

American Heart Association Advocacy Strategic Vision for Nutrition Policy: 2023-2030

Executive Summary/Overview

Despite steady improvements in Americans' diets across the last several decades, overall diet quality remains poor in the United States. Nearly half (47.8 percent) of all American adults have poor diet quality, with higher rates found among Black (55.5 percent) and Mexican American households (48.8 percent). Poor diet quality is a major risk factor for developing chronic diseases such as coronary heart disease, stroke, and type 2 diabetes.

For certain populations, specifically those with lower incomes and communities of color, a healthy diet may be less accessible. Lack of access to affordable, healthy food makes adhering to a healthy diet difficult for people already living with chronic diseases, particularly for those experiencing food and nutrition insecurity. In the United States (U.S.), 10.5 percent of households are considered food insecure with higher rates found among Hispanic households (17 percent), Black households (21 percent), and households living at the federal poverty line (35 percent).

The public health community has historically prioritized addressing food insecurity. However, there is a growing consensus that focusing solely on food security is too narrow an approach to improve health and wellbeing and reduce health disparities. The American Heart Association recognizes the need to shift the current narrow focus from food security – having enough calories - to a broader focus on nutrition security – having enough *nutritious* food - to address diet-related chronic diseases.

To achieve nutrition security in the U.S and increase the impact of our work at the Association, there needs to be coordinated efforts across all levels of government and with other sectors, such as the science community and the food and beverage industry. Below, the Association has outlined our strategic vision for nutrition policy and advocacy - an equitable, sustainable food system that ensures nutrition security for all – which will inform how we approach our work through the end of the decade.

Context

Historically, the public health and research community has focused on food insecurity, or household-level economic and social condition of limited or uncertain access to adequate food, as defined by the U.S. Department of Agriculture (USDA). Current U.S. nutrition-related policies and programs also prioritize food security instead of nutrition security. However, there is growing consensus that focusing solely on food security and providing food with sufficient calories is too narrow an approach to sufficiently improve health and wellbeing and reduce health disparities.

Despite steady improvements in Americans' diets over the past two decades, overall diet quality remains poor.² Unhealthy diets are a major cause of chronic disease including coronary heart disease, stroke, type 2 diabetes, and obesity.^{3,4} The gap in diet quality is even larger for Communities of Color, under-resourced communities, and people with lower educational attainment, as compared to non-Hispanic whites, people with higher incomes, and people with higher educational attainment.^{2,5} Socioeconomic disparities in diet quality are increasingly recognized as drivers of chronic disease disparities.^{6,7}

Unhealthy diets not only increase the burden of diet-related chronic diseases, but also contribute to environmental degradation and climate change.^{8,9} This occurs across the spectrum of the food system. Food production is responsible for

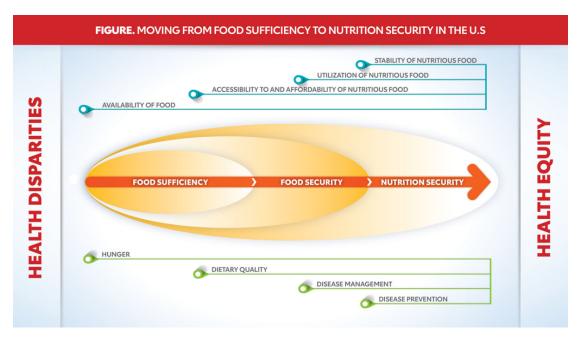
up to 30 percent of global greenhouse gas emissions¹⁰ and 70 percent of freshwater use,¹¹ making it a large contributor to global environmental change. At the retail and consumer level, the U.S. Department of Agriculture estimates that 31 percent of the food supply is lost or wasted, equaling 133 pounds of food and almost \$162 billion annually.¹² Looking ahead, climate change is projected to reduce the protein and micronutrient content of plant foods^{13,14} and increase the price of basic food commodities.¹⁵ The most severe impacts of climate change disproportionately fall on underserved communities, particularly racial and ethnic minority communities.¹⁶

Shifting from the current, somewhat narrow focus on food security to a broader approach of nutrition security will ensure that all Americans have the opportunity to consume food that will promote wellbeing and prevent and treat chronic disease and is critical to addressing socioeconomic and racial/ethnic disparities in nutrition and chronic diseases.¹⁷

