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# The Dietary Guidelines for Americans: Development, Implementation, and Considerations for Congress

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# The Dietary Guidelines for Americans: Development, Implementation, and Considerations for Congress

The Dietary Guidelines for Americans (DGA) provides federally developed food-based recommendations designed to promote health and prevent disease. As mandated by the National Nutrition Monitoring and Related Research Act of 1990 (P.L. 101-445), the guidelines must be reviewed and updated at least every five years by the Secretaries of the Department of Health and Human Services (HHS) and Agriculture (USDA). The lead role alternates between the two departments every five years.

To facilitate the development of the DGA, HHS and USDA convene a Dietary Guidelines Advisory Committee (DGAC) on a periodic basis. The DGAC comprises experts from outside the federal government who are responsible for reviewing the scientific evidence regarding diet and nutrition and submitting the committee’s conclusions and recommendations in an advisory report to the HHS and USDA Secretaries. The Secretaries use the DGAC’s report in drafting the DGA.

The DGA is written for a professional audience—for example, policymakers, health care professionals, and federal nutrition program operators—that is then responsible for translating and implementing the recommendations for the U.S. population. The USDA has created several educational tools to help translate the DGA into actionable consumer messages. These educational tools include the Food Guide Pyramid, MyPyramid, and MyPlate. Some research has demonstrated that use of these tools is associated with more healthful dietary behaviors in U.S. adults. However, the diet quality of the U.S. population as a whole has not noticeably improved since the DGA was first introduced to consumers in 1980.

By law, the DGA must be based on “the preponderance of the scientific and medical knowledge which is current at the time the report is prepared.” It is an evidence-based and authoritative policy document that affects nutrition policies and programs in the United States, including the National School Lunch Program (NSLP); the Supplemental Nutrition Assistance Program (SNAP); the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); and the Senior Nutrition Programs funded by the Older Americans Act (OAA). The guidelines also influence food and nutrition labeling; guide local, state, and national health promotion and disease-prevention initiatives; and inform various organizations and industries (e.g., products developed and marketed by the food and beverage industry).

Due to its impact on federal nutrition policy and consumer choices, the DGA is of interest to public health, nutrition, agriculture, and food industry stakeholders, who are given opportunities to provide input throughout the DGA development process. In some years, stakeholders and policymakers have expressed concerns with various aspects of the DGA development process, such as the scope of the DGAC’s recommendations, the process by which the DGAC made its conclusions and recommendations, and specific recommendations. In response to these concerns, Congress has included DGA-related policy riders in appropriations laws. For example, provisions in the FY2016 Consolidated Appropriations Act (P.L. 114-113) limited the scope of the DGA and directed the National Academies of Science, Engineering, and Medicine (NASEM) to review the DGA and its development process. Subsequent appropriations provisions required NASEM to study HHS and USDA’s implementation of its recommendations. Pursuant to these directives, NASEM published a series of reports providing recommendations for modifying the DGA development process and evaluating HHS and USDA’s adoption of its recommendations.

The development process for the 2025-2030 DGA, the 10<sup>th</sup> edition of the policy document, is underway, with the 2025 DGAC having held its first public meeting on February 9, 2023. Like the 2020 DGAC, the 2025 committee will take a lifespan approach, examining the relationship between diet and health across all life stages, from birth through older adulthood. The 2025 DGAC will approach its evidence review with a “health equity lens.” The 2025 DGAC is scheduled to meet six times throughout 2023 and 2024 and to submit its advisory report to HHS and USDA by October 2024.

This report describes the history of the DGA, the process by which HHS and USDA update the DGA, and implementation of the DGA in selected federal programs. This report also provides an overview of issues that have arisen with the DGA in recent years, discusses the DGA’s impact on the health of the U.S. population, and concludes with a discussion of the role of and considerations for Congress.

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## Introduction

The Dietary Guidelines for Americans (DGA) is a policy document that provides federally developed food-based recommendations to promote health and prevent disease in the United States. As mandated by the National Nutrition Monitoring and Related Research Act of 1990 (P.L. 101-445), the DGA must be reviewed and updated at least every five years by the Secretaries of the Department of Health and Human Services (HHS) and Agriculture (USDA).

The DGA is issued jointly by HHS and USDA, with the lead role alternating between the two departments every five years. USDA was the administrative lead for the 2020-2025 DGA, and HHS is the administrative lead for the 2025-2030 DGA. Among other responsibilities, the administrative lead for the DGA is responsible for chartering the Dietary Guidelines Advisory Committee (DGAC)—a group of experts from outside the federal government charged with reviewing the scientific evidence regarding diet and nutrition and submitting its conclusions and recommendations in an advisory report to the HHS and USDA Secretaries.<sup>1</sup> The Secretaries consider the DGAC’s report when drafting the final DGA policy document.

By law, the DGA must “contain nutritional and dietary information and guidelines for the general public” and “be based on the preponderance of the scientific and medical knowledge which is current at the time the report is prepared.”<sup>2</sup> In accord with this statutory mandate, the DGA provides dietary advice in order to promote health and prevent disease.<sup>3</sup> While various editions of the DGA have addressed physical activity, a separate policy document issued by HHS—the *Physical Activity Guidelines for Americans*—provides more extensive guidance on the importance of exercise and is intended to complement the DGA.<sup>4</sup>

The DGA is written for a professional audience—for example, policymakers, health care professionals, and federal nutrition program operators—that is then responsible for translating and implementing the guidelines for the U.S. population. It is an evidence-based and authoritative policy document that affects nutrition policies and programs in the United States, including the National School Lunch Program (NSLP); the Supplemental Nutrition Assistance Program (SNAP); the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); and the Senior Nutrition Programs funded by the Older Americans Act (OAA). The guidelines also influence food and nutrition labeling; guide local, state, and national health promotion and disease-prevention initiatives; and inform various organizations and industries (e.g., products developed and marketed by the food and beverage industry).

Due to its impact on federal nutrition policy and consumer choices, the DGA is of interest to public health, nutrition, agriculture, and food industry stakeholders, who are given opportunities to provide input throughout the DGA development process. In some years, stakeholders and policymakers have expressed concerns with various aspects of the DGA development process, such as the DGAC’s composition, the scope of its recommendations, and the process by which the DGAC made its conclusions and recommendations. In response to these concerns, Congress

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<sup>1</sup> *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, July 2020, Part C. Methodology, p. 4, [https://www.dietaryguidelines.gov/sites/default/files/2020-07/ScientificReport\\_of\\_the\\_2020DietaryGuidelinesAdvisoryCommittee\\_first-print.pdf](https://www.dietaryguidelines.gov/sites/default/files/2020-07/ScientificReport_of_the_2020DietaryGuidelinesAdvisoryCommittee_first-print.pdf).

<sup>2</sup> P.L. 101-445, §301(a).

<sup>3</sup> *Ibid.* DGA, “Purpose of the Dietary Guidelines,” <https://www.dietaryguidelines.gov/about-dietary-guidelines/purpose-dietary-guidelines>.

<sup>4</sup> For additional information, see HHS, *Physical Activity Guidelines for Americans, 2<sup>nd</sup> Edition*, 2018, [https://health.gov/sites/default/files/2019-09/Physical\\_Activity\\_Guidelines\\_2nd\\_edition.pdf](https://health.gov/sites/default/files/2019-09/Physical_Activity_Guidelines_2nd_edition.pdf).

included several DGA-related policy riders in the FY2016 Consolidated Appropriations Act (P.L. 114-113) and subsequent appropriations laws.<sup>5</sup> These laws limited the scope of the DGA and directed the National Academies of Science, Engineering, and Medicine (NASEM) to review the DGA and its development process.

NASEM appointed an ad hoc committee to conduct the evaluation and, in 2017, published two reports on the DGA development process and recommendations for change.<sup>6</sup> Pursuant to a directive in the FY2021 Consolidated Appropriations Act (P.L. 116-260), NASEM convened a new ad hoc committee and, in 2022, published two reports evaluating HHS and USDA's adoption of its recommendations in the development of the 2020-2025 DGA.<sup>7</sup> NASEM's recommendations and evaluation of the department's implementation of the recommendations are summarized in a text box in **Appendix A**. Select recommendations are also discussed throughout this report, where relevant.

The development process for the 2025-2030 DGA, the 10<sup>th</sup> edition of the policy document, is underway, with the 2025 DGAC having held its first public meeting on February 9, 2023. Like the 2020 DGAC, the 2025 committee will take a lifespan approach, examining the relationship between diet and health across all life stages, from birth through older adulthood. This approach will include examining the relationship between diet and risk of overweight and obesity, with a new emphasis on weight loss and weight maintenance.<sup>8</sup> In addition, the 2025 DGAC will approach its evidence review with a "health equity lens ... to ensure factors such as socioeconomic status, race, ethnicity, and culture are described and considered to the greatest extent possible based on the information provided in the scientific literature and data."<sup>9</sup> The 2025 DGAC is scheduled to meet six times throughout 2023 and 2024 and to submit its advisory report to HHS and USDA by October 2024.<sup>10</sup>

This report begins with a history of the DGA, including how the guidelines have changed over time. It then describes the process by which HHS and USDA update the DGA, including the work of the DGAC and changes made to the DGA development process over time, and examples of implementation of the DGA in federal programs. It then provides an overview of controversies that have arisen with the DGA in recent years, discusses the DGA's impact on the health of the U.S. population, and concludes with a discussion of the role of and considerations for Congress.

Historically, the title of the DGA has reflected the year in which the document was published (or was intended to be published). For example, the sixth edition of the DGA, published in December 2005, was titled *Dietary Guidelines for Americans 2005*. Beginning with the 2015-2020 DGA, HHS and USDA have titled the policy document using the five-year period it is intended to cover (e.g., *Dietary Guidelines for Americans 2015-2020*, *Dietary Guidelines for Americans 2020-2025*). Consistent with the departments' naming convention, this report refers to DGA editions published prior to 2015 using the publication year (e.g., 2005 DGA); editions published in 2015 and later are referred to using the five-year period that they cover (e.g., 2015-2020 DGA). This

<sup>5</sup> P.L. 114-113, §735; P.L. 116-6, §766; P.L. 116-260, §796.

<sup>6</sup> National Academies of Sciences, Engineering, and Medicine (NASEM), *Optimizing the Process for Establishing the Dietary Guidelines for Americans: The Selection Process*, 2017, and *Redesigning the Process for Establishing the Dietary Guidelines for Americans*, 2017 (Washington, DC: National Academies Press).

<sup>7</sup> NASEM, *Evaluating the Process to Develop the Dietary Guidelines for Americans, 2020-2025: A Midcourse Report*, 2022, and *Evaluating the Process to Develop the Dietary Guidelines for Americans, 2020-2025: Final Report*, 2022 (Washington, DC: National Academies Press).

<sup>8</sup> DGA, 2025 Dietary Guidelines Advisory Committee, "Proposed Scientific Questions," [https://www.dietaryguidelines.gov/sites/default/files/2022-07/Proposed%20Scientific%20Questions\\_508c\\_Final.pdf](https://www.dietaryguidelines.gov/sites/default/files/2022-07/Proposed%20Scientific%20Questions_508c_Final.pdf).

<sup>9</sup> DGA, "About the Committee," <https://www.dietaryguidelines.gov/2025-advisory-committee>.

<sup>10</sup> 2025 Dietary Guidelines Advisory Committee: Meeting 1, February 9 and 10, 2023.

report refers to each DGAC using a single year (e.g., the 2015 DGAC refers to the committee that assisted with development of the 2015-2020 DGA), also consistent with HHS and USDA documents.

### Key Terms Used Throughout This Report

**Dietary Guidelines for Americans (DGA):** the policy document issued by HHS and USDA every five years that serves as the basis for nutrition policies and programs in the United States.

**Dietary Guidelines Advisory Committee (DGAC):** the committee of experts from outside the federal sector that is responsible for reviewing the current science and submitting its recommendations, as well as the scientific rationale for those recommendations, in an advisory report to the Secretaries of HHS and USDA.

**DGAC's Report:** the scientific advisory report of the DGAC, which is used by the Secretaries of HHS and USDA to inform the DGA policy document.

**National Academies of Sciences, Engineering, and Medicine (NASEM):** independent institution that provides expert advice on various topics, including the DGA development process.

**Nutrition Evidence Systematic Review (NESR):** the staff at USDA who specialize in conducting systematic reviews to answer nutrition- and health-related questions to inform federal nutrition policies and programs.

## History of the DGA

The federal government has been issuing dietary guidance for the public as far as back as 1894, when the USDA published its first dietary recommendations.<sup>11</sup> Early nutrition guidance generally focused on nutrition adequacy (i.e., consuming enough nutrients). By the 1970s, however, a growing body of research had identified a link between overconsumption of certain nutrients (e.g., saturated fat and sodium) and the development of chronic diseases such as cardiovascular disease (CVD) and stroke.<sup>12</sup>

To help improve the diet of the U.S. population and reduce the risk of diet-related chronic disease, in February 1977, the U.S. Senate Select Committee on Nutrition and Human Needs published *Dietary Goals for the United States*, a predecessor to the DGA. Among other things, *Dietary Goals for the United States* made several quantitative recommendations around dietary intake; for example, to increase carbohydrate intake to account for 55%-60% of total daily calories and to reduce fat intake from 40% to 30% of total daily calories.<sup>13</sup> This document was criticized by some industry groups and scientific experts who questioned whether the available evidence supported these quantitative goals.<sup>14</sup> After a series of hearings and input from industry, scientists, and the public, in December 1977, the committee issued an updated document, *Dietary Goals for the United States, Second Edition*.<sup>15</sup> Although many of the same goals and quantitative recommendations carried over to the second edition, there were several modifications. For

<sup>11</sup> C. Davis and E. Altos, "Dietary Recommendations and How They Have Changed Over Time," in *America's Eating Habits: Changes and Consequences*, Agriculture Information Bulletin No. 750 (1999, Washington DC; Economic Research Service, USDA), pp. 33-50.

<sup>12</sup> Ibid.

<sup>13</sup> U.S. Congress, Senate Select Committee on Nutrition and Human Needs, *Dietary Goals for the United States*, committee print, 95<sup>th</sup> Cong., 1<sup>st</sup> sess., February 1977.

<sup>14</sup> 2015 Dietary Guidelines Advisory Committee DGAC MEETING 1: Materials and Presentations, June 13-14, 2013, <https://web.archive.org/web/20151117075627/http://health.gov/dietaryguidelines/2015-BINDER/meeting1/historyCurrentUse.aspx>. See also L. Jahns, W. Davis-Shaw, A. Lichtenstein, "The History and Future of Dietary Guidance in America," *Advances in Nutrition*, March 2018, vol. 9, no. 2, pp. 136-147.

