

Part A: Executive Summary

The Departments of Health and Human Services (HHS) and Agriculture (USDA) established the 2025 Dietary Guidelines Advisory Committee (Committee) to examine scientific evidence on specific nutrition and public health topics and provide independent, science-based advice and recommendations to be considered by the Departments in the development of the *Dietary Guidelines for Americans, 2025-2030*. HHS and USDA identified topics and scientific questions to potentially be examined by the 2025 Committee and posted them for public comment before establishing the Committee. After the Committee was appointed, it considered the proposed questions and determined if questions should be added, refined, or removed as it prioritized questions for its review. The Committee used the criteria of relevance, importance, potential impact to federal programs, avoiding duplication, and research availability during its prioritization process. The Committee used 3 approaches to examine the evidence: data analysis, systematic reviews, and food pattern modeling. Each of these approaches has its own rigorous, protocol-driven methodology, and each played a complementary role in examining the science. The type of information the Committee needed to answer each scientific question determined which approach it would use to review the evidence (see [Part C. Methodology](#) for more information on the Committee's process for examining the science and for a complete list of scientific questions addressed by the Committee).

As was true for recent Committees, the 2025 Committee's work took place against a backdrop of several significant nutrition-related issues in the United States (see [Part D. Chapter 1: Current Dietary Intakes and Prevalence of Nutrition-Related Chronic Health Conditions](#)).

- Chronic health conditions for which poor nutrition is a risk factor—including overweight and obesity, type 2 diabetes, cardiovascular disease (CVD), metabolic syndrome, and certain cancers—are prevalent, presenting major public health challenges. For example, prevalence of overweight and obesity is 73 percent among U.S. adults ages 20 years and older and 36 percent among children and adolescents ages 2 through 19 years, and prevalence of prediabetes is 38 percent among individuals ages 12 through 19 years. The prevalence of conditions such as overweight, obesity, and prediabetes at young ages is of particular concern because of their effects on the current health of the child as well as the risks of persistent chronic conditions into adulthood.
- Data show significant disparities in prevalence of nutrition-related chronic health conditions between sociodemographic groups. For example, the prevalence of obesity is lower among non-Hispanic Asian children and adults compared to all other racial and/or ethnic groups examined, and the prevalence of obesity is also lower among children with higher family income compared to those with lower family income. Among adults, the prevalence of obesity is lower among non-Hispanic Asian adults and higher in non-Hispanic Black adults. Also among adults, the prevalence of obesity, hypertension, and type 2 diabetes is higher among families with lower incomes compared to higher incomes. Education data show that prevalence of

obesity and prevalence of hypertension among adults are both lower among those with higher educational attainment (college degree or above) than those with lower educational attainment.

Against this backdrop, the Committee's report is particularly notable for its intentional focus on health equity, which it defined as the state in which everyone has a fair and just opportunity to attain their highest level of health. Specifically, the Committee was tasked with examining the relationship between diet and health across all life stages using a health equity lens, ensuring that the implications of factors such as socioeconomic position, race, ethnicity, and culture were described and considered to the greatest extent possible for each scientific question and based on the information available in the scientific literature and data. A primary goal of centering health equity is to help HHS and USDA ensure that the resulting guidance in the *Dietary Guidelines for Americans (Dietary Guidelines)* is relevant to people of diverse racial, ethnic, socioeconomic, and cultural backgrounds, thereby increasing the potential of the guidance to meet nutrient needs, promote health, and reduce risk of chronic disease.

The Committee considered health equity as a guiding principle as it examined the evidence (see [Part B. Chapter 2: Health Equity and Nutrition](#)). From protocol development to evidence integration, the Committee worked to ensure that factors such as socioeconomic position, race, ethnicity, and culture were considered to the greatest extent possible based on the available evidence. For example, the Committee conducted an evidence scan on culturally tailored dietary interventions to describe the available evidence and make recommendations regarding future systematic review efforts to continue work on this important topic. As a second example, the Committee's data analysis efforts included a granular look at how dietary intakes and prevalence of chronic diseases vary among sociodemographic groups. As a third example, the Committee was the first Committee to use diet simulations—a systems science approach—to evaluate proposed dietary patterns, considering variability in the selection and consumption of foods and beverages representing differing preferences, cultures, and traditions.

The Committee's report also leverages advancements in the methods used to examine the evidence. The Committee established synthesis plans in each of its systematic review protocols, and answered select scientific questions using systematic review with meta-analysis. In addition, all systematic reviews and food pattern modeling reports underwent external peer review in an effort to further align with recommendations from a National Academies report.

The Committee addressed a broad range of important diet- and health-related questions, building on the work of previous Committees and expanding their reviews to new topics. The Committee addressed new topics, including food sources of saturated fat consumed and risk of CVD; dietary patterns with varying amounts of ultra-processed foods; strategies for improving diet quality and weight management, which involved new reviews on portion size and frequency of meals and/or snacking; and practical guidance about how to feed younger children in terms of caregiver feeding styles and practices that support children's consumption of healthy foods.

In addition to these distinguishing features, the Committee continued the lifespan approach by reviewing evidence on the period of birth through older adulthood, including during pregnancy and lactation.