As explained in the Association's recent policy statement on Strengthening U.S. Food Policies and Programs to Promote Equity in Nutrition Security, nutrition security means having equitable and stable availability, access, affordability, and utilization of foods and beverages that promote well-being and prevent and treat disease. Nutrition security is comprised of four main pillars:

- Availability means that every community must have sufficient quantity (calories) and appropriate quality (nutrients) of food.
- Accessibility means that nutritious foods are attainable by individuals of all physical and mental conditions and in all geographic locations and that nutritious foods are acceptable and align with individuals' cultural, social, or other dietary preferences.
 - Affordability means that individuals have sufficient resources to acquire nutritious foods and that nutritious foods are available at a cost that can be purchased by all individuals.
- **Utilization** includes all steps that occur between the time of access to food to the time when the nutrients from food are available to be used by the body, such as food storage and preparation with the necessary kitchen tools and equipment.
- **Stability** ensures that all people have availability, accessibility, affordability, and utilization of nutritious food at all ages.

Availability, accessibility, and affordability are the foundation of both food security and nutrition security but to achieve nutrition security, we must also consider policies and programs that support utilization and stability of nutritious food. Within utilization, individuals must be able to properly store food, have access to the knowledge and tools to prepare food, and have the time and physical and mental capacity to utilize food and improve nutrition security. ^{19,20,21,22,23,24} Nutrition security also requires stability of a nutritious diet across the lifespan, which would ensure that all people have availability,



accessibility, affordability, and utilization of nutritious food at all ages. Current U.S. nutrition policies and programs help ensure stable access to nutritious food for several populations; however, there are numerous gaps within and between these programs that create barriers to nutrition stability. Addressing all four pillars of nutrition security will enable individuals and communities to move from food sufficiency to nutrition security, and from a state of health disparities to health equity.

In this Strategic Vision for Nutrition Policy and Advocacy, we lay out a framework for addressing the four pillars of nutrition security, along with environmental sustainability, according to the main sectors of the food system in which public policies are established.

The American Heart Association's Role

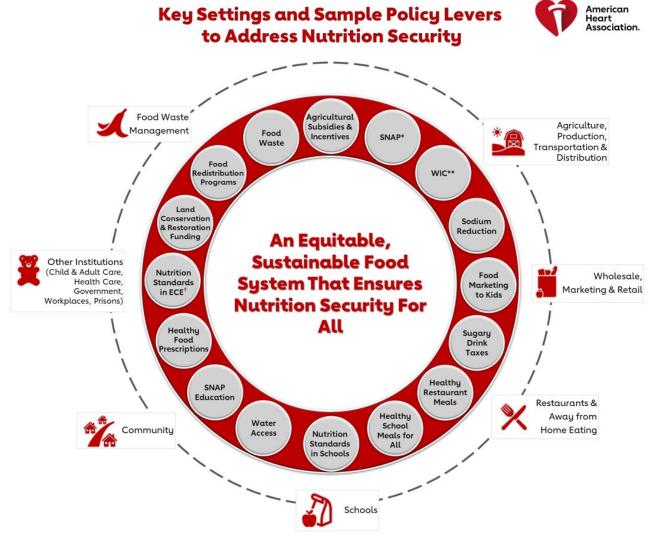
For the past 40 years, the Association has supported legislative and regulatory proposals across all levels of government that help improve nutrition security across the country. While we only recently started to use the term nutrition security, our focus has always been on ensuring that U.S. food policies and programs improve diet quality and improve the heart health of as many people as feasible. Our 2020-2022 policy priorities related to nutrition security were designed to "support an equitable, sustainable food system that provides healthy, affordable food for all." The Association purposefully targeted policy levers that improve nutrition across multiple sectors, including federal nutrition assistance programs, the food and beverage industry, restaurants, early care centers and schools, and federally owned facilities. In expanding our focus to include nutrition security, we are expanding past the standard definition of food security which highlights availability, accessibility, and affordability to focus on these components as well as emphasize the importance of utilization, stability, and equity. This broader focus on nutrition security is now a key component of our ongoing efforts to update our Organizational Strategic Policy Agenda. This process, in addition to the policy areas we are exploring, are described in the Strategic Policy Agenda section below.

