertensive disorders during pregnancy; 4) human milk composition and quantity; and 5) developmental milestones, including neurocognitive development?[7]
Diet during pregnancy and lactation and risk of food allergy in the infant	What is the relationship between maternal diet during pregnancy and lactation and risk of infant and child food allergies and atopic allergic diseases?
Beverages	What is the relationship between beverage[3] consumption during pregnancy and lactation and 1) achieving nutrient and food group recommendations; 2) additional outcomes during pregnancy: gestational weight gain and birth weight standardized for gestational age and sex; and 3) additional outcomes during lactation: human milk composition and quantity, post-partum weight loss, and for alcohol only, infant developmental milestones, including neurocognitive development?[7]
Added sugars	What is the relationship between added sugars consumption and 1) achieving nutrient and food group recommendations; 2) gestational weight gain and post-partum weight loss; 3) risk of cardiovascular disease; and 4) risk of type 2 diabetes? How much added sugars can be accommodated in a healthy diet while still meeting food group and nutrient needs?
Types of dietary fats	What is the relationship between types of dietary fat[4] consumed and 1) neurocognitive development; 2) risk of cardiovascular disease; 3) risk of certain types of cancer; and 4) all-cause mortality?
Seafood	What is the relationship between seafood consumption during pregnancy and lactation and neurocognitive development of the infant?
Frequency of eating	What is the relationship between the frequency of eating[6] and 1) achieving nutrient and food group recommendations; 2) gestational weight gain and post-partum weight loss; 3) risk of cardiovascular disease; 4) risk of type 2 diabetes; and 5) all-cause mortality?

Older adults, ages 65 years and older (with data reviewed by age group)[8]

Topic	Question(s)
Dietary patterns to promote health, prevent chronic disease, and meet nutrient needs	What is the relationship between dietary patterns[5] consumed and 1) body weight and risk of overweight and obesity; 2) risk of cardiovascular disease; 3) risk of type 2 diabetes; 4) risk of certain types of cancer; 5) bone health; 6) neurocognitive health; 7) sarcopenia[9]; and 8) all-cause mortality? Are changes to the USDA Food Patterns needed based on the relationships identified? If so, how well do USDA Food Pattern variations meet nutrient recommendations? If nutrient needs are not met, is there evidence to support supplementation and/or consumption of fortified foods to meet nutrient adequacy?
Beverages	What is the relationship between beverage[3] consumption and 1) achieving nutrient and food group recommendations; 2) body weight and risk of overweight and obesity; and 3) for alcohol only, risk of certain types of cancer, risk of cardiovascular disease, neurocognitive health, and all-cause mortality?
Added sugars	What is the relationship between added sugars consumption and 1) achieving nutrient and food group recommendations; 2) body weight and risk of overweight and obesity; 3) risk of cardiovascular disease; and 4) risk of type 2 diabetes? How much added sugars can be accommodated in a healthy diet while still meeting food group and nutrient needs?
Types of dietary fats	What is the relationship between types of dietary fat[4] consumed and 1) neurocognitive health; 2) risk of cardiovascular disease; 3) risk of certain types of cancer; and 4) all-cause mortality?
Frequency of eating	What is the relationship between the frequency of eating[6] and 1) achieving nutrient and food group recommendations; 2) body weight and risk of overweight and obesity; 3) risk of cardiovascular disease; 4) risk of type 2 diabetes; and 5) all-cause mortality?

Note: Some topics are not included above because they are addressed in existing evidence-based Federal guidance. In an effort to avoid duplication with other Federal efforts, it is expected that these topics will be reflected in the *2020-2025 Dietary Guidelines* by referencing the existing guidance. Thus, these topics do not require a review of the evidence by the 2020 Dietary Guidelines Advisory Committee. Examples of existing guidance include:

- Food safety guidance
- Guidance on the health risks of excessive alcohol use, including information on binge drinking, and the recommendation that women who are pregnant or might be pregnant not drink at all
- Gestational weight gain guidance
- Physical activity guidance
- Dietary Reference Intakes, including the ongoing review of sodium and potassium

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[1] *Complementary feeding* is defined as the process that starts when human milk or infant formula is complemented by other foods and beverages. The complementary feeding period typically continues to 24 months as the young child transitions fully to family foods. *Complementary foods and beverages* are food and beverages (liquids, semisolids, and solids) other than human milk or infant formula provided to an infant or young child to provide nutrients and energy. Timing of introduction, types, and amounts will be considered. Evidence related to dietary patterns consumed during the complementary feeding period will be considered as part of these questions.

[2] The following question was included on the list of topics and questions posted for public comment: "What is the relationship between complementary feeding, including foods and beverages, and achieving nutrient and food group recommendations of infants and toddlers?" This question was edited for clarity and completeness in the revised list of questions.

[3] *Beverages*, such as cow's milk, milk alternatives, water, 100% fruit juice, sugar-sweetened beverages, beverages with high-intensity sweeteners (also known as artificial sweeteners), and caffeinated beverages will be considered. For adults, including women who are lactating and older adults, alcohol will also be considered.

[4] *Types of dietary fat* to be considered include saturated, omega-3 and omega-6 polyunsaturated, and monounsaturated fatty acids. The source, amount, and replacement will be considered in analyses.

[5] The *dietary patterns* questions will consider the quantities, proportions, variety, or combination of different foods, drinks, and nutrients when examining relationships. Dietary patterns such as Dietary Guidelines-related, Mediterranean-style, Dietary Approaches to Stop Hypertension (DASH), vegetarian/vegan, low-carbohydrate diets, and high-fat diets will be considered. Studies that examine a specific food group, but control for the other aspects of the dietary pattern, will also be considered.

[6] *Frequency of eating* will consider factors such as meals per day, snacking, and fasting.

[7] "Birth outcomes" was included as an outcome on the list of topics and questions posted for public comment. This outcome was replaced with more specific outcomes in the refined list of questions.

[8] The following question was included on the list of topics and questions posted for public comment: "What modifications to food and beverage choices promote meeting nutrient needs in older adults with impaired dentition, dry mouth, or other aspects of aging that interfere with food and beverage consumption?" It is expected that this question will be addressed within the dietary patterns, beverages, and other questions.

[9] The following question that was included on the list of topics and questions posted for public comment: "What modifications to dietary patterns are effective in preventing or reversing declines in muscle mass or bone density in older adults?" This question was replaced by the addition of "sarcopenia" to the dietary patterns question.