The remainder of this Executive Summary provides brief summaries of the Committee's topic-specific reviews of the science through data analysis, systematic reviews, and food pattern modeling. Through these reviews the Committee also generated advice for the Departments, future Committees, and the research community, and outlined specific research needs to fill gaps in the current evidence (see [Part E. Chapter 2: Future Directions](#)). The Committee's report also includes a chapter that integrates its findings and conclusions and presents its overarching advice to the Departments for the *Dietary Guidelines for Americans, 2025-2030* ([Part E. Chapter 1: Overarching Advice to the Departments](#)); that chapter is summarized at the end of this Executive Summary.

Current Dietary Intakes Throughout the Lifespan

Consumption of nutrient-dense foods and beverages is critical to meeting nutrient needs essential for health throughout the lifespan, from growth and development during pregnancy and childhood through healthy aging during adulthood. Few U.S. individuals, however, consume a dietary pattern that aligns with *Dietary Guidelines* recommendations, regardless of age, race, ethnicity, or sociodemographic group examined. Therefore, nearly all U.S. individuals can benefit from shifting to healthier dietary patterns. Social determinants of health, which include economic, environmental, social, educational, and structural factors, play a role in dietary intakes throughout the lifespan because they impact the ability of individuals and population groups to access healthy foods and achieve nutrition recommendations.

The Committee's review of current U.S. dietary intakes indicates that across the lifespan, intakes of Vegetables; Fruits; Dairy and Fortified Soy Alternatives; Seafood; Nuts, Seeds, and Soy Products; and Whole Grains are generally lower than current recommendations, while intakes of total Grains (including Refined Grains); total Protein Foods; and Meat, Poultry, and Eggs are generally at or above current recommendations. These intakes have ramifications for nutrient intakes and status throughout life. Based on dietary intake, biomarker data, and relevance to health, for individuals ages 1 year and older, vitamin D, calcium, potassium, and dietary fiber are nutrients of public health concern due to underconsumption; and sodium, added sugars, and (for ages 2 years and older) saturated fat are nutrients of public health concern due to overconsumption. Additional nutrients are of public health concern for certain individuals only during specific life stages.

Each individual life stage holds unique implications for dietary intake and the risk of disease. In addition, during certain periods of the lifespan, dietary shortfalls and their associated risks may pose greater threats to long-term health. Diet quality is relatively higher in early childhood compared to later childhood and adolescence. The poor nutrient intakes of adolescents, particularly females—paired with potential for rapid growth and development during this period—are concerning, both at the individual level and for the possible intergenerational impacts. Diet quality is somewhat higher for older adults compared to younger adults, though several specific nutrient concerns remain. Also within each life stage, opportunities exist to provide specific advice to individuals about food components that provide key nutrients at that life stage and for ways they (and their caregivers, as applicable) can make healthy food choices and employ strategies to improve diet quality.

Dietary Patterns and Specific Dietary Components Across Life Stages

The Committee examined a range of topics related to dietary intakes across life stages, including the relationship between overall dietary patterns and specific dietary components and a series of broad health outcomes.

Dietary Patterns

Dietary patterns, which comprise usual quantities and frequencies of foods, beverages, and nutrients that are consumed during a given time frame or life stage, may be influenced by many factors such as population norms, personal preferences, and cultural foodways. The Committee examined evidence on relationships between dietary patterns and growth, body composition, and risk of obesity (including gestational weight gain and postpartum weight change); cardiovascular disease; type 2 diabetes; breast cancer; colorectal cancer; and age-related cognitive decline, dementia, Alzheimer's disease, and mild cognitive impairment. It also examined evidence on relationships between dietary patterns in pregnancy and maternal and infant outcomes, including risk of hypertensive disorders of pregnancy, risk of gestational diabetes mellitus, gestational age at birth, and birth weight. The studies reviewed included a variety of dietary patterns from multiple countries, which is consistent with the aim of the *Dietary Guidelines* to provide nutrition advice that represents a variety of cultural foodways.

As the Committee considered the evidence, which encompassed multiple life stages, a dietary pattern emerged that was consistently related to beneficial health. This healthy dietary pattern for individuals ages 2 years and older is higher in vegetables, fruits, legumes (i.e., beans, peas, lentils), nuts, whole grains, fish/seafood, and vegetable oils higher in unsaturated fat, and lower in red and processed meats, sugar-sweetened foods and beverages, refined grains, and saturated fat. Some of these healthy dietary patterns also include consumption of fat-free or low-fat dairy and foods lower in sodium, and/or may include plant-based dietary options.

Beverages

Beverages may be consumed as part of meals or snacks, as a meal or snack, or sipped throughout the day. Beverages are key contributors to hydration and to energy and nutrient intakes in U.S. dietary patterns. Although some beverages provide dietary and health benefits, consumption of higher quantities of certain beverages can contribute to excess intake of energy as well as certain nutrients that should be limited.