The Association also prioritizes equity across all aspects of our work, including within our nutrition portfolio. Equity is defined as everyone having optimal and just opportunity to be healthy, giving special attention to the needs of those at the greatest risk, assuring that no one is disadvantaged from achieving their potential because of social position or any other socially defined circumstances. Although we have made some progress toward longer, healthier lives, significant inequities persist across the U.S. and globally. Nutrition insecurity contributes to disparities in chronic disease outcomes, especially cardiovascular diseases. Inadequate dietary intake is a leading contributor to the development of chronic diseases. Worsening socioeconomic disparities in diet quality are increasingly recognized as drivers of chronic diseases disparities. A focus on nutrition security is critical for addressing socioeconomic and racial and ethnic disparities in nutrition and chronic diseases.

To achieve nutrition security in the U.S. and increase the impact of our work at the Association, coordinated and sustained efforts across all levels of government— federal, tribal, state, and local —and other industries, such as public health organizations, philanthropies, the science community, and the food and beverage industry. Future advocacy, innovation, and research will also be needed to expand existing nutrition policies and programs and develop new policies and programs.

Strategic Vision for Nutrition Policy and Advocacy

An equitable, sustainable food system that ensures nutrition security for all.



* Supplemental Nutrition Assistance Program

** Special Supplemental Nutrition Program for Women, Infants and Children

† Early Care and Education

The Association's Strategic Vision for Nutrition Policy and Advocacy defines how we will approach our nutrition-related work through the end of the decade. The Strategic Vision is grounded in nutrition security as a means of chronic disease prevention and treatment and health disparities reduction. In recognition of the serious impact of both health equity and environmental sustainability on nutrition security, we identify these as core elements of the vision. Finally, since public policy is often set according to the various sectors of the food system, we organize our policy approach in this way.

To accomplish the Strategic Vision for Nutrition Policy and Advocacy, the Association identifies eight Guiding Values:

1. Center work around equity and drive solutions that actively reduce disparities

Equity is a key value of the Association in policy development and advocacy campaigns. Disparities in health and wellbeing, including in nutrition security, are often driven by social determinants of health, the conditions in the social, physical, and economic environment where people are born, live, work, and age including housing, access to care, crime, education, and wages.^{20,28} These circumstances are shaped by the distribution of money, power, and resources at global, national and local levels. The Association will work not only to center its work around equity, from policy development

through policy implementation, but will also actively work to dismantle the disparities that exist throughout the food system.

2. Follow, incorporate, and amplify the power of community voices and those directly impacted by diet-related chronic diseases and health disparities

To actively reduce the disparities that perpetuate poor nutrition security, it is critical that community voices and those directly impacted by food and nutrition policy are centered in our work. This encompasses all steps of the policy and advocacy process including policy development, advocacy campaigns, and policy implementation. Lived experience will be especially important in areas where data are not available. This approach will ensure we are dismantling, not perpetuating, disparities through our work.

3. Maximize impact through coordination across federal, tribal, state, and local levels and collaboration with partner organizations

Achieving equity in nutrition security will require coordinated and sustained efforts at the federal, tribal, state, and local levels. The Association speaks with one voice across our work at each of these levels of government. We are uniquely positioned to lead this Strategic Vision due to our robust leadership and influence at all levels of government. This includes a 50-state infrastructure of core staff and organizational partners in communities and statehouses, and more than 350,000 grassroots volunteers at the ready to mobilize around issues of food and health. Our Voices for Healthy Kids initiative, a team within the Association's advocacy department that funds and provides capacity-building training and supports to staff and community-based organizations, further expands our impact into local markets across the country.

Fully addressing nutrition security will also require partnership across many sectors. Included in our ongoing work to update our Organizational Strategic Policy Agenda is an assessment of where the Association is best positioned to lead versus support our partners. The process for determining this positioning is described in the Strategic Policy Agenda section below.