<sup>15</sup> U.S. Congress, Senate Select Committee on Nutrition and Human Needs, *Dietary Goals for the United States, Second Edition*, committee print, 95<sup>th</sup> Cong., 1<sup>st</sup> sess., December 1977.

example, the second edition included a new goal to consume only as many calories as are expended to avoid weight gain and to decrease calorie intake and increase calorie expenditure if overweight. The goal to increase carbohydrate consumption from 55% to 60% was changed to increase consumption of complex carbohydrates and “naturally occurring” sugars from 28% to 48% of daily caloric intake.<sup>16</sup>

In response to continued criticisms of the Senate committee’s reports, HHS (then called the Department of Health, Education, and Welfare) and USDA selected scientists from the departments to review the evidence, with input from the scientific community, in order to provide authoritative and consistent guidance on diet and health.<sup>17</sup> This work resulted in the publication of the first edition of the DGA—a brochure titled *Nutrition and Your Health: Dietary Guidelines for Americans*—which provided seven principles for a healthful diet.<sup>18</sup>

Some industry and scientific groups continued to express concerns regarding the science used to develop the recommendations, and in 1980, a Senate Committee on Appropriations report directed that an external committee be established to review scientific evidence and recommend revisions to the DGA.<sup>19</sup> In 1983, an advisory committee of nine nutrition scientists from outside the federal government was convened to review the 1980 DGA and make recommendations for revisions, which were submitted in a report to the Secretaries of USDA and HHS. In 1985, USDA and HHS published *Nutrition and Your Health: Dietary Guidelines for Americans*, 2<sup>nd</sup> edition, which contained almost the same recommendations as the first edition but was more widely accepted.<sup>20</sup> Subsequently, in 1987, a House Committee on Appropriations conference report directed HHS and USDA to “reestablish a Dietary Guidelines Advisory Group on a periodic basis. This Advisory Group will review the scientific data relevant to nutritional guidance and make recommendations on appropriate changes to the Secretaries of the Departments of Agriculture and Health and Human Services.”<sup>21</sup> A DGAC has been used to develop the DGA since then.

In 1990, Congress passed the National Nutrition Monitoring and Related Research Act (P.L. 101-445), which required the Secretaries of HHS and USDA to publish, at least every five years, a report titled *Dietary Guidelines for Americans*, which “shall contain nutritional and dietary information and guidelines for the general public, and shall be promoted by each Federal agency in carrying out any Federal food, nutrition, or health program.”<sup>22</sup> The 1995 DGA was the first statutorily mandated edition of the DGA. (The 1980, 1985, and 1990 editions were issued voluntarily by HHS and USDA.)

Over the years, the DGA has evolved from an educational brochure for consumers to a policy document for policy officials, health care providers, nutrition educators, and federal nutrition

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<sup>16</sup> Ibid.

<sup>17</sup> 2015 Dietary Guidelines Advisory Committee DGAC MEETING 1: Materials and Presentations, June 13-14, 2013.

<sup>18</sup> USDA and HHS, *Nutrition and Your Health: Dietary Guidelines for Americans*, February 1980, <https://www.dietaryguidelines.gov/about-dietary-guidelines/previous-editions/1980-dietary-guidelines-americans>.

<sup>19</sup> 2015 Dietary Guidelines Advisory Committee DGAC MEETING 1: Materials and Presentations, June 13-14, 2013. U.S. Senate Agricultural Appropriations Committee (US Senate). 96<sup>th</sup> Cong., 1<sup>st</sup> sess., 1980, S.Rept. 96-1030.

<sup>20</sup> USDA and HHS, *Nutrition and Your Health: Dietary Guidelines for Americans*, 2<sup>nd</sup> edition, August 1985, <https://www.dietaryguidelines.gov/about-dietary-guidelines/previous-editions/1985-dietary-guidelines-americans>. See also, 2015 Dietary Guidelines Advisory Committee DGAC MEETING 1: Materials and Presentations, June 13-14, 2013.

<sup>21</sup> U.S. House of Representatives Conference Committee, 100<sup>th</sup> Cong., 1<sup>st</sup> sess., 1987, H.Rept. 100-498.

<sup>22</sup> P.L. 101-445, §301(a).



program operators.<sup>23</sup> The first four editions of the DGA contained seven guidelines (see **Table 1**). By 2005, that number had increased to 41 (23 for the general public and 18 for specific populations). The 2015-2020 DGA included five overarching guidelines, and the 2020-2025 DGA included four overarching guidelines, supported by “key recommendations” such as quantitative limits on certain nutrients. Despite fluctuations in the number of guidelines, the basic tenets of the seven original guidelines have been carried through across editions.

**Table 1. The DGA: 1980 to Present**

<b>Title and Edition</b>	<b>Date Issued</b>	<b>Method for Reviewing the Evidence</b>	<b>Target Audience</b>	<b>Focus of Guidance</b>	<b>Number of Guidelines</b>
<i>Nutrition and Your Health: Dietary Guidelines for Americans</i>	February 1980	Review of current science by select scientists from HHS and USDA, along with expertise of the scientific community	Consumers	Healthy Americans (age not specified)	7
<i>Nutrition and Your Health: Dietary Guidelines for Americans, 2<sup>nd</sup> edition</i>	August 1985	Establishment of DGAC and use of DGAC’s collective knowledge of nutrition; search and review of the scientific literature	Consumers	Healthy Americans (age not specified)	7
<i>Nutrition and Your Health: Dietary Guidelines for Americans, 3<sup>rd</sup> edition</i>	November 1990	DGAC’s collective knowledge of nutrition; search and review of the scientific literature	Consumers	Healthy Americans, two years of age and older	7
<i>Nutrition and Your Health: Dietary Guidelines for Americans, 4<sup>th</sup> edition</i>	December 1995	DGAC’s collective knowledge of nutrition; search and review of the scientific literature	Consumers	Healthy Americans, two years of age and older, to promote health and prevent disease	7
<i>Nutrition and Your Health: Dietary Guidelines for Americans, 5<sup>th</sup> edition</i>	May 2000	DGAC’s collective knowledge of nutrition; search and review of the scientific literature	Consumers, policy officials, nutritionists, nutrition educators	Healthy Americans two years of age and older, to promote health and decrease risk of certain chronic diseases	10 (clustered into three groups)
<i>Dietary Guidelines for Americans 2005, 6<sup>th</sup> edition</i>	January 2005	Modified evidence-based approach, data, analyses, food pattern modeling analyses	Policy officials, nutritionists, nutrition educators	Americans two years of age and older, to promote health and decrease risk of major chronic diseases	41 (23 for general population, 18 for specific population groups)

<sup>23</sup> DGAC Meeting 1, “The Dietary Guidelines for Americans: 1980 to Present,” <https://web.archive.org/web/20150920083150/http://health.gov/dietaryguidelines/2015-binder/meeting1/evolutionOfDietaryGuidelines.aspx>.

Title and Edition	Date Issued	Method for Reviewing the Evidence	Target Audience	Focus of Guidance	Number of Guidelines
<i>Dietary Guidelines for Americans 2010</i> , 7 <sup>th</sup> edition	January 2011	NESR, data analyses, food pattern modeling analyses, and other scientific reports	Policy officials, nutritionists, nutrition educators	Americans two years of age and older, including those at risk of chronic diseases, to promote health and decrease risk of major chronic diseases	29 (23 for general population, 6 for specific population groups)
<i>Dietary Guidelines for Americans 2015-2020</i> , 8 <sup>th</sup> edition	January 2016	NESR, data analyses, food pattern modeling analyses, and other scientific reports	Policy officials, nutritionists, nutrition educators	Americans two years of age and older, including those at risk of chronic diseases, to promote health and decrease risk of major chronic diseases	5 overarching guidelines (accompanied by recommendations)
<i>Dietary Guidelines for Americans, 2020-2025</i> , 9 <sup>th</sup> edition	December 2020	NESR, data analyses, and food pattern modeling analyses	Policy officials, nutritionists, nutrition educators	Americans from birth until older adulthood to promote health and decrease risk of major chronic diseases	4 overarching guidelines (accompanied by recommendations)
<i>Dietary Guidelines for Americans, 2025-2030</i> , 10 <sup>th</sup> edition	Expected December 2025	NESR, data analyses, and food pattern modeling analyses	Policy officials, nutritionists, nutrition educators	Americans from birth until older adulthood to promote health and decrease risk of major chronic diseases	To be determined

**Source:** Created by CRS based on the 1980 through 2020-2025 DGA and accompanying DGAC reports, as well as materials from DGAC Meeting 1, “The Dietary Guidelines for Americans: 1980 to Present”; see <https://web.archive.org/web/20150920083150/http://health.gov/dietaryguidelines/2015-binder/meeting1/evolutionOfDietaryGuidelines.aspx>.

**Notes:** DGA = Dietary Guidelines for Americans DGAC = Dietary Guidelines Advisory Committee; NESR = Nutrition Evidence Systematic Review.

Although the nine editions of the DGA have generally contained similar recommendations regarding what constitutes a healthy diet, the guidelines have evolved to reflect the latest scientific evidence and to address a broader population. In addition, the approach for DGAC’s review of the scientific evidence has changed over time. These changes are described in more detail below.

## Changes in Methods for Reviewing the Evidence

Although each edition of the DGA has been based on the scientific evidence available at the time it was developed, the methods for reviewing the science have evolved, and the DGA has become

more evidence-based over time.<sup>24</sup> The DGA editions released from 1980 through 2000 were generally based on the collective knowledge of the DGAC and literature reviews conducted by committee members (see **Table 1**). For the 2005 DGA, the DGAC took a new approach to its scientific review in which the committee identified specific research questions related to dietary guidance, which were then subject to an “evidence-based analysis of the science.”<sup>25</sup> The 2005 DGAC relied upon existing reports, such as the Dietary Reference Intake reports prepared by expert committees convened by the Institute of Medicine (now the National Academy of Medicine) and various Agency for Healthcare Research and Quality (AHRQ) and World Health Organization (WHO) reports, as well as data analysis and food pattern modeling analyses completed by USDA.<sup>26</sup>

In 2008, the USDA Center for Nutrition Policy and Promotion (CNPP) developed the Nutrition Evidence Library (NEL), now called the Nutrition Evidence Systematic Review (NESR), to conduct food- and nutrition-related systematic reviews. The NESR has been used by each DGAC since 2010. In 2019, CNPP changed the name from NEL to NESR to convey that NESR is “a team of professionals who specialize in conducting systematic reviews on food- and nutrition-related topics, rather than a library that collects, houses, or conducts original nutrition research.”<sup>27</sup> For consistency, this report uses the term NESR throughout.

Today, the DGACs primarily use three approaches to review the scientific evidence: NESR systematic reviews, data analyses, and food pattern modeling. These approaches are described in more detail in **Appendix B**. Some DGACs have also continued to rely upon existing reports and systematic reviews. For example, the 2010 and 2015 DGAC used existing systematic reviews and reports to avoid duplicating efforts, and the 2025 DGAC may use non-NESR systematic reviews, provided they are as rigorous and transparent as NESR systematic reviews.<sup>28</sup>

Over time, the NESR systematic review process has been modified for the purposes of DGA development. For example, for the 2020-2025 DGA, HHS and USDA added a peer review step to the NESR systematic review process, in response to recommendations from NASEM, as well as stakeholder comments and the understanding that peer review is a best practice for conducting systematic reviews.<sup>29</sup> Specifically, each NESR systematic review was peer reviewed by two federal scientists, with 47 scientists from various federal agencies participating in the peer review process.<sup>30</sup> In addition, the protocol for each systematic review question was made available for public comment before the DGAC began its review of the evidence.<sup>31</sup> New to the 2025-2030 DGA development process, NESR intends to conduct a limited number of meta-analyses, which use quantitative analysis to combine data from individual studies.<sup>32</sup>

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<sup>24</sup> NASEM, *Redesigning the Process for Establishing the Dietary Guidelines for Americans*, 2017 (Washington, DC: National Academies Press), p. 4.

<sup>25</sup> *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2005*, August 2004, Letter to Secretaries Thompson and Veneman, August 19, 2004, p. 4, <https://www.dietaryguidelines.gov/sites/default/files/2019-10/FINAL2005DGACReport.pdf>.

<sup>26</sup> *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2005*, Part C. Methodology, pp. 21-25.

<sup>27</sup> USDA, “About NESR (formerly NEL),” <https://nesr.usda.gov/about>.

<sup>28</sup> 2025 Dietary Guidelines Advisory Committee, Meeting 1, February 9, 2023.

<sup>29</sup> *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, Part C. Methodology, p. 45.

<sup>30</sup> *Ibid.*

<sup>31</sup> *Ibid.*, pp. 18-19.

<sup>32</sup> 2025 Dietary Guidelines Advisory Committee, Meeting 1, February 9 and 10, 2023.

## Changes in the Populations Addressed by the Guidelines

Until 2020, the DGA had provided recommendations for individuals two years of age and older, with the exception of the 1980 and 1985 DGA, which mentioned infants' nutritional needs and the importance of human breast milk.<sup>33</sup> The Agricultural Act of 2014 (P.L. 113-79, the “2014 farm bill”) required that beginning in 2020, the DGA include recommendations for the birth-to-24-months cohort, as well as pregnant women.<sup>34</sup> As a result, the 2020-2025 DGA covers the full lifespan and includes specific recommendations and chapters that address infants and toddlers, as well as pregnant and lactating women. Understanding that early food preferences influence food choices later in life, the 2020-2025 DGA, for the first time, provides recommendations by lifespan—from birth through older adulthood—identifying dietary and nutrition needs that are specific to each life stage and considering healthy dietary pattern characteristics that should be carried through to subsequent life stages.<sup>35</sup> This lifespan approach will also be used by the 2025 DGAC for the development of the 2025-2030 DGA.<sup>36</sup>

The DGA has changed over time to address a U.S. population with high rates of obesity and diet-related chronic diseases, such as type 2 diabetes and cardiovascular disease (CVD). More than 74% of U.S. adults are overweight or have obesity, and 40% of children and adolescents are overweight or have obesity.<sup>37</sup> An estimated 60% of U.S. adults have at least one diet-related chronic disease.<sup>38</sup>

Although the early editions of the DGA were generally intended for healthy Americans, by 2010 the DGA began to explicitly address Americans at risk of diet-related chronic disease.<sup>39</sup> The 2010 DGAC report noted that it was different from previous reports in several ways, including that it addressed “an American public of whom the majority are overweight or obese and yet undernourished in several key nutrients.”<sup>40</sup> Similarly, the 2015 DGAC indicated that its work was

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<sup>33</sup> USDA and HHS, *Nutrition and Your Health: Dietary Guidelines for Americans*, February 1980, p. 6, and *Nutrition and Your Health: Dietary Guidelines for Americans*, 2<sup>nd</sup> edition, August 1985, pp. 7-8.

<sup>34</sup> P.L. 113-79, §4204.

<sup>35</sup> USDA and HHS, *Dietary Guidelines for Americans, 2020-2025*, 9<sup>th</sup> edition, December 2020, Executive Summary p. viii, [https://www.dietaryguidelines.gov/sites/default/files/2020-12/Dietary\\_Guidelines\\_for\\_Americans\\_2020-2025.pdf](https://www.dietaryguidelines.gov/sites/default/files/2020-12/Dietary_Guidelines_for_Americans_2020-2025.pdf).

<sup>36</sup> DGA, “About the Committee,” <https://www.dietaryguidelines.gov/2025-advisory-committee>.

<sup>37</sup> According to National Health and Nutrition Examination Survey (NHANES) data for 2017 to March 2020, the U.S. prevalence of adult obesity—defined as obesity in individuals 20 years of age and older—was 41.9%, with prevalence rates highest among non-Hispanic Black adults (49.9%), followed by Hispanic (45.6%) and non-Hispanic white (41.4%) adults; obesity prevalence in non-Hispanic Asian adults was 16.1%.<sup>37</sup> The prevalence of severe obesity in adults was 9.2%. NHANES data for 2017 to March 2020 indicate that the prevalence of childhood obesity—defined as obesity in children and adolescents 2-19 years of age—was 19.7%, with rates highest among Hispanic (26.2%) and non-Hispanic Black (24.8%) children and adolescents, followed by non-Hispanic white (16.6%) and non-Hispanic Asian (9.0%) children and adolescents. B. Stierman, J. Afful, and M. Carroll, “National Health and Nutrition Examination Survey 2017-March 2020 Prepandemic Data Files—Development of Files and Prevalence Estimates for Selected Health Outcomes,” *National Health Statistics Reports*, June 14, 2021, no. 158, <https://stacks.cdc.gov/view/cdc/106273>. Because the COVID-19 pandemic halted field operations, data collected in the partial 2019-2020 cycle were not nationally representative and thus were combined with previously released data for 2017-2018 to produce nationally representative estimates.