The Committee examined evidence on relationships between beverage consumption and growth, body composition, risk of obesity, and risk of type 2 diabetes across the lifespan. Given that beverages vary in energy content and nutrient composition—differences that may be associated with beverages' different impacts on health outcomes—various types of beverages were examined in separate questions. These beverages included dairy milk and milk alternatives, 100% juice, sugar-sweetened beverages (SSB), and low- and no-calorie sweetened beverages (LNCSB). Taken together, the Committee's findings showed that SSB are associated with unfavorable health outcomes in infants, children, adolescents, adults, and older adults, based on evidence graded as moderate, and that total milk and higher-fat milk may be associated

with favorable health benefits for growth, body composition, and risk of obesity in younger children ages 2 through 5 years, based on evidence graded as limited. The Committee could not draw a conclusion about the relationship between consumption of milk with different fat content by older children, adolescents, adults, or older adults and these outcomes because of substantial concerns with the body of evidence. The Committee decided that evidence is not sufficient to advise changing current *Dietary Guidelines* recommendations for primary consumption of unsweetened fat-free and low-fat milk across the lifespan. The Committee's systematic reviews suggest that a relationship does not exist (i.e., neither a beneficial nor an adverse relationship exists) between 100% juice consumption or LNCSB consumption and growth, body composition, or risk of obesity in children, adolescents, adults, or older adults. Finally, no conclusion statements about beverages could be drawn for the life stages of pregnancy and postpartum, indicating this area should be a research priority so that comprehensive guidance on beverage intake can be developed.

These findings support existing general recommendations for beverage consumption provided in the *Dietary Guidelines*, which emphasize consuming water and beverages that contribute beneficial nutrients, such as fat-free and low-fat milk and 100% juices; and reducing intake of beverages (e.g., SSB) that contain calories while contributing limited or no beneficial nutrients. The Committee suggested enhancements to existing recommendations, including an emphasis on plain drinking water as the primary beverage for people to consume, specificity regarding unsweetened fat-free and low-fat dairy milk and unsweetened fortified soy beverages, and clarifying that SSB consumption should be limited.

Food Sources of Saturated Fat

Since the first edition of the *Dietary Guidelines* was published in 1980, each subsequent edition has consistently recommended limiting consumption of saturated fat. This is the first Committee to formally evaluate food-level comparisons of foods with higher or lower levels of saturated fat to inform potential guidance for which foods across the dietary pattern could be increased when saturated fat-containing foods are reduced, for cardiovascular disease risk reduction.

The Committee's findings reinforce the recommendations in the current (2020-2025) *Dietary Guidelines* to limit total saturated fat intake to less than 10 percent of calories per day starting at age 2 by replacing it with unsaturated fat, particularly polyunsaturated fats. Evidence indicates that when reducing butter, processed and unprocessed red meat, and dairy, substitution or replacement with a wide range of plant-based food sources, including plant-based protein foods (e.g., beans, peas, and lentils), whole grains, vegetables, or monounsaturated fatty acid (MUFA)- and PUFA-rich vegetable oils and spreads, is associated with cardiovascular disease risk reduction. The general lack of cardiovascular disease benefit observed for substitution or replacement within animal-based saturated fat foods, despite potential differences in saturated fat content, further highlights the importance of evaluating dietary exposures at the food level. Consuming foods lower in saturated fat may be related to decreased cardiovascular disease risk through their lower saturated fat content, as well as the other nutritional exposures within these foods, such as beneficial dietary factors (e.g., fiber, antioxidants). These findings support recommendations to replace saturated fat-containing foods with plant sources rich in MUFA, PUFA, and fiber, rather than other

animal sources of saturated fat, for reduction in CVD risk. Further, the Committee's systematic review findings support replacement of plant sources higher in saturated fat, such as coconut oil, cocoa butter, and palm oil, with vegetable oils higher in unsaturated fats.

Dietary Practices and Behaviors in Birth Through Childhood

Childhood represents a critical window during which nutrition has a profound influence on cognitive and physical development; it also represents a focal period for the development and socialization of eating behaviors. The family is a first and fundamental context in which the development of eating behaviors occurs. The Committee examined relationships between the timing and types of foods and beverages introduced during the complementary feeding period, and of caregiver feeding styles and practices, with various outcomes.

Complementary Feeding and Feeding Styles and Practices During Childhood

Complementary feeding is a period of rapid nutritional transition when children are introduced to a variety of foods, flavors, and textures, and eating routines that reflect the diets of their family, culture, and environment. Complementary feeding begins around age 6 months and extends to 24 months, a period during which complementary foods and beverages (CFB) take on an increasingly important role in sustaining adequate growth and development. In addition to the timing of introduction, the types and amounts of CFB are important factors that may influence dietary intake, nutritional status, growth and body composition, and future health outcomes. Fruits, vegetables, and grains are complementary food options between ages 6 and 24 months that are not associated with unfavorable outcomes related to growth or risk of obesity, based on the Committee's systematic reviews. Conclusions for food groups beyond fruits, vegetables, and grains for these outcomes are not possible at this time.

Children's food acceptance and preferences are largely learned through experiences around eating, which emphasizes that *how* children are fed may be as important as *what* they are fed. The Committee's systematic reviews on relationships between caregiver feeding styles and practices and child food acceptance, dietary intake, and outcomes related to growth highlight the potentially supportive role of structured feeding practices in promoting young children's acceptance and consumption of healthful foods aligned with the *Dietary Guidelines*. Structured feeding practices, including repeated exposure—a practice that shows robust evidence of promoting children's acceptance of fruits and vegetables during the first 6 years of life—may support children's intakes of both fruits and vegetables by organizing children's physical and social eating environments: making readily accepted foods generally available to children (e.g., fruits), including vegetables in eating routines (e.g., providing vegetables at snacks), providing guided choices that include vegetables, and modeling enjoyment of eating vegetables. The lack of studies regarding relationships between other types of feeding practices and outcomes related to eating behavior and dietary intakes highlights notable scientific gaps in how to feed children for promoting healthy dietary patterns aligned with the *Dietary Guidelines*.