4. Support work across the food system

The food system is comprised of all the sectors and processes involved in getting food from seed to table to disposal. This includes various industries and the settings where people access food, namely agriculture, production, transportation, distribution, wholesale, marketing, retail, restaurants, other away from home eating, waste management, communities, schools, and other institutions (child and adult care, health care, government, workplaces, and prisons). Food systems also involve people, farms, businesses, interventions, policies, and politics.²⁹ To effect lasting change toward the Strategic Vision, it is critical that our policy approach span the various sectors of the food system.

5. Promote resilience within the food system including environmental sustainability

The Food and Agriculture Organization of the United Nations defines sustainable diets as "diets with low environmental impacts that contribute to food and nutrition security and to healthy life for present and future generations. Sustainable diets are protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically fair and affordable; nutritionally adequate, safe and healthy; while optimizing natural and human resources." Currently, our food system's promotion of unhealthy diets is a significant contributor to environmental degradation and climate change. Policy research and innovation in the area of environmental sustainability and resilience across the food system will be a key consideration of how the Association plans to achieve the Strategic Vision.

6. Strive for effective policy implementation

To optimize our policy and advocacy work, we need to understand whether the policies we work so hard to get into place are implemented as intended, whether there is specific population impact, whether they improve equity or create disparities, the cost, their penetration and uptake, any unintended consequences, and their contribution to creating longer, healthier lives. Policy implementation and outcome evaluation are integral components of the policy process that provides an overall performance management framework to guide responsible decision-making.³¹ Effective policy implementation evaluation assesses adoption, acceptability, penetration, feasibility, fidelity, implementation cost, unintended consequences, and longevity.

7. Be a catalyst for industry change where needed

The Association will work to assess on a policy-by-policy basis where and how to interact with various food system industry actors to effect equitable, sustainable improvements in nutrition security. This will include industries of production (agriculture), transportation, distribution, wholesale, marketing, retail, restaurants, and other away from home eating.

8. Work across the lifespan

Nutrition security requires stability of a nutritious diet across the life course. The 2020 to 2025 U.S. Dietary Guidelines for Americans recognize the importance of stability by emphasizing continuity in healthy eating patterns at every stage of life. Accordingly, the Association will identify policy solutions that improve nutrition security at every stage of life. This approach will include policy research and development around nutrition security for prenatal through older adults. It also includes ensuring that food assistance programs avoid gaps in coverage. Finally, we recognize that early childhood is especially important because it provides an opportunity for developing long-term healthy eating habits that track into adulthood. Our Voices for Healthy Kids initiative will be prioritizing policy solutions and advocacy campaigns directed at improving nutrition security in the prenatal to three age range.

Strategic Policy Agenda

The public policies we pursue to achieve our Strategic Vision will be determined using the Association's robust policy prioritization process. The Association regularly updates its Organizational Strategic Policy Agenda across all issue areas every two to three years. This process involves grading potential policy priorities on evidence base, strategic alignment, potential health impact, opportunity for positioning the organization, likelihood of success, impact on health equity, resources required, feasibility, and level of opposition. The resulting scoring matrix guides organizational decision-making to help prioritize interventions.

More information on the policy grading criteria is listed here:

- <u>Evidence base:</u> The proposed policies should have existing evidence to support our position on each policy. Strong
 evidence includes well established studies (meta-analyses, well-designed quasi-experimental studies, and
 modelling studies) that suggest strong impact and has real life demonstrated impact.
- <u>Health impact</u>: The proposed policies should reach a large portion of the population and have a significant impact on cardiovascular health and reduce mortality.
- Equity impact: The proposed policies have a positive impact on at-risk populations by providing targeted resources/ technical assistance/interventions; addressing social determinants of health; and has funding and/or mechanisms in place to ensure equitable implementation and ongoing monitoring.
- <u>Strategic alignment:</u> The proposed policies should align with the Association's Strategic Vision for nutrition policy: an equitable, sustainable food system that ensures nutrition security for all.
- <u>Federal/State/Local Prioritization:</u> The Association may either take a leadership role on the issue; is working with key partners leading or co-leading the issue; or is "at the table," lending our name and brand to the issue.

