



Nourishing Today
Sustaining Tomorrow

February 10, 2025

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Office of Disease Prevention and Health Promotion (ODPHP)
Office of the Assistant Secretary for Health (OASH)
Department of Health and Human Services
1101 Wootton Parkway, Suite 420
Rockville, MD 20852

Re: Docket HHS-OASH-2024-0017: Request for Public Comments on the Scientific Report of the 2025 Dietary Guidelines Advisory Committee. 89 Fed. Reg. 99883-99884. (December 11, 2024)

Dear Ms. de Jesus:

The Meat Institute is the leading voice for the meat and poultry industry and has a rich, century-long history. It provides essential member services including legislative, regulatory, scientific, international, and public affairs representation. Together, the Meat Institute's members produce the vast majority of U.S. beef, pork, lamb, and poultry, in addition to the equipment, ingredients, and services needed to produce the safest and highest quality products.

Consumer health is a key consideration in producing meat and poultry products, which not only includes offering nutrient dense protein food products but also improving and maintaining the safety of the meat and poultry supply. Meat and poultry products play an important role in a healthy, well-balanced diet and the industry is committed to offering diverse nutritional products. Including meat and poultry in the diet allows consumers to more easily fulfill their essential amino acid and nutrient requirements. Dietary guidance should be practical, affordable, and attainable, and should measurably improve the health of Americans as part of healthy dietary patterns.

The Meat Institute applauds the enormous task undertaken by the 2025 Dietary Guidelines Advisory Committee (DGAC or Committee) to review the science and provide its recommendations in the Scientific Report (Report) to the U.S. Departments of Agriculture and Health and Human Services (USDA and HHS or the Departments). The Departments now must translate the Report into policy that will provide meaningful dietary advice for the American population. The significant efforts to develop the 2025-2030 *Dietary Guidelines for Americans (Guidelines)* do not go unrecognized or unappreciated by the Meat Institute or its members.

The Meat Institute's comments are organized around the following topics.

- Meat and Poultry, Which Includes Red and Processed Meats, Are Part of Healthy Dietary Patterns.
- Protein Foods Are Consumed Within Recommended Ranges.
- The Proposed Dietary Pattern Omits Key Nutrient Dense Foods: Meat and Poultry.
- Reducing Animal-Based Protein Foods Will Result in Significant Nutrient Impacts.

- Dietary Recommendations Based on Level of Processing is Not Appropriate and May Result in Unintended Consequences.
- Context and Clarity around Dietary Patterns is Critical.
- Dietary Guidance Should Be Practical, Affordable, and Achievable.
- HHS and USDA Must Develop Final Policy With the Expertise of Food Scientists and Consumer Behaviorists.
- Updates to the Existing Guidelines Must Be Clear and Consistent.
- Additional Scientific Disciplines, Including Food Scientists, Should be on the 2030 Advisory Committee.

The topics provide the support for why meat and poultry are part of healthy dietary patterns.

Because the Committee's Report excludes meat and poultry as part of healthy dietary patterns, the Meat Institute is extremely concerned that consumers will inaccurately perceive meat and poultry products as poor dietary choices, which may lead to a variety of unintended consequences, including nutritional deficiencies in certain sub-populations. USDA and HHS have the opportunity and responsibility to translate the Report's findings into clear, concise language that demonstrates the role meat and poultry play in healthy dietary patterns throughout the entire life span, when consumed in recommended amounts.

Meat and Poultry, Which Includes Red and Processed Meats, Are Part of Healthy Dietary Patterns.

The Meat Institute strongly supports nutritional guidance that encourages consuming nutrient-dense foods because diets are more likely to meet recommendations if such foods are selected.¹ Nutrient-dense foods provide substantial amounts of vitamins and minerals (micronutrients) and relatively few calories compared to foods that have solid fat and/or added sugars. Meat and poultry, which include red and processed meats, are nutrient-dense foods and can be a part of healthy dietary patterns.