Strategies for Individuals and Families Related to Diet Quality and Weight Management

The Committee considered specific evidence-based strategies that individuals can use to follow a healthy dietary pattern with appropriate calories to achieve or maintain a healthy weight. These include strategies related to frequency of meals and/or snacking as well as portion size. The Committee also explored culturally responsive interventions to improve diet through an evidence scan.

Frequency of Meals and/or Snacking

The Committee examined evidence across the lifespan on relationships between frequency of meals and/or snacking and consuming a dietary pattern that is better aligned with the *Dietary Guidelines*; energy intake; and growth, body composition, and risk of obesity. The Committee's work evaluated scientific literature on occasion-based measures such as meals (e.g., breakfast), snacking, frequency of meals, and number of eating occasions as defined by the studies.

Among children and adolescents, regular breakfast consumption and a higher number of eating occasions may be associated with favorable outcomes related to growth, body composition, and/or lower risk of obesity; frequency of daily snacking among children may not be associated with outcomes related to growth, body composition, and/or risk of obesity; and meal frequency/skipping among children may not be associated with risk of overweight or obesity. Among adults and older adults, breakfast skipping, overall snacking, and number of eating occasions may not be associated with outcomes related to body composition, body weight, and/or risk of obesity, but after dinner/evening snacking may be associated with less favorable outcomes related to body composition and risk of obesity. Adequate evidence was not available for any life stage on the relationship between frequency of meals and/or snacking and energy intake, nor for consuming a dietary pattern that is better aligned with the *Dietary Guidelines*, highlighting the need for additional research on these topics. Similarly, not enough evidence was available to assess the relationship between frequency of meals and/or snacking and gestational weight gain or postpartum weight change.

Portion Size

To better understand how portion sizes influence selection and consumption of food, the Committee examined evidence on relationships between food and beverage portion sizes and energy intake and growth, body composition, and risk of obesity. The Committee prioritized integrating the concepts of food type, portion size, and energy density in its review of the evidence to identify specific evidence-based strategies that individuals can use to follow a healthy dietary pattern with appropriate calories to achieve or maintain a healthy weight.

Evidence indicated that large portions, particularly of energy-dense foods and beverages, promote energy intake among both adults and children. Portion size effects have been observed across a variety of different types of foods, participant characteristics, and packaging types and sizes, suggesting that larger portion sizes may have universal effects to promote food consumption. The implications of portion size for

energy intake, however, may depend on food type. Among adults and older adults, portion size and energy density have independent and additive effects on daily energy intake. Among children, larger portion sizes of low energy-dense foods such as vegetables and fruits promote consumption of those foods without appreciable effects on daily energy intake. Strategies to promote portion control of energy-dense foods include selection of smaller package sizes and use of pre-portioned meals and snacks for foods and beverages. Although the body of evidence considered demonstrates robust influences of food and beverage portion size on intake among children and adults, a lack of evidence exists on the relationship between portion size and energy intake in young children, adolescents, and individuals during pregnancy and postpartum. A lack of evidence also exists on the role of portion size in achieving or maintaining a healthy weight and growth, body composition, and risk of obesity overall.

Culturally Responsive Interventions to Improve Diet

Dietary behaviors result from a complex interplay of psychological, sociological, economic, and sensory factors, all of which are influenced by culture. Culturally responsive (also referred to as culturally tailored) approaches and interventions have garnered significant interest based on their promise for improving equitable access to healthcare and nutrition services and in supporting health behavior change. Culturally responsive dietary interventions are designed to align with specific cultural practices, beliefs, and preferences of the target population, with the aim of improving the quality of their diet and health outcomes. The U.S. population has become more racially and ethnically diverse during the past decade, highlighting the need to ensure that the *Dietary Guidelines* are representative of the country's diverse populations and that community implementation appropriately reflects cultural preferences.

The Committee conducted an evidence scan to better understand the breadth and depth of the diverse body of evidence on culturally responsive dietary intervention studies, as such studies emphasize how cultural considerations have been incorporated into interventions to address the needs of a given population and explore the impact of culture on dietary intake and health. The Committee integrated concepts from 2 frameworks to provide a theoretical and practical foundation for the Committee to classify the intervention components within the evidence scan and interpret the scan's results within the broader context of the literature. This evidence scan also explored intervention opportunities, emphasizing the potential for social, economic, and environmental strategies to improve overall diet and overall diet quality among populations disproportionately affected by health disparities. The results demonstrated that many diverse culturally responsive dietary interventions have been conducted in the United States and Canada to improve diet and energy intake as well as various health outcomes such as growth, body composition, risk of obesity, and risk of cardiovascular disease and type 2 diabetes. The findings may provide insights on the importance of allowing for flexibilities around the Healthy U.S.-Style Dietary Pattern to be more culturally responsive, and could also serve as a springboard for future, more targeted systematic reviews that assess the effectiveness of the interventions on outcomes of interest.