The Strategic Policy Prioritization Grid document (see Appendix) details the policy grades for our existing Organizational Strategic Policy Agenda. We are also currently using the policy grading process to evaluate additional policy levers and areas that may be added to the Organizational Strategic Policy Agenda to help drive toward our Strategic Vision. These include policy levers identified in the Strengthening U.S. Food Policies and Programs to Promote Equity in Nutrition Security policy statement¹⁸ and the CHOICES Childhood Obesity National Action Kit.³⁴

To organize our Organizational Strategic Policy Agenda and potential policy priorities according to the Strategic Vision, we created the *Policy Categorization Framework* document (see Appendix). This document presents a framework outlining current and potential policy priorities to address the core components of nutrition security along with environmental sustainability (x axis) according to the main sectors of the food systems in which public policies are set (y axis). In the framework, we outline policy opportunities that move us closer to achieving nutrition security. We also acknowledge where the Association may be best positioned to lead versus support policy advancement.

Together, the policy grading process and organizational framework are critical to determining the most impactful Organizational Strategic Policy Agenda that will help the Association drive toward our Strategic Vision through the end of the decade.

Metrics

Traditionally, nutrition-related data collection has centered around food security instead of nutrition security. In the U.S., food security is measured using the USDA food security survey modules that assess a household's ability to afford and access sufficient calories. However, U.S. national data on the prevalence of food insecurity fail to capture the number of Americans who are lacking in adequate nutrition because of low resources. In addition, these measures do not robustly assess a household's ability to afford and access sufficient nutritious food and consume a diet consistent with the U.S. Dietary Guidelines for Americans. In fact, no standard measures of nutrition security currently exist.

To meaningfully improve nutrition security, it is critical that national measures of nutrition security are developed. In the Strengthening U.S. Food Policies and Programs to Promote Equity in Nutrition Security policy statement, the Association suggests this may be done by adding new modules to the USDA food security screening tool to include questions about a household's ability to utilize and consistently access nutritious food, such as fruits and vegetables, among all age groups. Research to develop and validate questions to assess nutrition security is also needed. Such questions could be integrated into national surveys such as the Centers for Disease Control and Prevention's National Health and Nutrition Survey to monitor progress in achieving equity in nutrition security.

Nutrition security data could also incorporate existing metrics that assess the overall quality of a dietary pattern in terms of nutritious food consumed. Two common, validated metrics of dietary quality include the Healthy Eating Index (HEI) and the Alternative Healthy Eating Index (AHEI). The HEI measures diet quality by assessing how well a set of foods aligns with key recommendations of the Dietary Guidelines for Americans. It uses a scoring system to evaluate a set of foods with scores ranging from 0 to 100. An overall HEI score of 100 indicates that the set of foods measured is in alignment with key dietary recommendations from the Dietary Guidelines for Americans. The overall HEI score for Americans in 2015 was 58 out of 100, which shows that the average diets of Americans do not align with dietary recommendations. This score was determined using the most recently available data from the National Health and Nutrition Examination Survey (NHANES), collected in 2015-2016. However, given the delay in the data, the HEI score for Americans does not reflect current dietary practices. The AHEI is an alternative measure to the HEI and assigns ratings to foods and nutrients predictive of chronic disease. However, both the HEI and the AHEI as dietary quality assessments have their challenges. For instance, gold standard measures (e.g., 24-hour dietary recalls, food frequency questionnaires) tend to be burdensome and expensive, whereas briefer measures (e.g., dietary screeners) are less specific and tend to be less rigorous, especially regarding validity and reliability.

Finally, it is important that data collected on nutrition security incorporate race, ethnicity, and other social determinants of health measures to adequately capture and address health disparities. It will also be critical to capture lived experiences to complement this data.

Appendix

Strategic Policy Prioritization Grid

Policy Categorization Framework

<u>Contributors:</u> Alexa Wohrman, Carter Headrick, Emily Holubowich, Funke Ajenikoko, Jill Birnbaum, Katie Bishop Kendrick, Kristi J Durazo, Kristy Anderson, Laurie Whitsel, Lori Fresina, Maureen Cassidy, Stephanie Scarmo, Suzette Harris

¹ U.S. Department of Agriculture; Economic Research Service. Definitions of Food Security. 2020.