<sup>38</sup> USDA and HHS, *Dietary Guidelines for Americans, 2020-2025*, p. 5.

<sup>39</sup> USDA and HHS, *Dietary Guidelines for Americans 2010*, 7<sup>th</sup> edition, December 2010, Chapter 1: Introduction, p. 1, <https://www.dietaryguidelines.gov/sites/default/files/2019-05/DietaryGuidelines2010.pdf>.

<sup>40</sup> *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2010*, May 2010, Part A: Executive Summary, p. 1, <https://www.dietaryguidelines.gov/sites/default/files/2019-10/FINAL2005DGACReport.pdf>.

guided, in part, by the high prevalence of preventable chronic disease among U.S. adults.<sup>41</sup> The 2020 DGAC’s report mentioned that like the 2010 and 2015 DGACs, the committee’s work “took place against a backdrop of several significant nutrition-related issues in the United States,” noting high rates of obesity and diet-related chronic diseases, as well as food insecurity and lack of access to affordable healthy food.<sup>42</sup>

## **Changes in Scientific Evidence**

Each edition of the DGA reflects the state of the scientific evidence available at the time the DGAC conducts its work. As such, certain recommendations have been modified over time to reflect newer science. For example, beginning with the 2010 DGAC, the committees noted the importance of focusing on dietary patterns rather than specific foods, reflecting the more recent understanding that people do not eat foods in isolation but rather in various combinations over time. In addition, recommendations for specific nutrients and food components such as cholesterol and sugar have been modified to reflect new scientific evidence. These changes are described in more detail below.

### **Dietary Patterns**

Over time, the DGA has evolved from focusing on individual nutrients to dietary patterns, defined as “the quantities, proportions, variety, or combination of different foods, drinks, and nutrients in diets, and the frequency with which they are habitually consumed.”<sup>43</sup> The DGA shifted its focus from individual foods and nutrients to dietary patterns because foods and nutrients are not eaten in isolation. Instead, they are consumed as part of a pattern over the lifespan. Evidence suggests that foods and nutrients have synergistic effects, and that dietary patterns—rather than single foods or nutrients—may have a stronger association with specific health outcomes.<sup>44</sup> The 2010 DGAC’s report discussed the importance of dietary patterns and recommended more research into this area. Subsequently, the 2015 DGAC was the first DGAC to explore the impact of dietary patterns on specific health outcomes, and by 2020, the DGAC “made dietary patterns a centerpiece of its report.”<sup>45</sup>

Healthy dietary patterns can be achieved in multiple ways with different foods and beverages. The USDA has developed three dietary patterns to allow for flexibility in how DGA recommendations can be met. These are the Healthy U.S.-Style Pattern, the Healthy Vegetarian Pattern, and the Healthy Mediterranean-Style Pattern. Each of these patterns identifies daily amounts of foods to eat from five major food groups (i.e., fruits, vegetables, grains, protein, and dairy) and their subgroups (e.g., dark green vegetables), with an allowance for oils and a limit on the maximum number of discretionary calories, for example, from added sugars.<sup>46</sup>

Consistent with the dietary patterns approach, the 2015 DGAC assessed the impact of dietary patterns on seven broad health outcomes: CVD, body weight, type 2 diabetes, cancer, congenital

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<sup>41</sup> *Scientific Report of the 2015 Dietary Guidelines Advisory Committee*, February 2015, Part A: Executive Summary, p. 1, <https://health.gov/sites/default/files/2019-09/Scientific-Report-of-the-2015-Dietary-Guidelines-Advisory-Committee.pdf>.

<sup>42</sup> *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, Part A: Executive Summary, pp.1-2.

<sup>43</sup> *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, Part D. Chapter 8: Dietary Patterns, p.1.

<sup>44</sup> *Scientific Report of the 2015 Dietary Guidelines Advisory Committee*, Part A. Executive Summary, p. 3.

<sup>45</sup> *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, Part A. Executive Summary, p. 2.

<sup>46</sup> USDA, “USDA Food Patterns,” <https://www.fns.usda.gov/usda-food-patterns>.

anomalies, neurological and psychological illnesses, and bone health.<sup>47</sup> For example, the committee examined the relationship between dietary patterns and CVD, concluding that

strong and consistent evidence demonstrates that dietary patterns associated with decreased risk of CVD are characterized by higher consumption of vegetables, fruits, whole grains, low-fat dairy, and seafood, and lower consumption of red and processed meat, and lower intakes of refined grains, and sugar-sweetened foods and beverages relative to less healthy patterns. Regular consumption of nuts and legumes and moderate consumption of alcohol also are shown to be components of a beneficial dietary pattern in most studies.<sup>48</sup>

Subsequently, the 2020 DGAC assessed the relationship between dietary patterns and eight broad health outcomes, including some of those examined by the 2015 DGAC (e.g., CVD, type 2 diabetes),<sup>49</sup> as well as the relationship between dietary patterns and health outcomes during pregnancy and lactation.

## Cholesterol

One nutrient-specific DGA guideline that has been modified over time concerns dietary cholesterol and, specifically, a quantitative limit for dietary cholesterol. As early as 1977, the *Dietary Goals for the United States Second Edition* noted a lack of consensus among nutrition scientists and research professionals as to whether a specific restriction of dietary cholesterol intake for the general population was warranted.<sup>50</sup> While each edition of the DGA has recommended keeping dietary cholesterol low, only the 2005 and 2010 DGA included a specific quantitative limit.

The 2005 DGA was the first edition to include a quantitative intake guideline for dietary cholesterol. This recommendation was informed by the 2005 DGAC, which concluded that the relationship between dietary cholesterol and blood low-density lipoprotein (LDL) cholesterol is “direct and progressive, increasing the risk of [coronary heart disease] CHD,” and recommended that cholesterol intake should be as low as possible.<sup>51</sup> The DGAC recommended a daily dietary intake of less than 300 mg for the general population and less than 200 mg per day for those with elevated LDL.<sup>52</sup> The DGAC based its conclusion on a systematic review of the evidence, noting there was a historical basis for this recommendation.<sup>53</sup> Similarly, the 2010 DGA recommended limiting dietary cholesterol intake to less than 300 mg per day. In its advisory report, the 2010 DGAC concluded that there is moderate evidence that links dietary cholesterol intake to clinical CVD endpoints.<sup>54</sup> This conclusion was based on an NESR systematic review, as well as a food

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<sup>47</sup> *Scientific Report of the 2015 Dietary Guidelines Advisory Committee*, Part D. Chapter 2: Dietary Patterns, Foods and Nutrients, and Health Outcomes, pp. 185-186.

<sup>48</sup> *Ibid.*, p. 188.

<sup>49</sup> *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, Part D. Chapter 8: Dietary Patterns, p. 14. The 2020 DGAC assessed the following eight outcomes: CVD, overweight and obesity, type 2 diabetes, neurocognitive health, bone health, risk of certain types of cancer, sarcopenia, and all-cause mortality.

<sup>50</sup> U.S. Congress, Senate Select Committee on Nutrition and Human Needs, *Dietary Goals for the United States, Second Edition*, committee print, 95<sup>th</sup> Cong., 1<sup>st</sup> sess., December 1977.

<sup>51</sup> *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2010*, May 2010, p. 129. The DGAC specifically examined the scientific research question, “What Are the Relationships Between Cholesterol Intake and Cardiovascular Disease?” LDL cholesterol is sometimes called “bad” cholesterol because it can build up in blood vessel walls, restricting blood flow to the heart and other organs.

<sup>52</sup> *Ibid.*

<sup>53</sup> The 2005 DGAC specifically identified the American Heart Association’s 1968 recommendation and the 1977 *Dietary Goals for the United States*, both of which recommended 300 mg/day of cholesterol.

<sup>54</sup> *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2010*, pp. 225-226.

pattern modeling analysis. Although the 2010 DGA recommended limiting cholesterol intake to less than 300 mg per day, it also explained that while dietary cholesterol is associated with higher LDL levels in certain individuals, the effect of dietary cholesterol on LDL levels is reduced when saturated fatty acid intake is low. Furthermore, “the potential negative effects of dietary cholesterol are relatively small compared to those of saturated and trans fatty acids.”<sup>55</sup>

Subsequent editions of the DGA have not included a quantitative intake recommendation for cholesterol. The 2015 DGAC concluded that available evidence “shows no appreciable relationship between consumption of dietary cholesterol and serum cholesterol.” As a result, the committee did not recommend limiting daily cholesterol to 300 mg per day.<sup>56</sup> Consistent with the DGAC’s report, the 2015-2020 DGA did not include a quantitative recommendation for cholesterol intake, explaining that although dietary patterns low in cholesterol are associated with reduced risk of CVD and obesity, eating patterns consist of numerous interacting components. For example, diets low in cholesterol also tend to be lower in saturated fat, which may play a bigger role in blood cholesterol levels.<sup>57</sup> The 2015-2020 DGA further stated that more research is needed regarding the dose-response relationship between dietary cholesterol and blood cholesterol, and noted a lack of sufficient evidence to recommend a quantitative limit for dietary cholesterol.<sup>58</sup>

Similar to the 2015 DGAC, the 2020 DGAC also found insufficient evidence to determine an independent relationship between dietary cholesterol intake in adults and blood lipids (e.g., LDL), given the co-occurrence of cholesterol with saturated fats in foods. The 2020 DGAC did conclude that there is strong evidence that diets lower in saturated fat and cholesterol in childhood result in lower levels of total blood and LDL cholesterol throughout childhood, particularly for boys.<sup>59</sup> Like the 2015-2020 DGA, the 2020-2025 DGA did not include a quantitative recommendation for cholesterol, but it did note NASEM’s recommendation that dietary cholesterol intake be as low as possible.<sup>60</sup>

## **Added Sugars**

Another guideline that has been present in each version of the DGA but modified over time concerns sugar consumption. While each of the DGA editions has recommended limiting consumption of sugars or *added* sugars,<sup>61</sup> the 2015-2020 DGA was the first to include a quantitative limit for added sugars intake (i.e., no more than 10% of total daily calories). Prior to that, the 2010 DGAC’s report and the 2010 DGA recommended reducing consumption of added

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The 2010 DGAC reviewed the 2005 DGAC’s report and then examined the question: “What Is the Effect of Dietary Cholesterol Intake on Risk of Cardiovascular Disease, Including Effects on Intermediate Markers Such as Serum Lipid and Lipoprotein Levels and Inflammation?”

<sup>55</sup> USDA and HHS, *Dietary Guidelines for Americans 2010*, p. 27.

<sup>56</sup> *Scientific Report of the 2015 Dietary Guidelines Advisory Committee*, Part D. Chapter 1: Food and Nutrient Intakes and Health: Current Status and Trends, p. 58.

<sup>57</sup> HHS and USDA, *Dietary Guidelines for Americans 2015–2020*, pp. 32-34.

<sup>58</sup> *Ibid.*

<sup>59</sup> *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, Part D: Chapter 9: Dietary Fats and Seafood, p. 10.

<sup>60</sup> USDA and HHS, *Dietary Guidelines for Americans, 2020-2025*, p. 44.

<sup>61</sup> Added sugars are defined as sugars that are added to food during processing or preparation, including brown sugar, corn sweetener, corn syrup, dextrose, fructose, fruit juice concentrates, high fructose corn syrup, and honey.

sugars and explained that no more than about 5% to 15% of calories from solid fats and added sugars combined can be reasonably accommodated in a healthy eating pattern.<sup>62</sup>

The 2015 DGAC proposed the 10% limit based on food pattern modeling, which found that when added sugars consumption exceeds 3% to 9% of daily calories, a healthy eating pattern within recommended calorie amounts may be hard to achieve. The 10% limit was further supported by the scientific evidence review conducted by the committee, which found “strong and consistent evidence” linking intake of added sugars from food and/or sugar-sweetened beverages with excess body weight in children and adults, as well as moderate evidence from prospective cohort studies suggesting that higher intake of added sugars is consistently associated with increased risk of hypertension and stroke in adults, among other outcomes.<sup>63</sup> Based on this evidence, the 2015-2020 DGA recommended consuming less than 10% of daily calories from added sugars.<sup>64</sup>

The 2020 DGAC revisited the topic of added sugars, examining the relationship between added sugars and CVD and evaluating the impact of added sugars consumption on achieving nutrient recommendations. The 2020 DGAC recommended lowering the quantitative limit for added sugars from 10% to 6%, based on food pattern modeling, which showed that the amount of calories “required to meet food group and nutrient needs using nutrient-dense representative foods” makes up 85% of recommended daily calories.<sup>65</sup> If the remaining calories are distributed to solid fats and added sugars, based on population-level proportionate intakes, this leaves 6% of calories for added sugars. USDA and HHS ultimately decided not to include this recommendation in the 2020-2025, citing insufficient evidence.<sup>66</sup>

## The DGA Development Process

As shown in **Figure 1**, the DGA development process generally involves four steps, the sequence of which was modified for the 2020-2025 DGA: (1) establishment of an advisory committee (i.e., the DGAC), (2) identification of the topics and scientific questions, (3) DGAC review of the scientific evidence and submission of its recommendations and conclusions in an advisory report to the HHS and USDA Secretaries, and (4) development of the final DGA policy document by HHS and USDA.<sup>67</sup>

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<sup>62</sup> *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2010*, p. 14. USDA and HHS, *Dietary Guidelines for Americans 2010*, p. 28.

<sup>63</sup> *Scientific Report of the 2015 Dietary Guidelines Advisory Committee*, Part D. Chapter 6: Cross-Cutting Topics of Public Health Importance, pp. 342-343, 347.

<sup>64</sup> HHS and USDA, *Dietary Guidelines for Americans 2015–2020*, p. xiii.

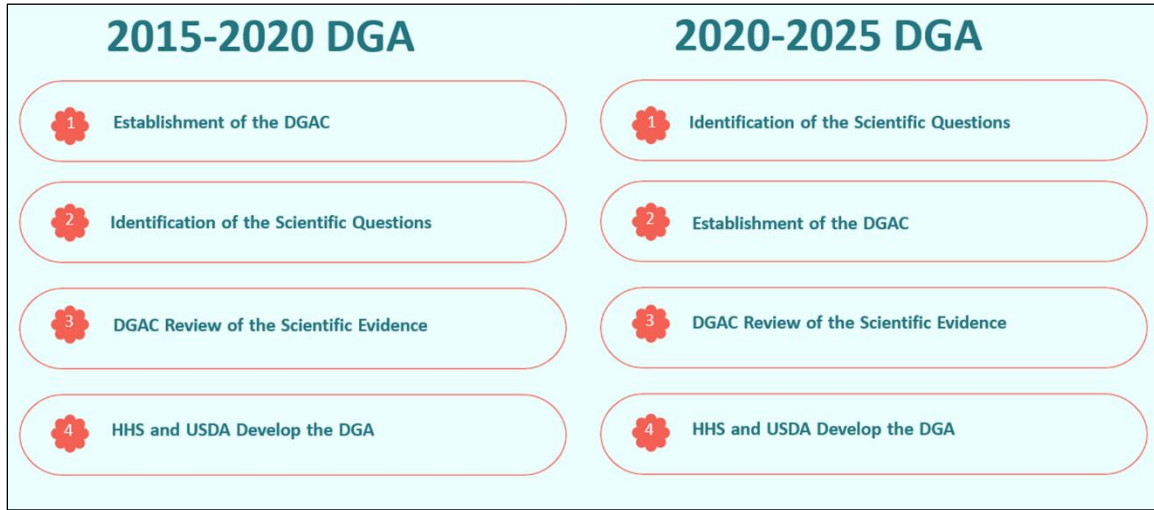
<sup>65</sup> *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, Part A: Executive Summary, p. 11 and Part D. Chapter 12: Added Sugars, p. 16.