Food Pattern Modeling

Food pattern modeling is a methodology used to illustrate how changes to the amounts or types of foods and beverages in a dietary pattern might affect meeting nutrient needs. These analyses are used to develop quantitative dietary patterns that reflect health-promoting patterns identified in systematic reviews to meet energy and nutrient needs. The Committee used food pattern modeling to inform, with consideration of each life stage, if changes should be made to the 3 USDA Dietary Patterns (Healthy U.S.-Style, Healthy Mediterranean-Style, and/or Healthy Vegetarian). The Committee also considered if additional Dietary Patterns should be developed/proposed based on the review of evidence.

Nutrient Profile Development

An initial step in the Committee's food pattern modeling process was development of nutrient profiles to use in all food pattern modeling analyses. Nutrient profiles are calculated for food groups and subgroups, and are based on the weighted average of nutrient-dense forms of foods considering a range of foods and beverages reported by individuals in the United States. Nutrient-dense versions of foods and beverages were used to calculate nutrient profiles in previous food pattern modeling analyses. This Committee examined an alternative approach that considered which, if any, foods and beverages lower in nutrient density should contribute toward the calculations of nutrient profiles. The nutrient profiles were modestly refined by excluding a limited list of foods and beverages lower in nutrient density with the intent to model nutrient-dense foods and beverages that better align as part of a healthy dietary pattern.

The Committee also examined whether nutrient profiles based on dietary intakes of the total U.S. population ages 1 and older are generalizable to individual population groups classified by race, Hispanic origin, and socioeconomic position using income measures related to federal assistance program income eligibility. Separate nutrient profiles were calculated based on each group's proportional intakes of foods and beverages, which represented the variation in dietary intakes among these population groups. The evaluation of nutrient profiles specific to individual population groups demonstrated some differences in the proportions of foods and beverages that contributed to the calculation of nutrient profiles, but had limited differences on the overall macronutrient and micronutrient composition of the nutrient profiles. No changes were made to the nutrient profiles used in subsequent food pattern modeling analyses based on this evaluation. The individual population group nutrient profiles were used, however, as part of the final synthesis to evaluate proposed food pattern(s) against nutritional goals.

Food Group and Subgroup Analysis

After developing the nutrient profile to use in all food pattern modeling analyses, the Committee explored how shifts in quantities of food groups and subgroups, mostly tested within the 2020 Healthy U.S.-Style Dietary Pattern (HUSS), could have implications for nutrient adequacy. This helped the Committee determine if modifications or flexibilities should be made to the existing patterns, or if new dietary pattern variations should be developed. Ultimately, the Committee did not propose the addition of an entirely new dietary pattern. It did, however, identify supporting evidence from food pattern modeling analyses to explore potential modifications to the 2020 HUSS that simultaneously modify at certain calorie

levels: (1) Vegetable subgroups, specifically to increase Beans, Peas, and Lentils and decrease Starchy Vegetables while keeping Total Vegetables in the same quantities; and (2) reduce Total Protein Foods by reducing Meat, Poultry and Eggs. The Committee determined that based on the evidence reviewed, no scientific justification existed to recommend modifications for the quantities of other food groups or subgroups in any pattern. The Committee also recommended removal of the line for “Limits on Calories for Other Uses” that appears in the existing USDA Dietary Patterns for ages 2 years and older. This line represented a quantitative estimate of calories remaining after all other foods and beverages in the pattern are consumed in their most nutrient-dense forms. According to the current (2020-2025) *Dietary Guidelines*, these calories can be used for added sugars, saturated fat, and/or alcohol, or to eat more than the recommended amount of food in a food group. Given inherent variability in the energy estimates of nutrient-dense foods and beverages and the poor diet quality in the United States, presenting a quantified number of additional calories was not considered prudent and may be misleading because calories for other uses may not be available.

The Committee’s food pattern modeling analyses also demonstrated the unique but varied contributions that each of the food groups and subgroups across the HUSS make to meeting nutritional goals, underscoring the necessity of dietary variety and highlighting potential implications of excluding dietary components without thoughtful replacement. Findings from the Committee’s food pattern modeling analyses informed its development of a modified 2020 HUSS that continues to meet nutritional goals across life stages and age and sex groups, with few exceptions. The modified 2020 HUSS was then evaluated for potential refinement using diet simulations.

Diet Simulations

The Committee used diet simulations to evaluate the capacity of a wide range of foods and beverages consumed in the United States, including foods of lower nutrient density, to meet the modified 2020 HUSS. The addition of this systems modeling approach is the first use in the *Dietary Guidelines* development process and is also responsive to recommendations from a National Academies report. These data allowed the Committee to examine and consider refinement of the modified 2020 HUSS to ensure that it is inclusive of a broader range of dietary intakes. Given time constraints and the novelty of this approach, the Committee needed to limit the number of groups for whom the diet simulations would test the proposed pattern. The Committee unanimously decided to prioritize American Indian and Alaska Native populations in the pilot method to identify foods and beverages to use in a separate set of simulation analyses, with the recommendation that future work in this area be expanded to represent additional U.S. population groups.

Results from the Committee’s analyses indicate that nutrient requirements can generally be met with the modified 2020 HUSS dietary pattern when considering a wide variety of foods consumed in the United States and included in select American Indian and Alaska Native diets. Therefore, the Committee did not further refine the modified 2020 HUSS, but emphasized that recommended food group amounts should be met predominantly with foods and beverages lower in added sugars, saturated fat, and sodium. It is notable, however, that recommended limits for sodium intake were exceeded even when foods lower in nutrient density were excluded from the simulations. This suggests that decreasing sodium to levels

expected to reduce chronic disease risk is unlikely without considerable efforts to decrease sodium in the U.S. food supply.