² Wang DD, Leung CW, Li Y, Ding EL, Chiuve SE, Hu FB and Willett WC. Trends in dietary quality among adults in the United States, 1999 through 2010. JAMA Intern Med. 2014;174:1587-95.

³ Micha R, Shulkin ML, Penalvo JL, Khatibzadeh S, Singh GM, Rao M, Fahimi S, Powles J and Mozaffarian D. Etiologic effects and optimal intakes of foods and nutrients for risk of cardiovascular diseases and diabetes: Systematic reviews and meta-analyses from the Nutrition and Chronic Diseases Expert Group (NutriCoDE). PLoS One. 2017;12:e0175149.

⁴ Waters H and DeVol R. Weighing Down America: The Health and Economic Impact of Obesity, 2016.

⁵ Rehm CD, Penalvo JL, Afshin A and Mozaffarian D. Dietary Intake Among US Adults, 1999-2012. JAMA. 2016;315:2542-53.

⁶ Mensah GA, Brown AGM, Pratt CA. Nutrition disparities and cardiovascular health. Curr Atheroscler Rep. 2020;22:15. doi: 10.1007/s1 1883-020-0833-3

⁷ Harrison CA, Taren D. How poverty affects diet to shape the microbiota and chronic disease. Nat Rev Immunol. 2018;18:279–287. doi: 10.1038/nri.2017.121

⁸ Tilman D and Clark M. Global diets link environmental sustainability and human health. Nature. 2014;515:518-22.

⁹ Springmann M, Godfray HC, Rayner M and Scarborough P. Analysis and valuation of the health and climate change cobenefits of dietary change. Proc Natl Acad Sci U S A. 2016;113:4146-51.

¹⁰ Vermeulen SJ, Campbell BM and Ingram JSI. Climate Change and Food Systems. Annual Review of Environment and Resources. 2012;37:195-222.

¹¹ Steffen W, Richardson K, Rockstrom J, Cornell SE, Fetzer I, Bennett EM, Biggs R, Carpenter SR, de Vries W, de Wit CA, Folke C, Gerten D, Heinke J, Mace GM, Persson LM, Ramanathan V, Reyers B and Sorlin S. Sustainability. Planetary boundaries: guiding human development on a changing planet. Science. 2015;347:1259855.

¹² Buzby JC, Wells HF and Hyman J. The Estimated Amount, Value, and Calories of Postharvest Food Losses at the Retail and Consumer Levels in the United States. 2014.

¹³ Myers SS, Smith MR, Guth S, Golden CD, Vaitla B, Mueller ND, Dangour AD and Huybers P. Climate Change and Global Food Systems: Potential Impacts on Food Security and Undernutrition. Annu Rev Public Health. 2017;38:259-277.

¹⁴ Taub DR, Miller B and Allen H. Effects of elevated CO2 on the protein concentration of food crops: a meta-analysis. Global Change Biology. 2007;14:565-575.

¹⁵ United States Environmental Protection Agency. Climate Impacts on Agriculture and Food Supply. 2018.

¹⁶ EPA. 2021. Climate Change and Social Vulnerability in the United States: A Focus on Six Impacts. U.S. Environmental Protection Agency, EPA 430-R-21-003.

¹⁷ Mozaffarian D, Fleischhacker S and Andrés JR. Prioritizing Nutrition Security in the US. Jama. 2021;325:1605-1606.

¹⁸ Thorndike AN, Gardner CD, Bishop Kendrick K, Seligman HK, Yaroch AL, Gomes AV, Ivy KN, Scarmo S, Cotwright CJ, Schwartz MB; on behalf of the American Heart Association Advocacy Coordinating Committee. Strengthening US food policies and programs to promote equity in nutrition security: a policy statement from the American Heart Association. Circulation. 2022;145:e---e--. doi: 10.1161/CIR.0000000000000001072

¹⁹ UN Food and Agriculture Organization. Food Security. 2003. Accessed April 14, 2021. http://www.fao.org/3/y5061e/y5061e08.htm

²⁰ UN Food and Agriculture Organization. An Introduction to the Basic Concepts of Food Security. 2008. Accessed April 14, 2021. http://www.fao.org/3/al936e/al936e.pdf