<sup>66</sup> DGA, “USDA-HHS Response to the National Academies of Sciences, Engineering, and Medicine: Using the Dietary Guidelines Advisory Committee’s Report to Develop the Dietary Guidelines for Americans, 2020-2025,” <https://www.dietaryguidelines.gov/about-dietary-guidelines/related-projects/usda-hhs-response-national-academies-sciences-engineering>.

<sup>67</sup> The DGA website lists “implementation” as the fifth step of the DGA development process; however, for purposes of this report, implementation of the DGA is described separately.



**Figure I. The DGA Development Process**  
Comparison of the 2015-2020 and 2020-2025 DGA



**Source:** Created by CRS based on information on [dietaryguidelines.gov](http://dietaryguidelines.gov).

Each of these steps is described in more detail below. Where relevant, this section also discusses recommendations made by NASEM in its two reports on the DGA development process published in 2017 and HHS and USDA’s implementation of those recommendations in the 2020-2025 DGA cycle. As mentioned above, following some controversies with the 2015-2020 DGA development process, Congress included several DGA-related policy riders in the FY2016 Consolidated Appropriations Act (P.L. 114-113) and subsequent appropriations laws.<sup>68</sup> These laws, among other things, directed NASEM to review the 2015-2020 DGA development process, recommend changes, and evaluate the departments’ implementation of NASEM’s recommendations in the development of the 2020-2025 DGA.

Certain constraints—particularly the timing of the publication of the 2017 reports relative to the then-ongoing 2020-2025 DGA cycle—may have prevented full implementation of NASEM’s recommendations.<sup>69</sup> Although it appears that HHS and USDA have continued to implement some of NASEM’s recommendations in the development of the 2025-2030 DGA (e.g., with respect to managing conflicts of interest), the extent to which they have done so is not yet clear from publicly available documents.

## Establishment of a DGAC

Since the second edition of the DGA, a committee of nonfederal experts has been convened on a periodic basis to help develop the DGA policy document. The DGAC historically has been composed of nationally recognized experts in the fields of human nutrition, food science, chronic disease prevention, and related disciplines (e.g., epidemiology, public health).

The DGAC must comply with the Federal Advisory Committee Act (FACA), which, among other things, requires that all advisory committees be strictly advisory and prohibits advisory committees from creating policy or issuing regulations.<sup>70</sup> FACA requires that a charter be

<sup>68</sup> P.L. 114-113, §735; P.L. 116-6, §766; P.L. 116-260, §796.

<sup>69</sup> NASEM, *Evaluating the Process to Develop the Dietary Guidelines for Americans, 2020-2025: Final Report*, p. 66.

<sup>70</sup> For additional information, see CRS report CRS Report R44253, *Federal Advisory Committees: An Introduction and*

prepared and filed with Congress before a federal advisory committee can meet or take any action.<sup>71</sup> The charter outlines the DGAC's charge, specific duties, and general operational characteristics. The DGAC's work is time-limited and terminates after delivery of its final report to the HHS and USDA Secretaries or two years from the date the charter was filed with Congress, whichever is earlier.<sup>72</sup>

The HHS and USDA Secretaries select committee members based on their education, professional experience, and scientific expertise, with a goal of “establishing a diverse membership that is reflective of the racial, ethnic, gender, and geographic diversity within the United States.”<sup>73</sup> DGAC nominees undergo background checks and are screened for conflicts of interest. The HHS and USDA Secretaries review committee nominations and jointly agree on committee membership. Individuals who are selected by the Secretaries to serve on the DGAC are appointed as “Special Government Employees” and are subject to applicable federal ethics rules.<sup>74</sup>

DGAC membership and the methods for selecting committee members have changed over time. For example, the 1985 DGAC included nine members; three were representatives of HHS, three were representatives of USDA, and three were selected from a list of nominees recommended by the National Academy of Sciences.<sup>75</sup> In contrast, for the 2000 DGAC, an 11-member committee of experts was appointed after a call for nominations was published in the *Federal Register*.<sup>76</sup> The 2020-2025 and 2025-2030 DGACs each included 20 members who were appointed after a call for nominations in the *Federal Register* once HHS and USDA identified the topics and scientific questions in advance and thus the expertise needed to serve on the DGAC.<sup>77</sup>

## **NASEM Recommendations**

In its 2017 report *Optimizing the Process for Establishing the Dietary Guidelines for Americans: The Selection Process*, NASEM made four recommendations with respect to establishing the DGAC:

1. The HHS and USDA Secretaries should hire an external third party to review and narrow the candidate pool to a list of primary and alternate nominees using criteria developed by the departments. Based on its review of other advisory committees, NASEM concluded that the nominee screening and the appointment authority should be separated.

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*Overview.*

<sup>71</sup> Ibid.

<sup>72</sup> See, for example, HHS, “Establishment of the 2015 Dietary Guidelines Advisory Committee,” 78 *Federal Register* 8147, February 5, 2013, and HHS, “Announcement of First Meeting of the 2025 Dietary Guidelines Advisory Committee and Request for Comments,” 88 *Federal Register* 2423, January 19, 2023.

<sup>73</sup> DGA, “Learn about the Process,” <https://www.dietaryguidelines.gov/work-under-way/learn-about-process>.

<sup>74</sup> Ibid.

<sup>75</sup> *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans*, April 10, 1985, p. iii.

<sup>76</sup> *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2000*. See also USDA, HHS, “Invitation for Nominations for the Dietary Guidelines Advisory Committee,” 62 *Federal Register* 48982, September 18, 1997.

<sup>77</sup> *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, 2020 Dietary Guidelines Advisory Committee Membership, p. 1. See also DGA, “About the Committee,” <https://www.dietaryguidelines.gov/2025-advisory-committee>.

2. The HHS and USDA Secretaries should make available for public comment a list of provisional appointees to include short biographies and any known conflicts of interest.
3. The HHS and USDA Secretaries should disclose how provisional nominees' biases and conflicts of interest are identified and managed, including by documenting how conflicts of interest were managed in the DGAC report.
4. The HHS and USDA Secretaries should “adopt a system for continuous process improvement to enhance outcomes and performance” of the DGAC selection process.

While NASEM's 2022 reports did not evaluate whether HHS and USDA adopted the 2017 recommendations for the committee selection process, the departments addressed these recommendations in a presentation.<sup>78</sup> The departments did not use a third party for the 2020 DGAC selection process due to time and cost constraints, nor did the departments make public a list of provisional appointees due to privacy concerns. HHS and USDA did develop screening criteria that was included in the call for nominations. The departments also took steps to assess and manage potential conflicts of interest and minimize bias, including by, for the first time, requesting specific information in nomination packages (e.g., education, employment, peer-reviewed publications, presentations, blogs, funding sources, and other affiliations).<sup>79</sup> In addition, individuals under final consideration for appointment to the 2020 DGAC were required to submit a confidential financial disclosure report before being appointed. This was the first time this review was conducted before committee appointment.<sup>80</sup>

The departments have undertaken a similar process for the appointment of the 2025 DGAC, for example, by requiring specific information to be submitted in nomination packages and submission of a confidential financial disclosure report prior to final appointment.<sup>81</sup>

## Identification of Scientific Questions

For the 1985 through 2015-2020 editions of the DGA, establishment of the DGAC was the first step in DGA development, preceding a selection of questions and topics for scientific review. Typically, HHS and USDA would publish a notice in the *Federal Register* announcing the departments' intent to establish the DGAC and a request for nominations, which included a list of the areas of expertise being considered for DGAC membership. Once appointed, each DGAC reviewed the previous edition of the DGA and determined if, based on the current science,

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<sup>78</sup> USDA and HHS, “Responding to the National Academies of Sciences, Engineering, and Medicine Study on the Process to Update the Dietary Guidelines for Americans,” Presentation of Eve Stoodly, Designated Federal Officer for the 2020 DGAC, <https://www.dietaryguidelines.gov/sites/default/files/2019-05/Day%201%20Response%20to%20NASEM%20Study.pdf>.

<sup>79</sup> Ibid. *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, Part C. Methodology, p. 8.

<sup>80</sup> Ibid.

<sup>81</sup> HHS, “Announcement of Intent To Establish the 2025 Dietary Guidelines Advisory Committee and Solicitation of Nominations for Membership,” 87 *Federal Register* 36137, June 15, 2022. DGA, “Dietary Guidelines for Americans, 2025-2030 Development Process,” <https://www.dietaryguidelines.gov/learn-about-process#step-2-appoint-the-advisory-committee>.

revisions were warranted.<sup>82</sup> The DGAC, working within this broad charge, then identified the scientific questions it would answer, with input from HHS and USDA.<sup>83</sup>

Following some controversies with the development of the 2015-2020 DGA (discussed in more detail in the section “The 2015-2020 DGA”), the process for developing the 2020-2025 DGA was modified so that the Secretaries of HHS and USDA identified the topics and scientific questions for consideration before the DGAC members were selected, based on expertise in those areas.<sup>84</sup> This was done “to promote a deliberate and transparent process, better define the expertise needed on the Committee, and ensure the scientific review conducted by the Committee would address Federal nutrition policy and program needs and help manage resources.”<sup>85</sup> HHS and USDA prioritized topics based on four criteria: relevance, importance, potential federal impact, and avoiding duplication.<sup>86</sup> The potential topics and supporting scientific questions identified by HHS and USDA were published online for public comment. After HHS and USDA reviewed the comments, the agencies announced a list of the final topics and questions, along with a call for nominations to the 2020 DGAC.<sup>87</sup>

Similarly, for the development of the 2025-2030 DGA, HHS and USDA first selected a list of topics and scientific questions to identify the expertise needed on the DGAC and then appointed members accordingly.<sup>88</sup> In identifying proposed scientific questions, HHS and USDA conducted a yearlong process, which involved input from federal experts and a public comment period resulting in more than 1,400 public comments.<sup>89</sup> The departments considered the same four criteria as for the 2020-2025 DGA (i.e., relevance, importance, potential impact to federal programs, and avoiding duplication), as well as research availability (new to 2025).<sup>90</sup> Additional questions may be added to the evidence review, provided they meet the five prioritization criteria.<sup>91</sup>

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<sup>82</sup> *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans*, April 1985, p. iv; *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 1990*, May 1990, p. 3; *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 1995*, September 1995, p. 5; *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2000*, June 2000, p. viii. *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2005*, August 2004, p. 20; *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2010*, May 2010, Part C. Methodology p. 57; *Scientific Report of the 2015 Dietary Guidelines Advisory Committee*, February 2015, Part C. Methodology, pp. 30-31.

<sup>83</sup> NASEM, *Redesigning the Process for Establishing the Dietary Guidelines for Americans*, 2017, p. 128.

<sup>84</sup> Charter of the 2020 DGAC, <https://www.dietaryguidelines.gov/sites/default/files/2019-03/DietaryGuidelinesAdvisoryCommitteeCharter-10-05-18.pdf>.

<sup>85</sup> USDA and HHS, *Dietary Guidelines for Americans, 2020-2025*, p. 8.

<sup>86</sup> Health.gov, Call for Public Comments on Topics and Scientific Questions for the 2020-2025 Dietary Guidelines for Americans, March 1, 2018, <https://health.gov/news/news-and-announcements/2018/03/call-public-comments-topics-scientific-questions-2020-2025-dietary-guidelines-americans>.

<sup>87</sup> USDA and HHS, “Announcement of Intent To Establish the 2020 Dietary Guidelines Advisory Committee and Solicitation of Nominations for Membership,” 83 *Federal Register* 45206, September 6, 2018.

<sup>88</sup> DGA, “Dietary Guidelines for Americans, 2025-2030 Development Process,” <https://www.dietaryguidelines.gov/work-under-way/learn-about-process>.

<sup>89</sup> 2025 Dietary Guidelines Advisory Committee, Meeting 1, February 9 and 10, 2023.

<sup>90</sup> DGA, “Scientific Questions for the Dietary Guidelines for Americans, 2025-2030,” <https://www.dietaryguidelines.gov/most-popular-questions>.

<sup>91</sup> Charter of the 2025 DGAC, [https://www.dietaryguidelines.gov/sites/default/files/2023-01/2025\\_DGAC\\_Charter\\_Final\\_12.09.2022.pdf](https://www.dietaryguidelines.gov/sites/default/files/2023-01/2025_DGAC_Charter_Final_12.09.2022.pdf).

## **NASEM Recommendations**

NASEM’s 2017 report raised questions about the sequence of events with respect to the 2015 DGAC appointment and topic selection, as well as the process by which topics were identified and scientific questions prioritized. With respect to the sequence of events, NASEM noted that while the call for nominations listed in the *Federal Register* included the areas of expertise considered by HHS and USDA, there was no opportunity for the public to provide input on which areas of expertise and experience should be included.<sup>92</sup> With respect to the process by which topics were identified, NASEM explained that HHS and USDA have encouraged DGACs to explore specific outcomes without justification for selecting those outcomes and with limited public input. For example, the departments encouraged the 2015 DGAC to include topics that have the potential to affect food- and nutrition-related health outcomes.<sup>93</sup> Similar ambiguities were found in the process by which the DGAC selected and prioritized scientific questions. The NASEM report noted that “this lack of public input into the process for selecting topics and questions to address does not take full advantage of expertise within the nutrition community, thus creating the possibility of subject matter imbalance in the composition of the DGA.”<sup>94</sup>

In its 2017 reports, NASEM did not include, as one of its recommendations, modifying the sequence of events with respect to DGAC appointment and topic selection. However, as discussed in the next section, NASEM did recommend redistributing the DGAC’s functions across three new committees, including the Dietary Guidelines Planning and Continuity Group, which would be responsible for monitoring and curating evidence to identify and prioritize topics for inclusion in the DGA, and would provide strategic planning support across DGA cycles.

## **DGAC Review of the Evidence**

Once DGAC members are appointed by the USDA and HHS Secretaries, they conduct a review of the scientific evidence to develop their conclusions and recommendations, which are then submitted in an advisory report to the Secretaries. Each DGAC since 1985 has submitted an advisory report to the HHS and USDA Secretaries.<sup>95</sup> (The section “Changes in Methods for Reviewing the Evidence” provides more information about the methods used by DGACs over time to review the scientific evidence.)

To accomplish the committee’s charge, DGAC members generally work within subcommittees, which meet regularly to review evidence for the identified scientific topics and questions. The 2020 DGAC, for example, had six topic area subcommittees (i.e., Pregnancy and Lactation, Birth to 24 Months, Dietary Patterns, Dietary Fats and Seafood, Beverages and Added Sugars, and Frequency of Eating), as well as one cross-cutting working group (Data Analysis and Food

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<sup>92</sup> NASEM, *Redesigning the Process for Establishing the Dietary Guidelines for Americans*, 2017, p. 128.

<sup>93</sup> Ibid.

<sup>94</sup> Ibid.

<sup>95</sup> *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans*, April 1985; *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans*, 1990, May 1990; *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans*, 1995, September 1995; *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans*, 2000, June 2000; *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans*, 2005, August 2004; *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans*, 2010, May 2010; *Scientific Report of the 2015 Dietary Guidelines Advisory Committee*, February 2015; *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, July 2020.