Overarching Advice to the Departments

Several key themes emerged throughout the Committee's work. First, the value of using multiple sources of evidence to inform comprehensive, actionable recommendations. The Committee leveraged and triangulated diverse evidence sources and methodological approaches that built iteratively upon one another—including findings from data analysis, systematic reviews, and food pattern modeling—to develop comprehensive and actionable advice for HHS and USDA in developing the *Dietary Guidelines for Americans, 2025-2030*. Second, the importance of considering—across approaches to examine evidence—select sociodemographic and economic indicators that are central to applying a health equity lens. Including these indicators allowed the Committee to examine their implications for recommending dietary patterns that promote health equity, specifically understanding how they impact dietary intake; how and if different populations are represented in the existing literature to ensure generalizability; and the potential of existing and revised dietary patterns to meet cultural, regional, social, and religious needs. Third, the expansion of the scope of the evidence reviewed to examine not only recommended amounts and types of foods but also strategies to effectively promote healthy dietary patterns across the life course; this recognizes that achieving a healthy dietary pattern involves a combination of dietary/feeding strategies and behavioral modifications. The Committee evaluated the effectiveness of strategies, including the frequency of meals/snacks, breakfast consumption, portion size, and child feeding styles and practices, for achieving a healthy dietary pattern and lower risk of obesity across the lifespan. The Committee also emphasized the importance of flexibility and inclusion in dietary recommendations—which is increasingly recognized as essential for promoting adherence to healthy eating patterns and improving overall health outcomes—as a core element across the 3 themes.

With regard to USDA Dietary Patterns, the Committee did not recommend modifications to the 2020 HUSS for young children ages 12 through 23 months who are no longer receiving human milk or infant formula. For individuals ages 2 years and older, results from the Committee's analyses indicate that nutrient requirements can generally be met with the modified 2020 HUSS dietary pattern when considering a wide variety of foods consumed in the United States and included in select American Indian and Alaska Native diets. Moreover, systematic reviews demonstrate that the 3 current USDA Dietary Patterns, as well as other healthy dietary patterns, have similar core elements. These core elements are retained in the *Eat Healthy Your Way* Dietary Pattern, which is the Committee's proposed dietary pattern—a single inclusive, flexible, dietary pattern that incorporates scientific evidence accumulated across many years and builds on the work of prior Committees. The proposed modifications are based on the Committee's systematic reviews and food pattern modeling analyses, informed by data analysis, supported by diet simulations, and reflective of the Committee's review of scientific evidence through a health equity lens. Key tenets include flexibility and inclusivity, acknowledging that all U.S. individuals with their diverse backgrounds and foodways can achieve the goal of eating a healthy dietary pattern by following the proposed dietary pattern.

The Committee recommends that the proposed *Eat Healthy Your Way Dietary Pattern* emphasizes dietary intakes of beans, peas, and lentils while reducing intakes of red and processed meats, as supported by systematic reviews as well as food pattern modeling analyses indicating that nutrient goals are generally met with such a shift from the 2020 HUSS to include more plant-based Protein Foods. The Committee also recommends moving Beans, Peas, and Lentils as a subgroup of the Vegetables Food Group to a subgroup of the Protein Foods Group to align with evidence to encourage plant sources of Protein Foods. The Committee also proposes reorganizing the order of the Protein Foods Group to list Beans, Peas, and Lentils first, followed by Nuts, Seeds, and Soy products, then Seafood, and finally Meats, Poultry, and Eggs. The Committee also recommends removing “Limits on Calories for Other Uses” from the quantitative pattern because variability in calorie content exists across the many food and beverage options that may be used to achieve the pattern’s food group and subgroup recommendations, meaning that it is possible that no calories may remain for other uses.

The Committee also reviewed the 4 overarching Guidelines in the *Dietary Guidelines for Americans, 2020-2025* and provides advice to the Departments regarding these 4 Guidelines for the *2025-2030* edition. The updates reflect the Committee’s emphasis on how and why individuals eat what they do and its commitment to building flexibilities into an inclusive framework such that the *Dietary Guidelines* can better meet individuals where they are and to meet the varied budgetary, cultural, and personal preferences of people living in the United States. Details of these suggested updates are provided in [Part E. Chapter 1: Overarching Advice to the Departments.](#)

The *Eat Healthy Your Way* Dietary Pattern proposes modifications and flexibilities to the modeled dietary pattern, which ensures food group recommendations meet nutrient requirements, with few exceptions. These modifications do not necessarily reflect changes needed to bring current dietary intakes at the individual or population levels into alignment with recommendations. Therefore, the Committee recommends that future Committees be composed of expertise in the disciplines of health equity, nutrition science, and behavioral and implementation sciences to assist HHS and USDA in their efforts to successfully implement dietary guidance for all Americans, regardless of their age, sex, race, ethnicity, and/or socioeconomic position, to narrow the gap between scientifically robust dietary guidance and actual dietary consumption by the U.S. population.