²¹ Wagle K. Food security: pillars, determinants and factors affecting it. 2018. Public Health Notes. Accessed April 14, 2021. https://www.publichealth-notes.com/food-security-determinants-and-urbanization/

²² Lam MCL, Adams J. Association between home food preparation skills and behaviour, and consumption of ultra-processed foods: cross-sectional analysis of the UK National Diet and Nutrition Survey (2008–2009). Int J Behav Nutr Phys Act. 2017;14:68. doi: 10.1186/s12966-017-0524-9

²³ Escoto KH, Laska MN, Larson N, Neumark-Sztainer D, Hannan PJ. Work hours and perceived time barriers to healthful eating among young adults. Am J Health Behav. 2012;36:786–796. doi: 10.5993/ AJHB.36.6.6

²⁴ Oakley AR, Nikolaus CJ, Ellison B, Nickols-Richardson SM. Food insecurity and food preparation equipment in US households: exploratory results from a cross-sectional questionnaire. J Hum Nutr Diet. 2019;32:143–151. doi: 10.1111/jhn.12615

²⁵ Whitehead M, Dahlgren G. Levelling Up(Part1): A Discussion Paper on Concepts and Principles for Tackling Social Inequities in Health. World Health Organization. Available at http://www.euro.who.int/document/e89383.pdf.

²⁶ Mensah GA, Brown AGM and Pratt CA. Nutrition Disparities and Cardiovascular Health. Curr Atheroscler Rep. 2020;22:15.

²⁷ Havranek EP, Mujahid MS, Barr DA, Blair IV, Cohen MS, Cruz-Flores S, Davey-Smith G, Dennison-Himmelfarb CR, Lauer MS, Lockwood DW, Rosal M, Yancy CW, American Heart Association Council on Quality of C, Outcomes Research CoE, Prevention CoC, Stroke Nursing CoL, Cardiometabolic H and Stroke C. Social Determinants of Risk and Outcomes for Cardiovascular Disease: A Scientific Statement From the American Heart Association. Circulation. 2015;132:873-98.

²⁸ Heiman H, Artiga, S. Beyond health care: the role of social determinants in promoting health and health equity. Disparities Policy. 2015.

²⁹ Sobal J, Khan LK, Bisogni C. A conceptual model of the food and nutrition system. Soc Sci Med. 1998;47:853–863.

³⁰ FAO (2012) Sustainable Diets and Biodiversity: Directions and Solutions for Policy, Research and Action http://www.fao.org/docrep/016/i3004e/i3004e.pdf

³¹ Grembowski D. The practice of health program evaluation. Second edition. ed. Los Angeles: SAGE; 2016.

³² US Department of Agriculture and US Department of Health and Human Services. Dietary Guidelines for Americans, 2020–2025. 9th ed. December 2020. https://www.dietaryguidelines.gov/

³³ Healthy Eating Research. Feeding guidelines for infants and young toddlers: a responsive parenting approach. Guidelines for health professionals. 2017. Accessed July 30, 2021. http://healthyeatingresearch.org/wp-content/up-loads/2017/02/her_feeding_guidelines_brief_021416.pdf

³⁴ Gortmaker, S., Cradock, A., Giles, K., & Garrone, M. (2022, April 19). Childhood obesity national action kit. CHOICES Project. Retrieved May 2, 2022, from https://choicesproject.org/actionkit/

³⁵ Data—National Center for Health Statistics, What We Eat in America/National Health and Nutrition Examination Survey, 2013-2018. Healthy Eating Index-2015, Scores—U.S. Department of Agriculture, Center for Nutrition Policy and Promotion.

³⁶ Bilodeau, Kelly. "Scoring Highly on Alternative Healthy Eating Index Lowers Risk for Many Illnesses." Harvard Health Blog, 8 Feb. 2022,

https://www.health.harvard.edu/blog/scoring-highly-on-alternative-healthy-eating-index-lowers-risk-for-many-illnesses-202202082681. Accessed 12 May 2022.

³⁷ Thompson FE. Subar AF. Dietary assessment methodology. In: Coulston AM, Boushey CJ, Ferruzzi M, Delahanty L, eds. Nutrition in the Prevention and Treatment of Disease. 4th ed. Academic Press; 2017:5–48.