Pattern Modeling), that corresponded to the topics and questions identified by HHS and USDA.<sup>96</sup> The subcommittee meetings generally have not been open to the public.

At times, DGACs have enlisted the expertise of individuals not appointed to the committee. For example, the 2015 DGAC, for the first time, used outside consultants to assist with its evidence review.<sup>97</sup> Two subcommittees of the 2015 DGAC—the Diet and Physical Activity Behavior Change subcommittee and the Food Sustainability and Safety Committee—used outside consultants, and seven outside experts were invited to present to the full DGAC at two public meetings.<sup>98</sup> The 2015 DGAC’s charter explicitly allowed for use of nonmember special consultants and/or individuals with certain expertise.<sup>99</sup> While consultants are vetted for financial conflicts of interests and do not vote on DGAC decisions, their use may have raised questions about the integrity of the DGAC’s review process.<sup>100</sup> In contrast to the 2015 DGAC, outside consultants were not used by the 2020 DGAC. For development of the 2025-2030 DGA, the departments also identified the topics and scientific questions prior to DGAC appointment.<sup>101</sup>

As mentioned above, each DGAC has been established for a time-limited term during which the committee evaluates the science and develops conclusions and recommendations to inform the development of the DGA. The DGAC’s subcommittees and the full committee meet throughout the duration of its appointment. Full committee meetings are available to the public, and throughout the DGAC’s review of the scientific evidence and data, the public can submit comments in response to the questions and topics being examined. For the first time, the 2020-2025 DGAC held a public meeting to discuss its draft advisory report one month before the final advisory report was posted for public comment.<sup>102</sup>

## **NASEM Recommendations**

In its 2017 report, NASEM found that the current DGA development process, which provides two years for DGAC’s work and one year for HHS and USDA to develop the policy document, results in two years of “relative inactivity.”<sup>103</sup> NASEM stated “that using the entire 5 years for work on the DGA will not only provide the opportunity for a more thorough evaluation of the science, but also allow the DGA process to become more agile, flexible, and effective—and will address more topics of interest to the general public.”<sup>104</sup> In this context, NASEM recommended that the HHS and USDA Secretaries should redesign the DGA process so that the work occurs over all five years. NASEM also recommended that HHS and USDA prioritize the topics to be reviewed in each DGA cycle and redistribute the DGAC’s functions to three separate groups:

- A Dietary Guidelines Planning and Continuity Group to monitor and curate evidence to identify and prioritize topics for inclusion in the DGA, and to provide strategic planning support across DGA cycles.

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<sup>96</sup> *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, Part C. Methodology, p. 9.

<sup>97</sup> NASEM, *Redesigning the Process for Establishing the Dietary Guidelines for Americans*, 2017, pp. 128-129.

<sup>98</sup> *Scientific Report of the 2015 Dietary Guidelines Advisory Committee*, Part C. Methodology, pp. 32-33.

<sup>99</sup> Charter of the 2015 DGAC, <https://web.archive.org/web/20150918165215/http://health.gov/dietaryguidelines/2015-BINDER/meeting1/docs/fedDocumentation/dgac2015-charter-final.pdf>.

<sup>100</sup> NASEM, *Redesigning the Process for Establishing the Dietary Guidelines for Americans*, 2017, pp. 128-129.

<sup>101</sup> DGA, “Work Under Way,” <https://www.dietaryguidelines.gov/work-under-way/learn-about-process>.

<sup>102</sup> *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, Part C. Methodology, p. 8.

<sup>103</sup> NASEM, *Redesigning the Process for Establishing the Dietary Guidelines for Americans*, 2017, preface x.

<sup>104</sup> *Ibid.*

- Technical expert panels to provide content and methodological consultation during evaluation of the evidence.
- A Dietary Guidelines Scientific Advisory Committee to interpret the scientific evidence and draw conclusions.<sup>105</sup>

In its 2022 final report, NASEM concluded that HHS and USDA did not implement the major elements of this recommendation for the 2020-2025 DGA because the departments did not redistribute the functions of the DGAC to three separate groups. However, HHS and USDA did make certain changes to the DGA development process that “partially met the intent of redistributing some of the functions of the DGAC,” specifically the interpretation and integration of the data.<sup>106</sup>

In its 2017 report, NASEM also made several recommendations with respect to the DGAC’s review of the evidence. For example, with respect to use of the NESR, NASEM recommended that the HHS and USDA Secretaries clearly separate the roles of the NESR and the proposed Dietary Guidelines Scientific Advisory Committee, and that NESR systematic reviews be externally peer reviewed prior to being made available for use by the proposed Dietary Guidelines Scientific Advisory Committee. In its 2022 report, NASEM found that this recommendation was partially implemented for the 2020-2025 DGA; the roles of DGAC and NESR were defined, but some tasks were shared between the two groups, and the peer review was not external to the federal government (i.e., federal scientists peer reviewed the systematic reviews rather than outside experts).<sup>107</sup> NASEM also recommended that the USDA Secretary ensure that NESR systematic reviews align with best practices by conducting ongoing training of the NESR staff; engaging with experts to periodically review NESR’s methods, as well as with external groups on the forefront of systematic review methods; and investing in technological infrastructure. NASEM found that HHS and USDA substantially implemented this recommendation.<sup>108</sup>

Relatedly, NASEM recommended that HHS and USDA should “enhance food pattern modeling to better reflect the complex interactions involved, variability in intakes, and range of possible healthful diets,” and that HHS and USDA should standardize criteria for determining which nutrients are determined by the DGAC to be of public health concern.<sup>109</sup> In its 2022 report, NASEM concluded that some “refinements” were made to the food pattern modeling used to develop the 2020-2025 DGA, but the analytic methods did not change.<sup>110</sup> With respect to standardization of criteria, HHS and USDA did implement this recommendation by developing a framework that standardized terminology, thresholds, analytic methods, and interpretations related to nutrients of concern.<sup>111</sup>

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<sup>105</sup> *Ibid.*, pp. 8-12.

<sup>106</sup> NASEM, *Evaluating the Process to Develop the Dietary Guidelines for Americans, 2020-2025: Final Report*, pp. 5-7.

<sup>107</sup> *Ibid.*, pp. 9-10.

<sup>108</sup> *Ibid.*

<sup>109</sup> NASEM, *Redesigning the Process for Establishing the Dietary Guidelines for Americans*, 2017, pp. 13-15.

<sup>110</sup> *Ibid.*

<sup>111</sup> NASEM, *Evaluating the Process to Develop the Dietary Guidelines for Americans, 2020-2025: Final Report*, p. 11.

## HHS and USDA Develop the DGA

The Secretaries of HHS and USDA consider the DGAC’s report, as well as comments on the report from the public and federal agencies, to draft the DGA policy document. The DGAC’s report is solely advisory, and DGAC’s conclusions and recommendations are not always included in the DGA. The DGA must be “based on the preponderance of the scientific and medical knowledge which is current at the time the [DGA] is prepared.”<sup>112</sup> As such, in writing the DGA, HHS and USDA work to ensure that the final policy document meets this standard and that it is not based on an individual study or opinion.<sup>113</sup>

The DGA is drafted by the DGA writing team, which is made up of HHS and USDA staff, including nutrition scientists with expertise in the DGA and related research and programs, as well as those with expertise in communicating nutrition information. The writing team is guided by several “key tenets,” including that the recommendations in the final policy document are based on the totality of the evidence, that they address the needs of federal programs, and that they incorporate plain language strategies. The DGA writing team also follows best practices established by other organizations that provide population-wide health guidance. These best practices include supporting transparency, managing conflicts of interest, and involving key stakeholders, among others.<sup>114</sup>

Once written, the draft DGA document goes through a three-step review process:

1. **Federal expert technical review.** The draft document is subject to a technical review by federal scientists, including those who supported the DGAC’s work.
2. **External peer review.** The draft document goes through external peer review by outside experts, including former DGAC members.
3. **Departmental clearance.** This process varies depending on the procedures for HHS and USDA at the time of review. However, it typically involves two parts: (1) agency review and (2) Administration review. During agency review, the agencies within HHS and USDA with nutrition expertise—typically the agency directors or administrators and subject matter experts—participate in the clearance process. If substantive revisions are made, additional review and clearance may be necessary. The Administration review process typically involves formal review of the draft by the Office of the USDA Under Secretary of Food, Nutrition, and Consumer Services; the USDA Under Secretary of Research, Education, and Economics; the HHS Assistant Secretary for Health; staff from the Offices of the USDA and HHS Secretaries; and departmental communications and government relations staff. A decision memorandum is then routed through each department to the HHS and USDA Secretaries, who are responsible for granting final approval to the document. Once approved, the DGA is released.<sup>115</sup>

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<sup>112</sup> P.L. 101-445, §301(a)(2).

<sup>113</sup> DGA, “USDA-HHS Development of the Dietary Guidelines,” <https://www.dietaryguidelines.gov/usda-hhs-development-dietary-guidelines>.

<sup>114</sup> *Ibid.*

<sup>115</sup> DGA, Current Dietary Guidelines, “Review Process,” <https://www.dietaryguidelines.gov/usda-hhs-development-dietary-guidelines#reviewprocess>.



## **NASEM Recommendations**

To increase transparency in the DGA development process, NASEM recommended that USDA and HHS provide a clear explanation when recommendations made by the DGAC are “accepted, revised, or discarded.”<sup>116</sup> NASEM found that this recommendation was substantially implemented by the departments for the 2020-2025 DGA.<sup>117</sup> For example, the 2020 DGAC report recommended reducing the quantitative limit for added sugars from 10% to 6% and limiting alcoholic drinks to one drink per day for both men and women (as opposed to two drinks for men). HHS and USDA noted that although evidence supports limiting intake of added sugars and alcoholic beverages, the 2020-2025 DGA did not include changes to the quantitative limits suggested by the DGAC because such changes were not supported by a preponderance of the evidence.<sup>118</sup>

## **Examples of Implementation of the DGA**

The National Nutrition and Related Research Monitoring Act of 1990 requires that federal agencies promote the DGA in carrying out any federal food, nutrition, or health program.<sup>119</sup> This section provides examples of how two federal agencies—the Food and Drug Administration (FDA) and USDA—have implemented DGA recommendations and used the policy document to establish nutrition policies.

### **FDA and Nutrition Labeling**

The Federal Food, Drug, and Cosmetic Act authorizes FDA to regulate nutrition labeling and health claims on food labels. FDA uses the DGA, in addition to other consensus reports and scientific information, in establishing nutrition labeling requirements.<sup>120</sup> For example, FDA has used the DGA to support requiring disclosure of added sugars on the Nutrition Facts panel and to set a Daily Reference Value (DRV) for added sugars. Specifically, in 2014, FDA issued two proposed rules, which were finalized in 2016, to update the Nutrition Facts panel to better align with the 2010 DGA, including a key recommendation to reduce consumption of added sugars. One of the agency’s final rules required, among other things, a new “added sugars” line on the Nutrition Facts panel distinguishing between added sugars and naturally occurring sugars in a food.<sup>121</sup>

While the 2010 DGA did not specify a quantitative limit for added sugars, the 2015 DGAC’s report provided new scientific evidence to support establishing a reference amount for added sugar intake. The 2015 DGAC recommended that added sugars should not contribute more than

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<sup>116</sup> NASEM, *Redesigning the Process for Establishing the Dietary Guidelines for Americans*, 2017, p. 50.

<sup>117</sup> NASEM, *Evaluating the Process to Develop the Dietary Guidelines for Americans, 2020-2025: Final Report*, pp. 7-8.

<sup>118</sup> DGA, “USDA-HHS Response to the National Academies of Sciences, Engineering, and Medicine: Using the Dietary Guidelines Advisory Committee’s Report to Develop the Dietary Guidelines for Americans, 2020-2025,” <https://www.dietaryguidelines.gov/about-dietary-guidelines/related-projects/usda-hhs-response-national-academies-sciences-engineering>.

<sup>119</sup> P.L. 101-445 §301(a).

<sup>120</sup> FDA, “Food Labeling: Nutrient Content Claims; Definition of Term ‘Healthy,’” 87 *Federal Register* 59171, September 29, 2022.

<sup>121</sup> FDA, “Food Labeling: Revision of the Nutrition and Supplement Facts Labels,” 81 *Federal Register* 33741, May 27, 2016. 21 C.F.R. 101.9

10% of total daily calories, a recommendation that was ultimately included in the 2015-2020 DGA. In light of this new evidence, FDA established a DRV of 10% of total calorie intake from added sugars.<sup>122</sup>

Another example of how FDA has used the DGA to inform nutrition labeling requirements is through its proposal to modify the regulatory definition of the term *healthy*, an implied nutrition content claim. In order for a food to be labeled as *healthy*, it must meet certain criteria specified in FDA regulations. The definition, as codified in 1994, includes limits on total fat, saturated fat, cholesterol, and sodium, and includes minimum amounts for vitamin A, vitamin C, iron, calcium, protein, and dietary fiber.<sup>123</sup> On September 29, 2022, FDA issued a proposed rule to update the regulatory definition of “healthy” so that it better aligns with current nutrition science and the 2020-2025 DGA.<sup>124</sup>

As explained in FDA’s proposed rule, the 1994 definition of *healthy* is based solely on individual nutrients because at the time the regulation was issued, nutrition science and federal nutrition guidance focused on individual nutrients in food. However, the DGA now focuses largely on dietary patterns rather than individual nutrients, with some exceptions (i.e., recommending limits on sodium, added sugars, and saturated fat). In addition, among other changes, the DGA no longer recommends diets low in total fat, but rather recommends decreasing intake of saturated fat while increasing intake of mono- and poly-unsaturated fats. The DGA also recommends limiting intake of added sugars to less than 10% of total daily calories. Because of these changes, the current definition of *healthy* is inconsistent with the DGA and current nutrition science. For example, under the 1994 definition, certain nutrient-dense foods are not permitted to be labeled as healthy (e.g., salmon due to fat content), while other foods that contain high amounts of added sugar could be labeled as healthy (e.g., certain breakfast cereals). Given this, FDA has proposed to revise the definition of *healthy* to require that food products contain a certain amount of food from at least one of the food groups or subgroups recommended by the 2020-2025 DGA (i.e., vegetables, fruits, grains, dairy, and protein foods, and oils) and be limited in sodium, saturated fat, and added sugars.<sup>125</sup>

## USDA and School Meal Programs

The DGAs inform the nutritional guidelines of several programs administered by USDA. For example, the Richard B. Russell National School Lunch Act requires that federally funded school meals reflect the latest DGA.<sup>126</sup> In January 2012, following enactment of the Healthy Hunger-Free Kids Act of 2010, USDA promulgated a final rule updating the meal and nutrition standards for the National School Lunch Program (NSLP) and the School Breakfast Program (SBP) to align with the 2010 DGA and NASEM recommendations.<sup>127</sup> Among other things, the final rule established vegetables as their own meal component, separate from fruits, in the NSLP and

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<sup>122</sup> Ibid. In a 2,000 calorie per day diet, 10% equates to 200 calories from added sugar or about 50 grams of added sugar (there are 4 calories in a gram of sugar) or 12.5 teaspoons of added sugar.

<sup>123</sup> 21 C.F.R. 101.65(d)(2).

<sup>124</sup> FDA, “Food Labeling: Nutrient Content Claims; Definition of Term ‘Healthy,’” 87 *Federal Register* 59168, September 29, 2022.

<sup>125</sup> Ibid.

<sup>126</sup> 42 U.S.C. 1758(a)(4) Section 9(a)(4). Also see 42 U.S.C. 1753(b)(3); Section 4(b)(3) and Section 10 of the Child Nutrition Act of 1966.