Part B. Chapter 1: Introduction

More than half of all U.S. adults have one or more preventable chronic conditions, many of which are related to unhealthy dietary intakes.¹ Food insecurity is present in 18 million U.S. households, including 3.2 million U.S. households with children.² The likelihood of having a chronic disease increases with increasing degree of food insecurity, and both disproportionately affect different population groups.³ Availability and access to nutritious foods and beverages that support healthy living is important for all people in the United States. Up-to-date nutrition advice in the *Dietary Guidelines for Americans* can help improve the health of individuals in the United States by encouraging food and beverage choices that are affordable, enjoyable, promote health and sustainability, and help prevent chronic diseases.

By law (Public Law 101-445, Title III, 7 U.S.C. 5301 et seq.), the *Dietary Guidelines for Americans* is published by the federal government every 5 years. Since the 1985 edition, the U.S. Departments of Health and Human Services (HHS) and Agriculture (USDA) have fulfilled this requirement by establishing a Dietary Guidelines Advisory Committee (Committee) of nationally recognized experts in the field of nutrition and health to review the scientific and medical knowledge current at the time.

The 2025 Dietary Guidelines Advisory Committee was established for the single, time-limited task to examine the evidence on specific nutrition and public health topics, and for providing independent, science-based advice and recommendations to the federal government. The Committee considered all the conclusion statements generated from its scientific reviews to develop overarching advice for the Secretaries of Health and Human Services and Agriculture for use as HHS and USDA develop the *Dietary Guidelines for Americans, 2025–2030*.

An Evolving Focus for Dietary Guidance

To meet the nutrient needs of the U.S. population, the *Dietary Guidelines for Americans, 2020–2025* promotes consumption of a variety of nutrient-dense foods and beverages from food groups and subgroups in USDA Dietary Patterns. Each edition of the *Dietary Guidelines* builds on the previous edition, with scientific justification for changes informed by the Committee's scientific report, along with input from federal agencies and the public. Early editions focused on healthy members of the public but more recent editions, recognizing the growing prevalence of diet-related chronic diseases such as cardiovascular disease, type 2 diabetes, obesity, and some forms of cancer, have also addressed individuals with increased risk of chronic disease. More recent editions have also focused on dietary patterns, or combinations of foods eaten over time, with more quantitative information and refinements in guidance.

The 2025 Committee expanded the scope of work of the 2020 Committee to: (1) explore variability in intakes and the range of possible healthy diets; (2) refine patterns based on special considerations by life stage, if and where evidence is available; (3) provide a framework intended to be customized to individual needs and preferences; and (4) conduct work through a health equity lens to help HHS and USDA develop *Dietary Guidelines* that can support all people in the U.S. across racial, ethnic, socioeconomic, and cultural backgrounds in achieving a healthy dietary pattern. This Committee leveraged methodological refinements to those used in prior Committees; introduced new analytical tools, such as a new risk of bias tool for

observational studies; and expanded transparency around its activities, including providing updated information for dedicated websites where all the protocols were posted for comment.

Several key themes emerged throughout the Committee's work. First, the value of leveraging multiple sources of evidence to inform comprehensive, actionable recommendations. Second, the importance of considering select sociodemographic and economic indicators across approaches to examine evidence, which is central to applying a health equity lens. Third, the expansion of the scope of the evidence reviewed to examine not only recommended amounts and types of foods but also strategies to effectively promote healthy dietary patterns across the life course; this recognizes that achieving a healthy dietary pattern involves a combination of dietary/feeding strategies and behavioral modifications. The Committee also emphasized the importance of flexibility and inclusion in dietary recommendations—which is increasingly recognized as essential for promoting adherence to healthy eating patterns and improving overall health outcomes—as a core element across the 3 themes.

Health Equity

This Committee was the first to be charged to and employ a comprehensive, systematic approach to incorporate a health equity lens throughout its work. Although prior Committees incorporated basic demographic factors such as age, race, and/or ethnicity into their reviews of the science, this Committee considered additional variables representing the social determinants of health (such as socioeconomic position) as it reviewed, interpreted, and synthesized evidence across data analysis, systematic review, and food pattern modeling. The importance of reviewing evidence through a health equity lens and considering factors like economic stability cannot be overstated. Income and employment have a significant impact on dietary choices through various factors, including time constraints, financial resources, and workplace food environments. Economic constraints can limit access to healthier food options, pushing individuals toward cheaper, less nutritious alternatives.^{4,5}

Including these select sociodemographic and economic indicators allowed the Committee to examine their implications for recommending dietary patterns that promote health equity. Specifically, the inclusion of such indicators allowed the Committee to understand how they impact dietary risk, how and if different populations are represented in the existing literature to ensure generalizability, and the potential of existing and revised dietary patterns to meet cultural, regional, social, and religious needs. This approach is consistent with federal program and policy initiatives to improve health, improve food and nutrition security, and promote equity. The effort to center health equity builds on previous editions of the *Dietary Guidelines* as they continue to refine population-based dietary recommendations across life stages, reflecting changing dietary needs over the life course. Integrating social and structural considerations that affect the relationship between diet and health, such as influences of varying environments, financial circumstances, and cultural backgrounds, supports an inclusive approach to dietary guidance. While such evidence is still accumulating, integrating the available data can inform development of dietary guidance that is relevant to diverse population groups.

Flexibility and Inclusion

This Committee used food pattern modeling (FPM) to build on the current *Dietary Guidelines* to explore what modifications and flexibilities can be introduced in and between food groups in current USDA Dietary Patterns to enhance dietary guidance for all individuals. The integration of data analysis, systematic reviews, and FPM through a health equity lens allowed the Committee to explore different combinations of foods within the individual food groups and subgroups to maximize the capacity of the healthy dietary patterns to address individual differences while optimizing health. The Committee further built on this work by conducting novel diet simulations that can test the capacity of a wide range of foods and beverages to meet a given dietary pattern. The addition of this systems science approach allowed the Committee to test dietary patterns to ensure the final pattern recommended to the Departments is inclusive of a broader range of dietary intakes and considers health equity. Separately, a pilot was conducted to simulate foods and beverages identified by cultural experts as included in select American Indian and Alaska Native diets, the first time any country has conducted simulations to evaluate national dietary guidelines using only foods identified for specific cultural groups.

The importance of flexibility and inclusion in dietary recommendations is increasingly recognized as essential for promoting adherence to healthy eating patterns and improving overall health outcomes among a diverse population. Flexibility in dietary guidelines allows individuals to tailor their eating habits to fit personal preferences, cultural practices, and lifestyle needs, which can enhance motivation and compliance with dietary recommendations.^{6,7} For instance, dietary guidelines that incorporate a variety of food choices rather than rigid restrictions can accommodate diverse dietary patterns, making it easier for individuals to integrate healthy foods into their daily lives.⁸ Inclusion is equally vital, as it ensures that dietary recommendations are accessible and relevant to a broad audience, including those with specific health conditions, cultural backgrounds, and socioeconomic positions. This approach recognizes that individuals have unique dietary needs and preferences, which can significantly influence their ability to follow dietary guidelines. By allowing for flexibility in food choices, such as incorporating preferred foods in moderation, dietary recommendations can be more effective in promoting long-term behavior change. For example, studies have shown that individuals who follow more flexible dietary patterns tend to have higher adherence to recommended nutrient intakes and lower risks of diet-related diseases.⁹ By recognizing the diverse needs of the population and allowing for personalized dietary choices, health professionals can foster a more inclusive approach to nutrition that supports long-term health and well-being. Ultimately, this work allowed the Committee to develop advice to the Departments recommending a single flexible, healthy dietary pattern, designed to meet people where they are and to meet the varied budgetary, cultural, and personal preferences of people living in the United States.

The How of Healthy Eating

This Committee emphasized the importance of extending its evidence review beyond *what* a healthy dietary pattern is to *how* to support consumption of a healthy dietary pattern across the lifespan. The Committee gave consideration not only to recommendations regarding the amounts and types of foods to consume but also evaluated the effectiveness of strategies—including frequency of meals/snacks, breakfast consumption, portion size, and child feeding styles and practices—for achieving a healthy dietary

pattern and lower risk of obesity across the lifespan. Evidence indicates that achieving a healthy dietary pattern involves a combination of dietary/feeding strategies and behavioral modifications. For example, the Committee considered the timing and types of complementary foods, use of responsive feeding practices, and use of structure in guiding children's eating behaviors. During infancy the introduction of complementary foods is a critical milestone in a child's development, influencing not only one's nutritional status but also future eating behaviors and food preferences. During early childhood, child feeding styles and practices have been shown to influence children's food intake, dietary habits, and overall health outcomes. This helped the Committee consider guidance that can be provided to parents and caregivers to support them in both *what* to feed and *how* to feed.

Eating behaviors are important determinants of dietary intake, and some can be investigated as strategies to enhance health. Understanding how these behaviors influence food intake is critical for identifying effective strategies for improving dietary quality and weight management in childhood and adulthood. For example, understanding how portion sizes impact selection and consumption of food can inform recommendations for weight control and obesity prevention.

Lastly, recognizing that nutrient-dense foods that align with the dietary patterns recommended by the *Dietary Guidelines for Americans* are present in all cultural diets, the Committee conducted a novel evidence scan of culturally responsive approaches and interventions. This evidence scan on culturally tailored interventions may provide insights as to the importance of allowing for flexibilities around the Healthy U.S.-Style Dietary Pattern to be more culturally responsive, supporting the development of the Committee's flexible, healthy dietary pattern.

From the 2025 Dietary Guidelines Advisory Committee Report to the *Dietary Guidelines for Americans*

A major goal of the 2025 Committee is to summarize and synthesize the evidence to support HHS and USDA in developing the *Dietary Guidelines for Americans, 2025-2030* recommendations for meeting nutrient requirements and promoting health for all Americans. The *Dietary Guidelines* is developed and written for a professional audience including policymakers, healthcare providers, nutrition educators, and federal nutrition program operators. The federal government uses the *Dietary Guidelines for Americans* as the basis of its food and nutrition assistance programs—in which about 1 in 4 people in the United States participate during a given year—and its nutrition education efforts, as well as decisions about national health objectives, and for providing information on diet and health to the general public.¹⁰ For example, the National School Lunch Program incorporates the *Dietary Guidelines* in menu planning, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) applies the *Dietary Guidelines* in its program and educational materials, and the Healthy People objectives for the nation include objectives based on the *Dietary Guidelines*. The *Dietary Guidelines* also provides a critical framework for state and local health promotion and disease prevention initiatives.