<sup>127</sup> USDA, “Nutrition Standards in the National School Lunch and School Breakfast Programs,” 77 *Federal Register* 4088, January 26, 2012.

required that all vegetable subgroups specified in the 2010 DGA (e.g., dark green, orange, and legumes) be offered over the course of a week. The rule also restricted grains to only those that are “whole grain-rich” and restricted milk to unflavored low-fat (1%) and flavored and unflavored fat-free varieties (subsequent law and rulemaking have altered certain aspects of the 2012 standards, including the whole-grain and milk requirements).<sup>128</sup>

Not every iteration of the DGA results in major changes to the school meal program and nutrition standards. For example, following the release of the 2015-2020 DGA, USDA determined that NSLP and SBP competitive foods (i.e., foods and beverages sold in schools during the school day, such as in vending machines or a la carte in the cafeteria) standards did not need to be modified as they were already consistent with the 2015-2020 DGA.<sup>129</sup> In 2018, the agency made changes to sodium, milk, and whole grain requirements “to ensure that school meals regulations work for all operators, while reflecting the recommendations of the Dietary Guidelines for Americans.”<sup>130</sup>

In February 2023, USDA issued a proposed rule that would make several changes to school nutrition standards, in part, to better align with the 2020-2025 DGA.<sup>131</sup> Among other things, the proposed rule includes product-specific and weekly (less than 10% of calories) added sugars limits for school meals. For example, breakfast cereals would be limited to no more than 6 grams of added sugars per dry ounce, and yogurt would be limited to no more than 12 grams of added sugars per 6 ounces.<sup>132</sup>

## Controversies in the DGA

Due to its impact on federal nutrition policy and consumer choices, the DGA is of interest to public health, nutrition, agriculture, and food industry stakeholders who are given opportunities to provide input throughout the DGA development process. In some years, stakeholders and policymakers have opposed various aspects of the DGA development process, for example, the composition of the DGAC, the scope of the DGAC’s recommendations, the evidence used by the DGAC to make its recommendations, and the departments’ adoption of the DGAC’s recommendations. This section discusses some of these issues in the context of the 2015-2020 and 2020-2025 DGA cycles.

### The 2015-2020 DGA

After publication of the 2015 DGAC’s report, some stakeholders and policymakers argued that the DGAC exceeded the scope of its charter by making certain policy recommendations about the environment and sustainability, as well as economic and tax policies. Specifically, the 2015 DGAC’s report suggested that individuals should eat less red and processed meat in favor of a plant-based diet, as “a diet higher in plant-based foods, such as vegetables, fruits, whole grains,

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<sup>128</sup> For more information on changes to nutrition standards for school meals, see CRS Report R46234, *School Meals and Other Child Nutrition Programs: Background and Funding*, by Kara Clifford Billings.

<sup>129</sup> USDA, “National School Lunch Program and School Breakfast Program: Nutrition Standards for All Foods Sold in School as Required by the Healthy, Hunger-Free Kids Act of 2010,” 81 *Federal Register* 50131, July 29, 2016.

<sup>130</sup> USDA, “Child Nutrition Programs: Flexibilities for Milk, Whole Grains, and Sodium Requirements,” 83 *Federal Register* 63775, December 12, 2018.

<sup>131</sup> USDA, “USDA Announces Steps to Improve Child Health through Nutritious School Meals,” February 3, 2023, <https://www.fns.usda.gov/news-item/usda-0027.23>.

<sup>132</sup> USDA, “Child Nutrition Programs: Transitional Standards for Milk, Whole Grains, and Sodium,” 87 *Federal Register* 6984 February 7, 2023.

legumes, nuts, and seeds, and lower in calories and animal-based foods is more health promoting and is associated with less environmental impact than is the current U.S. diet.”<sup>133</sup> The DGAC added that due to high consumption of animal-based foods (e.g., meat, eggs, and dairy products) and low intake of plant-based foods, the average U.S. diet may have a large impact on the environment in terms of increased greenhouse gas emissions, land use, water use, and energy use. The DGAC also proposed use of economic and tax policies to encourage the production and consumption of healthy foods and to reduce consumption of unhealthy foods (e.g., by taxing sugar-sweetened beverages, snack foods, and desserts, and by restricting marketing of certain foods to children and teens).<sup>134</sup>

In response, some Members of Congress wrote that the DGAC “had neither the expertise, evidence, nor charter” to make recommendations about matters of sustainability and tax policy,<sup>135</sup> which was reiterated by meat trade groups.<sup>136</sup> Some observers supported the discussion surrounding sustainability, saying that it is important to have an understanding of how food production affects the environment.<sup>137</sup> Ultimately, the HHS and USDA Secretaries determined that issues of sustainability and tax policy would not be part of the final policy document and that the DGA would “remain within the scope of our mandate in the 1990 National Nutrition Monitoring and Related Research Act (P.L. 101-445, NNMRRRA), which is to provide ‘nutritional and dietary information and guidelines’ ... ‘based on the preponderance of the scientific and medical knowledge.’”<sup>138</sup>

Stakeholders also expressed concern with the 2015 DGAC’s evidentiary review process, in particular its reliance on existing systematic reviews and observational studies. The 2015 DGAC used the NESR to answer approximately 27% of its questions, relying on existing sources of evidence (e.g., existing reports and systematic reviews) to answer another 45%, and data analyses and food pattern modeling analyses to answer an additional 30%.<sup>139</sup> This approach is in contrast to the 2010 DGAC, which used the NESR to answer the majority of its research questions.<sup>140</sup> According to the 2015 DGAC, the majority of the scientific community now regularly uses systematic reviews, so unlike the 2010 DGAC, the 2015 DGAC relied more heavily on existing sources of evidence (e.g., existing systematic reviews, meta-analyses, and reports) and avoided duplicative efforts.<sup>141</sup> This approach of using existing systematic reviews was subject to criticism, with some questioning the scientific rigor and objectivity of the advisory report. For example, some argued that the 2015 DGAC bypassed the NESR process for certain issues (e.g., added

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<sup>133</sup> *Scientific Report of the 2015 Dietary Guidelines Advisory Committee*, Part A. Executive Summary, p. 5.

<sup>134</sup> *Scientific Report of the 2015 Dietary Guidelines Advisory Committee*, Part D. Chapter 6: Cross-Cutting Topics of Public Health Importance, p. 347.

<sup>135</sup> Letter from various Members of Congress to Secretaries Vilsack and Burwell, March 31, 2015, [https://agriculture.house.gov/uploadedfiles/ag\\_dietaryguidelineslettertosecvsilsackburwell.pdf](https://agriculture.house.gov/uploadedfiles/ag_dietaryguidelineslettertosecvsilsackburwell.pdf).

<sup>136</sup> CRS Report R44360, *Dietary Guidelines for Americans: Frequently Asked Questions*, by Agata Bodie.

<sup>137</sup> A Aubrey, “New Dietary Guidelines Will not Include Sustainability Goal,” *NPR*, October 13, 2015, <http://www.npr.org/sections/thesalt/2015/10/06/446369955/new-dietary-guidelines-will-not-include-sustainability-goal>.

<sup>138</sup> Secretaries Vilsack and Burwell, “2015 Dietary Guidelines: Giving You the Tools You Need to Make Healthy Choices,” *USDA blog*, October 6, 2015, <https://www.usda.gov/media/blog/2015/10/06/2015-dietary-guidelines-giving-you-tools-you-need-make-healthy-choices>.

<sup>139</sup> *Scientific Report of the 2015 Dietary Guidelines Advisory Committee*, Part C. Methodology, p. 32. The percentages do not add to 100% due to rounding.

<sup>140</sup> *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 2010*, Part A: Executive Summary, p. 1.

<sup>141</sup> *Scientific Report of the 2015 Dietary Guidelines Advisory Committee*, Part C. Methodology, p. 32.

sugars) and “almost solely used pre-existing and hand-picked systematic reviews.”<sup>142</sup> Others voiced concern that the 2015 DGAC relied heavily on weaker forms of science, such as observational evidence rather than the whole body of evidence.<sup>143</sup>

## The 2020-2025 DGA

One issue identified with the 2020-2025 DGA cycle was the composition of the DGAC and, more specifically, members with perceived conflicts of interest. For example, one study published in the journal *Public Health Nutrition* found that 19 of the 20 DGAC members had conflicts of interest with the food and/or pharmaceutical industry, with the most common type of conflict being research funding, followed by DGAC members’ presence on a board or committee in a company, and consultant positions.<sup>144</sup> Other stakeholders have expressed similar concerns about the role of industry in the DGA development process, including by nominating DGAC members with ties to the food and beverage industry.<sup>145</sup> NASEM’s 2017 report on the DGAC selection process included recommendations to HHS and USDA for managing biases and conflicts of interest in the DGAC. However, in NASEM’s report, the ad hoc committee also noted that it “does not believe these influences can be eliminated entirely” and “those who have had relationships with industry or issue-specific advocates in the recent past could participate fairly on a panel if the nature of the relationship was incidental to the work of the panel.”<sup>146</sup>

Another area of controversy arose in the 2020 DGA development process: the DGAC’s recommendations to lower the recommended quantitative limits for added sugars and alcohol, and the departments’ decision not to adopt those recommendations. Specifically, the 2020 DGAC recommended that for men who consume alcohol, the daily limit be reduced from two drinks to one drink. (The DGAC found that the existing recommended daily limit of one drink for women was reasonable.) The DGAC concluded, based on a NESR systematic review, that “moderate evidence indicates that higher average alcohol consumption is associated with an increased risk of all-cause mortality compared with lower average alcohol consumption among those who drink.”<sup>147</sup> For added sugars, the DGAC recommended that the daily limit be reduced from 10% to 6%. This recommendation was based on food pattern modeling, which found that a diet could accommodate 6% or less of calories from added sugars if it were to provide recommended nutrient levels and remain within most of the recommended total daily calorie ranges.<sup>148</sup> In addition, the 2015 and 2020 DGAC’s evidence reviews suggested that added sugars may contribute to overweight and diet-related chronic diseases.<sup>149</sup> Members of the DGAC further

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<sup>142</sup> CRS Report R44360, *Dietary Guidelines for Americans: Frequently Asked Questions*, by Agata Bodie.

<sup>143</sup> Ibid.

<sup>144</sup> M. Mialon, P. Serodio, E. Crosbie, et al., “Conflicts of Interest for Members of the U.S. 2020 Dietary Guidelines Advisory Committee,” *Public Health Nutrition*, March 2022.

<sup>145</sup> D. Flynn, “A Second Study Finds Dietary Guidelines Panel Rife with Conflicts of Interest,” *Food Safety News*, April 6, 2022, <https://www.foodsafetynews.com/2022/04/a-second-study-finds-dietary-guidelines-panel-rife-with-conflicts-of-interest/>.

<sup>146</sup> NASEM, *Optimizing the Process for Establishing the Dietary Guidelines for Americans: The Selection Process*, 2017, pp. 9-10.

<sup>147</sup> *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, Part D: Chapter 11: Alcoholic Beverages, p. 11.

<sup>148</sup> *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, Part D: Chapter 12: Added Sugars, pp. 16 to 18. For the highest daily calorie levels (i.e., 3,000 to 3,200), a diet could accommodate 7% to 8% of calories from added sugars.

<sup>149</sup> Ibid., pp. 22-24. *Scientific Report of the 2015 Dietary Guidelines Advisory Committee*, Part D. Chapter 6: Cross-

explained in a separate publication that the theme of the 2020-2025 DGA was “make every bite count,” and that alcohol and added sugars have no nutritional value.<sup>150</sup> HHS and USDA ultimately decided not to adopt these two recommendations, stating that although the preponderance of the evidence supported limiting intake of alcohol and added sugars, it did not support changes to the daily limits for alcohol and added sugars.<sup>151</sup> The departments did clarify, as recommended in the DGAC’s report, that drink limits are based on consumption per drinking day rather than average amounts over time (e.g., one drink per day rather than seven drinks on one day of the week).<sup>152</sup> Some observers criticized the agencies for not adopting the revised recommendations on added sugars and alcohol and for reverting to the previous recommendations.<sup>153</sup>

## The DGA and the Health of the U.S. Population

Although the DGA has become increasingly evidence-based over time, experts have noted that the diet quality of the U.S. population has not noticeably improved since the DGA was first introduced to consumers in 1980.<sup>154</sup> One measure of diet quality, the Healthy Eating Index (HEI), which is used to assess how well U.S. diets align with the DGA, indicates that Americans are not meeting dietary recommendations.<sup>155</sup> The HEI has a total possible score ranging from zero to 100, with a higher score indicating better adherence to the DGA. The average HEI-2015 score for 2017-2018 (the most recent data available) is 58 out of 100, indicating that the average American diet does not comply with the 2015-2020 DGA. Scores vary by age, with children 2 to 4 years of age having the highest diet quality (HEI score of 62), followed by older adults aged 60 and older (HEI score of 61).<sup>156</sup>

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Cutting Topics of Public Health Importance, pp. 342-345.

<sup>150</sup> E. Mayer-Davis, T. Naimi, and Richard Mattes, “Proposed Reductions in Limits on Added Sugar and Alcohol for the New Dietary Guidelines: Our Perspective,” *American Journal of Clinical Nutrition*, 2021, vol. 114, pp. 405-406.

<sup>151</sup> DGA, “USDA-HHS Response to the National Academies of Sciences, Engineering, and Medicine: Using the Dietary Guidelines Advisory Committee’s Report to Develop the Dietary Guidelines for Americans, 2020-2025,” <https://www.dietaryguidelines.gov/about-dietary-guidelines/related-projects/usda-hhs-response-national-academies-sciences-engineering>.

<sup>152</sup> *Ibid.* *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, Part D: Chapter 11: Alcoholic Beverages, pp. 22-24.

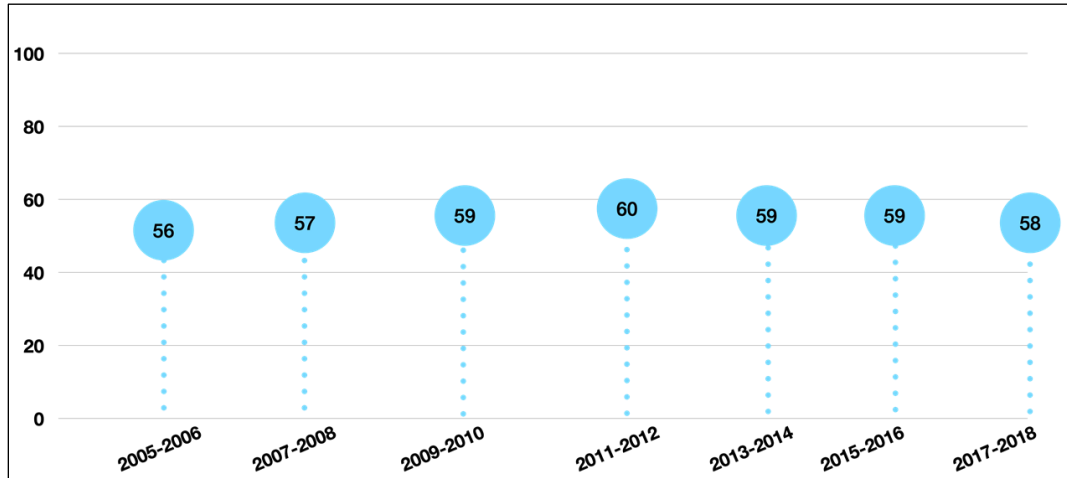
<sup>153</sup> See, for example, R. Rabin, “U.S. Diet Guidelines Sidestep Scientific Advice to Cut Sugar and Alcohol,” *New York Times*, December 29, 2020, NASEM 2022, pp. 26-27.

<sup>154</sup> S. Rowe, N. Alexander, N. Almeida, et al., “Translating the Dietary Guidelines for Americans 2010 to Bring about Real Behavior Change,” *Journal of the Academy of Nutrition and Dietetics*, 2011, vol. 111, no. 1, pp. 28-39.

<sup>155</sup> The HEI was developed in 1995 and has been modified over time to reflect each edition of the DGA. For example, the HEI-2015 measures adherence to the 2015-2020 DGA and is the most recent measure available. A new HEI is being developed for children under two years of age. HEI scores are calculated by nutritionists at USDA’s CNPP using data from What We Eat in America, the interview component of NHANES. Each HEI also includes dietary components (e.g., total sodium intake, fruit consumption), which are scored from zero to 10. The number of dietary components differs across the different HEIs. For example, the HEI-1995 included 10 dietary components, while the HEI-2015 includes 13 dietary components. See <https://www.fns.usda.gov/hej-scores-americans>.

<sup>156</sup> USDA, “HEI Scores for Americans,” <https://www.fns.usda.gov/hej-scores-americans>.

**Figure 2. Healthy Eating Index (HEI)-2015 Scores 2005-2018**  
Based on NHANES WWEIA Data



**Source:** Created by CRS based on USDA and HHS, *Dietary Guidelines for Americans, 2020-2025*, p. 4, and USDA, “HEI Scores for Americans,” <https://www.fns.usda.gov/hei-scores-americans>.

**Notes:** The 2005-2006 through 2015-2016 numbers are from Figure I-1 in the 2020-2025 DGA and are based on an analysis of What We Eat in American (WWEIA), the dietary component of the National Health and Nutrition Examination Survey (NHANES). The 2017-2018 scores are from the USDA website at <https://www.fns.usda.gov/hei-scores-americans>. The HEI scores were derived using the HEI-2015, thus measuring adherence to the 2015-2020 DGA. USDA’s website includes HEI scores for earlier years. For example, the first HEI scores available are for 1989 and 1990—both 64—which were derived using the HEI-1995. HEI scores over time have been derived using different versions of the HEI (e.g., the HEI-1995, which included 10 dietary components, versus the HEI-2015, which includes 13 dietary components), thus making comparisons in scores over time challenging.

Observers have proposed various reasons as to why the DGA has not noticeably improved diet quality in the United States, including the need for more effective communication of dietary recommendations and changes to the food environment, and public distrust in nutrition science. These three proposed reasons are discussed in more detail below.

## Communication of Dietary Recommendations

The DGA is written for a professional audience responsible for translating and implementing the guidelines for the U.S. population. Some stakeholders have proposed that better “integration and translation of the evidence” is needed to bring about behavior change, for example, through consumer education.<sup>157</sup> In May 2021, the Institute of Food Technologists, with the Department of Food Science at the University of Massachusetts at Amherst, held a virtual meeting with a goal of improving implementation and adoption of the DGA.<sup>158</sup> The meeting was funded by the USDA National Institute of Food and Agriculture and resulted in four recommendations for improving adoption of and adherence to the DGA. These recommendations focused on improving consumer education and communication.<sup>159</sup>

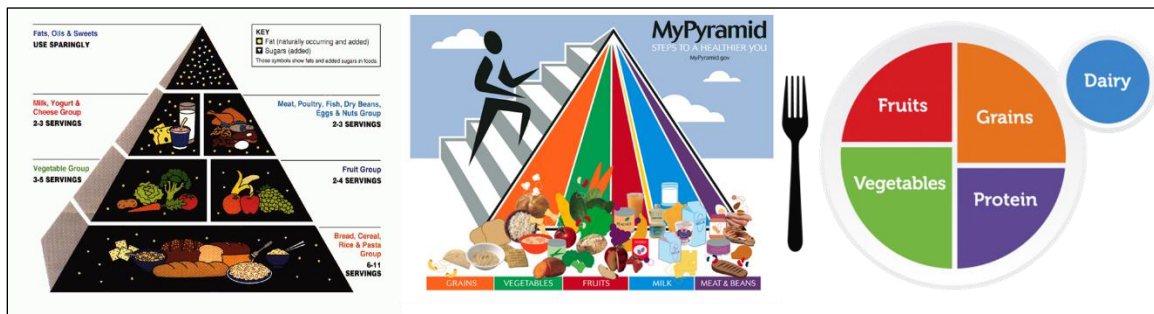
<sup>157</sup> S. Rowe, N. Alexander, N. Almeida, et al., “Translating the Dietary Guidelines for Americans 2010 to Bring about Real Behavior Change,” *Journal of the Academy of Nutrition and Dietetics*, 2011, vol. 111, no. 1, pp. 28-39.

<sup>158</sup> L. Sanders, J. Allen, Jeanne Blankenship, et al., “Implementing the 2020-2025 Dietary Guidelines for Americans: Recommendations for a Path Forward,” *Current Developments in Nutrition*, December 2021, vol. 5, no. 12.

<sup>159</sup> *Ibid.*

The USDA has created several educational tools to help translate the DGA into actionable consumer messages, for example, the Food Guide Pyramid, MyPyramid, and MyPlate (see **Figure 3**). The Food Guide Pyramid was created in 1992 based on the 1990 DGA. It included six food groups, with proportionality conveyed by the size of the section in the pyramid and with the recommended serving amounts listed.<sup>160</sup> In 2005, USDA modified the figure to better align with the DGA. Renamed MyPyramid, the new figure included an image of a person walking up the steps of the pyramid to emphasize the inclusion of physical activity. MyPyramid also included six food groups, but in contrast to the Food Guide Pyramid, the food groups were depicted in ascending vertical bands that reflected the recommended proportions, with quantities provided in cups and ounces rather than servings. In 2011, USDA replaced MyPyramid with MyPlate to help consumers visualize how to build a plate that aligns with the DGA.<sup>161</sup> The icon—a plate on a placemat—shows five food groups and their suggested portions.

**Figure 3. Nutrition Education Tools**



Source: USDA.

Some research suggests that use of nutrition education tools may help consumers achieve more healthy dietary intakes. For example, one study evaluated the relationship between use of MyPyramid and MyPlate and dietary intake in NHANES participants. The authors found that the reported use of these tools was associated with more healthful dietary intakes, specifically higher consumption of dark and leafy vegetables and lower consumption of refined grains, added sugars, solid fats, and sodium, as well as lower overall calorie intake compared with nonusers.<sup>162</sup> These findings suggest that use of such educational tools may help consumers better align their diets with the DGA.

Another consumer education tool—point-of-purchase labeling (e.g., the Nutrition Facts Panel on packaged food, calorie disclosure on menus, and front-of-package labeling)—may also help consumers improve their diet quality. In recent years, FDA has revised the Nutrition Facts Panel to improve its content and design to make important information more prominent and easier to understand. FDA also issued new menu calorie labeling regulations to aid consumers when eating

<sup>160</sup> C. Davis and E. Altos, “Dietary Recommendations and How They Have Changed Over Time,” in *America’s Eating Habits: Changes and Consequences*, Agriculture Information Bulletin No. 750, (1999, Washington, DC; Economic Research Service, USDA), pp. 43-44.

<sup>161</sup> USDA, “USDA’s MyPlate Celebrates Its First Anniversary,” May 30, 2012, <https://www.usda.gov/media/press-releases/2012/05/30/usdas-myplate-celebrates-its-first-anniversary>.

<sup>162</sup> J. Schwartz and J. Vernarelli, “Assessing the Public’s Comprehension of Dietary Guidelines: Use of MyPyramid or MyPlate is Associated with Healthier Diets among US Adults,” *Journal of the Academy of Nutrition and Dietetics*, 2019, vol. 119, no. 3, pp. 482-489.



at restaurants and other food establishments. The agency has proposed other changes to help consumers make food choices that better align with the DGA (e.g., redefining the term *healthy*).

Some observers describe nutrition education and point-of-purchase labeling as “soft” policies that place most of the responsibility on the individual consumer.<sup>163</sup> These observers further note that the effectiveness of such policies has varied but can be valuable as part of a broader government food and nutrition strategy, including fiscal incentives (e.g., subsidies for fruits and vegetables) and disincentives (e.g., taxes on sugar-sweetened beverages), which have more consistent evidence of effectiveness but may be more challenging politically.<sup>164</sup>

## **Access to Healthy Food and the Food Environment**

Poor diet quality and negative health outcomes have also been attributed to the food environment.<sup>165</sup> For example, studies have found that the presence of supermarkets and other sources of fruits and vegetables is associated with lower BMI, especially for low-income Americans, while lack of or long distances to supermarkets is associated with higher BMI.<sup>166</sup>

Recent editions of the DGA have recognized the role of the food environment in influencing the nutrition decisions individuals make. The 2010 and 2015-2020 DGA described the social-ecological model, which provides a framework for how the different elements in society shape an individual’s food and physical activity choices.<sup>167</sup> These elements include individual factors (e.g., age, race, income), environmental settings (e.g., schools, food retail establishments), sectors of influence (e.g., government, industry, media), and social and cultural norms and values (e.g., acceptable ranges of body weight, types of foods and beverages consumed).<sup>168</sup> Research has shown that implementing changes at different levels of the social-ecological model is an effective way to improve eating and physical activity behaviors.

In this context, the 2010 DGA included a new “A Call to Action,” with three guiding principles accompanied by actionable strategies. One guiding principle—facilitating individual behavior change by modification to the environmental setting—includes the actionable strategy of initiating partnerships with the food industry to promote the development and availability of nutritious and affordable foods.<sup>169</sup> The 2015-2020 DGA also discussed the social-ecological model and the importance of “broad, multisectoral coordination and collaboration” to align dietary practices with the DGA at the population level, although it did not explicitly mention working with the food industry.<sup>170</sup> The 2015 DGAC’s report, however, included various recommendations for changing the food environment, for example, by encouraging the food industry to improve the nutritional profile of certain foods so that they better align with DGA

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<sup>163</sup> D. Mozaffarian, S. Angell, T. Lang, et al., “Role of Government Policy in Nutrition—Barriers to and Opportunities for Healthier Eating,” *BMJ*, June 2018, vol. 361.

<sup>164</sup> *Ibid.*

<sup>165</sup> M. McCullough, S. Chantaprasopsuk, F. Islami, et al., “Association of Socioeconomic and Geographic Factors With Diet Quality in US Adults,” *JAMA Network Open*, June 2022, vol. 5, no. 6.

<sup>166</sup> The 2010 DGAC examined the association between the food environment and body weight, concluding that there is moderate evidence that the food environment is associated with dietary intake. See <https://nesr.usda.gov/what-relationship-between-environment-body-weight-and-fruitvegetable-consumption#plain-summary>.

<sup>167</sup> USDA and HHS, *Dietary Guidelines for Americans 2010*, pp. 55-59, and HHS and USDA, *2015-2020 Dietary Guidelines for Americans*, pp. 64-72.

<sup>168</sup> *Ibid.*

<sup>169</sup> USDA and HHS, *Dietary Guidelines for Americans 2010*, pp. 57-59.

<sup>170</sup> HHS and USDA, *2015-2020 Dietary Guidelines for Americans*, p. 64.

recommendations.<sup>171</sup> The 2020 DGAC did not examine questions related to the food environment or the overall food system, although the committee did encourage HHS and USDA to examine these topics to support improved dietary intake.<sup>172</sup> The 2020-2025 DGA does not mention the social-ecological model but does discuss the role of food manufacturers and retail establishments in supporting Americans achieving a healthy dietary pattern, including through food reformulation and menu modification.<sup>173</sup>

In recognition of the food industry's influence on the food environment, recent federal efforts to improve the U.S. diet have called for its input and participation. For example, during the White House Conference on Hunger, Nutrition, and Health held on September 28, 2022, and in the *Biden-Harris Administration National Strategy on Hunger, Nutrition, and Health*, the Administration announced new goals for ending hunger and reducing diet-related disease by 2030.<sup>174</sup> Among other things, the National Strategy called on the food industry to increase the availability of and access to foods that align with the DGA (e.g., low in added sugars and sodium), particularly for the K-12 schools market.<sup>175</sup>

## Trust in Nutrition Science

Poor adherence to the DGA may also be due, in part, to public distrust of nutrition science. Observers have noted that the field of nutrition maybe be particularly susceptible to public distrust for many reasons, including because of the large role the food industry plays in funding, conducting, and disseminating nutrition research, as well as the perception that dietary recommendations are frequently changing.<sup>176</sup>

According to a 2019 Pew Research Center study, 51% of Americans have a positive view of nutrition research scientists and 11% have a negative view, with the remainder (38%) having neither positive nor negative views.<sup>177</sup> Americans have a more positive view of dietitians (i.e., health practitioners) than research scientists (60% versus 51%) but are generally skeptical of whether research scientists and dietitians are transparent about potential conflicts of interest. Specifically, Pew found that 12% of Americans believe nutrition researchers are transparent about potential conflicts of interest, and 37% of Americans believe that dietitians are transparent about potential conflicts of interest. As discussed in the section “Controversies in the DGA,” conflicts of interest among DGAC members have been identified, which may affect the public's trust in the guidelines.

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<sup>171</sup> *Scientific Report of the 2015 Dietary Guidelines Advisory Committee*, Part B. Chapter 2: 2015 DGAC Themes and Recommendations: Integrating the Evidence, p. 27.

<sup>172</sup> *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, Part A. Executive Summary, p. 13.

<sup>173</sup> USDA and HHS, *Dietary Guidelines for Americans, 2020-2025*, p. 50.

<sup>174</sup> Biden Harris plan, p. 28, <https://www.whitehouse.gov/wp-content/uploads/2022/09/White-House-National-Strategy-on-Hunger-Nutrition-and-Health-FINAL.pdf>.

<sup>175</sup> The White House, “Fact Sheet: The Biden-Harris Administration Announces More Than \$8 billion in New Commitments as Part of Call to Action for White House Conference on Hunger, Nutrition, and Health,” September 28, 2022.

<sup>176</sup> C. Garza, P. Stover, Sarah Ohlhorst, et al., “Best Practices in Nutrition Science to Earn and Keep the Public's Trust,” *American Journal of Clinical Nutrition*, 2019, vol. 109, pp. 225-243. NASEM, *Evaluating the Process to Develop the Dietary Guidelines for Americans, 2020-2025: Final Report*, p. 27.

<sup>177</sup> Pew Research Center, “Trust and Mistrust in Americans' Views of Scientific Experts,” August 2, 2019, Chapter 5. Americans trust dietitians more than nutrition researchers but are skeptical of both groups' transparency, accountability, pp. 37-47.

The perception that dietary recommendations are frequently changing may also affect public trust in nutrition science. Although many recommendations have stayed consistent over time—for example, those encouraging intake of vegetables and fruits and limiting intake of sodium—some have changed over time (as discussed in the section “Changes in Scientific Evidence”). In addition, new findings have been reported with respect to health outcomes associated with consumption of certain foods and beverages, such as coffee, added sugars, and alcohol.<sup>178</sup>

Experts note that modern science is “inherently tentative, continuous, and iterative in nature.”<sup>179</sup> Nutrition is also a relatively young science,<sup>180</sup> and recommendations may evolve as new data are generated. In addition, nutrition research is challenging to conduct, because people’s eating patterns are complex, and because foods and nutrients are not eaten in isolation. Most nutrition studies are observational, limiting conclusions about causality. Moreover, confounding variables such as sleep, exercise, and stress, among others, may affect the relationship between diet and health.<sup>181</sup>

The perception that dietary recommendations are frequently changing might be further driven by the increasingly rapid dissemination of information through social media, making it difficult for the public to distinguish science from opinion or inadequately substantiated conclusions.<sup>182</sup> The process by which nutrition recommendations are made might also influence public trust in the science. For example, observers have noted that discrepancies between the recommendations in the DGAC reports and the final DGA policy document might create confusion and sow public distrust in the nutrition recommendations.<sup>183</sup>

Some experts have recommended steps to address concerns about the authoritativeness of dietary recommendations and to improve trust in nutrition guidance. For example, responding to a congressional mandate, NASEM published two reports in 2017 with recommendations to improve the process to develop the DGA. (These recommendations are discussed throughout this report and summarized in **Appendix A**.) In its second 2017 report, NASEM identified five values to improve the integrity of the process “to develop credible and trustworthy guidelines”: (1) enhance transparency, (2) promote diversity of expertise and experience, (3) support a deliberative process, (4) manage biases and conflicts of interest, and (5) adopt state-of-the-art processes and methods.<sup>184</sup>

## Congress and the DGA

As discussed throughout this report, Congress has played an active role in establishing requirements governing the DGA. This role includes establishing broad requirements applicable to each edition of the DGA, as well as policy riders affecting specific editions of the DGA. With

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<sup>178</sup> HHS and USDA, *2015-2020 Dietary Guidelines for Americans*, pp. 33-34. See also T. R. Goldman, “Health Policy Brief: Final 2015-20 Dietary Guidelines for Americans,” *Health Affairs*, March 31, 2016.

<sup>179</sup> C. Garza, P. Stover, Sarah Ohlhorst, et al., “Best Practices in Nutrition Science to Earn and Keep the Public’s Trust,” *American Journal of Clinical Nutrition*, 2019, vol. 109, pp. 225-243.

<sup>180</sup> T. R. Goldman, “Health Policy Brief: Final 2015-20 Dietary Guidelines for Americans,” *Health Affairs*, March 31, 2016.

<sup>181</sup> *Ibid.*

<sup>182</sup> C. Garza, P. Stover, Sarah Ohlhorst, et al., “Best Practices in Nutrition Science to Earn and Keep the Public’s Trust,” *American Journal of Clinical Nutrition*, 2019, vol. 109, pp. 225-243.

<sup>183</sup> NASEM, *Evaluating the Process to Develop the Dietary Guidelines for Americans, 2020-2025: Final Report*, p. 26.

<sup>184</sup> NASEM, *Redesigning the Process for Establishing the Dietary Guidelines for Americans*, 2017, p. 6.

the passage of the National Nutrition Monitoring and Related Research Act of 1990, Congress established a statutory mandate for HHS and USDA to review and issue the DGA every five years “based on the preponderance of evidence.” In 2014, Congress required that, beginning in 2020, the DGA include recommendations for infants, toddlers, and pregnant women.

During the 2015-2020 DGA development process, in response to stakeholder concerns surrounding the scope of the 2015 DGAC’s report and the process used to develop the 2015-2020 DGA, Congress held hearings and included several DGA-related policy riders in the FY2016 Omnibus Appropriations Act (P.L. 114-113), which limited the scope of the 2015-2020 DGA to information or guidelines that are “nutritional and dietary” and are “based on significant scientific agreement.”<sup>185</sup> The law also provided \$1 million for the USDA Secretary to engage NASEM to conduct a comprehensive study of the process used to establish the 2015 DGAC and the subsequent development of the 2015-2020 DGA, as specified.<sup>186</sup> Some observers noted that Congress’s role in the 2015-2020 DGA was unusual, particularly the appropriations riders.<sup>187</sup>

In subsequent years, Congress included related policy riders in appropriations acts. For example, the Consolidated Appropriations Act, 2019 (P.L. 116-6), required the USDA Secretary to submit a report to Congress summarizing the process used to develop the 2020-2025 DGA and an explanation of the decisions to incorporate or exclude recommendations from NASEM’s 2017 report *Redesigning the Process for Establishing the Dietary Guidelines for Americans*.<sup>188</sup> The Consolidated Appropriations Act, 2021 (P.L. 116-260), required that NASEM submit a report to Congress, HHS, and USDA providing a comparative analysis of the processes and methodologies used to develop the 2020-2025 DGA compared with recommendations in NASEM’s 2017 report *Redesigning the Process for Establishing the Dietary Guidelines for Americans*.<sup>189</sup>

Congress also plays an indirect role in the development of the DGA, for example, by appropriating funds to HHS and USDA for DGA development and by confirming the appointments of the Secretaries of HHS and USDA, who are responsible for signing off on the final policy document.

Going forward, Congress might consider legislation that would further modify the DGA development process. For example, Congress might direct HHS and USDA to adopt certain NASEM recommendations in the development of subsequent editions of the DGA, particularly those recommendations not previously adopted by the departments (see **Appendix A**). Congress also might limit or broaden the scope of the DGA to expressly include issues such as sustainability. Congress may also require further studies of the DGA development process to inform additional changes to the process and increase public trust in the policy document.

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<sup>185</sup> P.L. 114-113, §734.

<sup>186</sup> P.L. 114-113, §735.

<sup>187</sup> T. R. Goldman, “Health Policy Brief: Final 2015-20 Dietary Guidelines for Americans,” *Health Affairs*, March 31, 2016.

<sup>188</sup> P.L. 116-6, §766.

<sup>189</sup> P.L. 116-260, §796.

## Appendix A. Summary of NASEM Reports

To fulfill a statutory directive in the 2016 Consolidated Appropriations Act, NASEM appointed an ad hoc committee to evaluate the 2015-2020 DGA development process and make recommendations for changes to the process, which resulted in two reports that were published in 2017.<sup>190</sup> Subsequently in 2021, Congress directed NASEM to evaluate HHS and USDA's implementation of the 2017 recommendations in the 2020-2025 DGA. Pursuant to this directive, NASEM convened a new ad hoc committee and, in 2022, published two reports evaluating HHS and USDA's adoption of its recommendations in the development of the 2020-2025 DGA.<sup>191</sup> NASEM's 2017 recommendation and evaluation of the departments' implementation of the recommendations are summarized below. In its 2022 reports, NASEM did not evaluate the departments' implementation of its recommendations from the report, *Optimizing the Process for Establishing the Dietary Guidelines for Americans: The Selection Process*.

### 2017 NASEM Recommendations and HHS and USDA Implementation for the 2020-2025 DGA

From *Redesigning the Process for Establishing the Dietary Guidelines for Americans*, 2017, pp. 9-15:

**Recommendation 1.** The Secretaries of USDA and HHS should redesign the DGA process to prioritize topics to be reviewed in each DGA cycle, and redistribute the current functions of the DGAC to three separate groups:

- a. Dietary Guidelines Planning and Continuity Group to monitor and curate evidence generation, to identify and prioritize topics for inclusion in the DGA, and to provide strategic planning support across DGA cycles;
- b. Technical expert panels to provide content and methodological consultation during evaluation of the evidence; and
- c. Dietary Guidelines Scientific Advisory Committee to interpret the scientific evidence and draw conclusions.

**HHS/USDA Implementation:** NASEM found that the major elements of this recommendation, specifically to redistribute the functions of the DGAC to three separate groups, were not implemented, although HHS and USDA did make changes to the process during the development of the 2020-2025 DGA that partially met the intent of redistributing some of the functions.

**Recommendation 2.** The Secretaries of USDA and HHS should provide the public with a clear explanation when the DGA omit or accept only parts of conclusions from the scientific report.

**HHS/USDA Implementation:** NASEM found that this recommendation was substantially implemented in the development of the 2020-2025 DGA.

**Recommendation 3.** The USDA Secretary should clearly separate the roles of NESR staff and the DGSAC so that:

- a. The NESR staff plan and conduct systematic reviews with input from technical expert panels, perform the risk of-bias assessment of individual studies, and assist the DGSAC as needed;
- b. The NESR systematic reviews are externally peer reviewed before being made available for use by the DGSAC; and
- c. The DGSAC synthesizes and interprets the results of systematic reviews and draws conclusions about the entire body of evidence.

**HHS/USDA Implementation:** NASEM found that this recommendation was partially implemented. For example, while the DGSAC was not created, the DGAC synthesized and interpreted systematic review results and drew

<sup>190</sup> National Academies of Sciences, Engineering, and Medicine (NASEM), *Optimizing the Process for Establishing the Dietary Guidelines for Americans: The Selection Process*, 2017, and *Redesigning the Process for Establishing the Dietary Guidelines for Americans*, 2017 (Washington, DC: National Academies Press).

<sup>191</sup> NASEM, *Evaluating the Process to Develop the Dietary Guidelines for Americans, 2020-2025: A Midcourse Report*, 2022, and *Evaluating the Process to Develop the Dietary Guidelines for Americans, 2020-2025: Final Report*, 2022 (Washington, DC: National Academies Press).

conclusions independent of NESR. In addition, the Departments did solicit peer review of systematic reviews for the first time, but the reviews were not external to the federal government.

**Recommendation 4.** The USDA Secretary should ensure all NESR systematic reviews align with best practices by:

- a. Enabling ongoing training of the NESR staff;
- b. Enabling engagement with, and learning from, external groups on the forefront of systematic review methods;
- c. Inviting external systematic review experts to periodically evaluate the NESR's methods; and
- d. Investing in technological infrastructure.

**HHS/USDA Implementation:** NASEM found that this recommendation was substantially implemented.

**Recommendation 5.** The Secretaries of HHS and USDA should enhance food pattern modeling to better reflect the complex interactions involved, the variability in intakes, and the range of possible healthful diets.

**HHS/USDA Implementation:** NASEM concluded that some refinements were made to the food pattern modeling used to develop the 2020-2025 DGA, but the analytic methods did not change.

**Recommendation 6.** The Secretaries of HHS and USDA should standardize the methods and criteria for establishing nutrients of concern.

**HHS/USDA Implementation:** NASEM found that this recommendation was almost fully implemented.

**Recommendation 7.** The Secretaries of HHS and USDA should commission research and evaluate strategies to develop and implement systems approaches into the DGA. The selected strategies should then begin to be used to integrate systems mapping and modeling into the DGA process.

**HHS and USDA Implementation:** NASEM found that none of this recommendation was implemented as proposed.

From *Optimizing the Process for Establishing the Dietary Guidelines for Americans: The Selection Process*, 2017, pp. 7-11:

**Recommendation 1.** The Secretaries of USDA and HHS should employ an external third party to review and narrow the candidate pool to a list of primary and alternate nominees. Criteria against which nominees are screened should be developed by USDA and HHS for use by the third party.

**Recommendation 2.** The Secretaries of USDA and HHS should make a list of provisional appointees open for public comment—including short biographies and any known conflicts—for a reasonable period of time prior to appointment.

**Recommendation 3.** The Secretaries of USDA and HHS should disclose how provisional nominees' biases and conflicts of interest are identified and managed by

- a. Creating and publicly posting a policy and form to explicitly disclose financial and nonfinancial biases and conflicts;
- b. Developing a management plan for addressing biases and conflicts for the panel as a whole and individuals, as needed;
- c. Certifying that a federal ethics officer independently reviewed and judged the advisory committee's biases and conflicts of interest; and
- d. Documenting how conflicts of interest were managed in the DGAC report.

**Recommendation 4.** The Secretaries of USDA and HHS should adopt a system for continuous process improvement to enhance outcomes and performance of the DGAC selection process.

## **Appendix B. The DGAC's Approaches to Reviewing the Evidence**

Today, the DGACs primarily use three approaches to review the scientific evidence: Nutrition Evidence Systematic Review (NESR) systematic reviews, data analyses, and food pattern modeling. These approaches are described in more detail below.

## NESR

In 2008, USDA's CNPP established the NESR to conduct food- and nutrition-related systematic reviews. This systematic review methodology was developed in consultation with the Agency for Healthcare Research and Quality (AHRQ), and the Academy of Nutrition and Dietetics, and informed by the U.S. Cochrane Collaboration.

NESR was created to ensure compliance with Section 515 of the Consolidated Appropriations Act of 2001 (P.L. 106-554, the Data Quality Act), which directed the Office of Management of Budget (OMB) to issue government-wide guidelines that "provide policy and procedural guidance to Federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal agencies." NESR's work helps federal agencies and programs comply with these requirements.<sup>192</sup>

NESR uses a six-step process to conduct specialized systematic reviews and is designed to promote transparency, minimize bias, and ensure the availability of systematic reviews that are relevant, timely, and high quality. These steps are as follows:

- 1. Develop high-priority questions.** Federal stakeholders develop systematic review questions that address food and nutrition topics, are important to public health, and that can inform federal guidance and programs. NESR analysts then work with scientific experts to develop an analytic framework for each systematic review question, which includes defining key terms, identifying the population of interest and outcomes, and identifying confounders, among other things.
- 2. Search for and screen studies.** The next step involves establishing inclusion and exclusion criteria for studies, including study design, publication date, and participant characteristics, among others. NESR librarians create a search strategy based on the analytic framework and inclusion/exclusion criteria, and then NESR analysts screen potentially relevant studies, documenting which studies were excluded and why.
- 3. Extract data and assess the risk of bias.** NESR analysts extract certain data and information (e.g., study design, participant characteristics, results, funding source) to help answer each systematic review question. NESR analysts also use a risk of bias tool to assess how a study was designed and conducted, which can affect the accuracy of its results.
- 4. Synthesize the evidence.** NESR analysts then work with scientific experts to synthesize the evidence from the included studies, which involves examining similarities and differences between the studies and their results, identifying gaps and limitations, and determining whether other factors may affect the relationships being examined.
- 5. Answer the question and grade the evidence.** The scientific experts, with help from NESR analysts, then use the evidence synthesis to develop conclusion statements to answer the systematic review questions. They also grade the strength of the evidence (i.e., strong, moderate, limited, and grade not assignable).
- 6. Recommend future research.** NESR analysts and external experts (e.g., DGAC committee members) recommend future research based on the gaps and limitations that were identified.<sup>193</sup>

NESR makes information about its systematic reviews publicly available, posting on its website a plain language summary of each review, a technical abstract, and the full systematic review.<sup>194</sup>

## Data Analysis

The DGACs have relied upon several federal sources of data, including the National Health and Nutrition Examination Survey (NHANES) and the National Health Interview Survey (NHIS).<sup>195</sup> The dietary component of NHANES, What We Eat in America (WWEIA), for example, is used to understand the eating habits of the U.S. population using data obtained from 24-hour dietary recalls. NHANES physical exams and laboratory data are used to assess physical and biochemical indicators of health. The NHIS provides data on the U.S. population for analyzing health trends and tracking progress toward achieving national health objectives. NHANES and the NHIS are managed by the National Center for Health Statistics (NCHS) at the Centers for Disease Control and Prevention (CDC).

## Food Pattern Modeling

<sup>192</sup> USDA, Nutrition Evidence Systematic Review Methodology, <https://nesr.usda.gov/nutrition-evidence-systematic-review-methodology>.

<sup>193</sup> Ibid.

<sup>194</sup> Ibid.

<sup>195</sup> *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, Part C. Methodology, p. 13.



Food pattern modeling are analyses that show how changes to food-based dietary recommendations might affect the U.S. population's ability to meet nutrient needs.<sup>196</sup> Different elements of the food pattern can be modified, for example, food group amounts and the inclusion or exclusion of certain foods. As an example, the 2020 DGAC used food pattern modeling to examine the relationship between added sugars consumption and achieving nutrient and food group recommendations.

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<sup>196</sup> Ibid., pp. 16-17.