About 95 percent of Americans make meat and poultry products part of their diets, and for good reason.² Meat and poultry products provide consumers with a convenient, direct, and balanced dietary source of all essential amino acids. Per serving, meat, poultry, and fish provide more protein than dairy, eggs, legumes, cereals, vegetables, or nuts. Protein is critical for developing, maintaining, and repairing strong muscles; is vital for growth and brain development in children; and is essential to prevent muscle loss during aging.^{3,4}

¹ Weaver, C.M, Dwyer, J., Fulgoni, V., King, J., Leveille, G.A., MacDonald, R.S., Ordovas, J. and Schnakenberg, D. 2014. Processed Foods: Contributions to Nutrition. Am J Clin Nutr DOI: 10.3945/ajcn.114.089284.

² 2023 Gallup Poll. <https://news.gallup.com/poll/510038/identify-vegetarian-vegan.aspx>. Accessed February 2, 2025.

³ Campbell, W. W., et al. (1999). "Effects of an omnivorous diet compared with a lactoovovegetarian diet on resistance-training-induced changes in body composition and skeletal muscle in older men." Am J Clin Nutr 70(6): 1032-1039.

⁴ Robinson, M. J., et al. (2013). "Dose-dependent responses of myofibrillar protein synthesis with beef ingestion are enhanced with resistance exercise in middle-aged men." Appl Physiol Nutr Metab 38(2): 120-125.

Meat and poultry products are also important sources of micronutrients, such as iron, zinc, selenium, vitamins B₁₂, B₆, thiamin, riboflavin, niacin, and potassium – nutrients essential in all life stages including the critical first 1,000 days, during periods of growth and development like childhood and adolescence, throughout adulthood and during older years to maintain physical function enhancing quality of life. The iron and zinc in beef, pork, lamb, poultry, and fish are also more bioavailable than from other sources, meaning these minerals are more easily absorbed and utilized by the body.

The high iron content in meat and poultry products is important to certain low income subpopulations and teenage girls and pregnant women at a higher risk of anemia.⁵ Although iron supplementation may be an option, the heme iron present in meat is the most absorbable form of iron and continued deficiency could lead to long-term adverse health effects, including decreased mood, shortness of breath, dizziness, and headaches, among others.⁶ The natural presence of heme iron also aids absorption of non-heme iron.⁷ It is clear meat and poultry play an integral role in ensuring adequate vitamin and mineral intake.^{8,9,10,11}

A three-ounce serving of lean beef provides about 170 calories and is an “excellent” source of six nutrients, including protein, zinc, vitamin B₁₂, vitamin B₆, niacin, and selenium, and a “good” source of four nutrients—phosphorous, choline, iron, and riboflavin.¹² Pork is a lean, nutrient-rich food, and a three-ounce serving of pork tenderloin is a source of nine key essential nutrients—an “excellent” source of thiamin, selenium, protein, niacin, vitamin B₆, and phosphorus and a “good” source of riboflavin, zinc, and potassium.¹³ And, today’s pork is 16 percent leaner and has 27 percent less saturated fat than 29 years ago.¹⁴ A three-ounce portion of roasted skinless turkey breast contains only 3 grams of fat and is naturally low in sodium, containing less than 25

⁵ <http://www.hematology.org/Patients/Anemia/Iron-Deficiency.aspx>. Accessed May 20, 2020.

⁶ <https://www.mayoclinic.org/diseases-conditions/iron-deficiency-anemia/symptoms-causes/syc-20355034>. Accessed February 2, 2025.

⁷ National Academy of Sciences. [Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc](#). National Academy Press. Washington, DC. 2001.

⁸ Institute of Medicine, National Academy of Sciences. Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc. National Academy Press., Washington, DC. 2001.
<http://www.nap.edu/openbook.php?isbn=0309072794>

⁹ Institute of Medicine, National Academy of Sciences. Dietary Reference Intakes for Vitamin C, Vitamin E, Selenium, and Carotenoids. National Academy Press. Washington, DC. 2000.

¹⁰ National Academy of Sciences. Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B₆, Folate, Vitamin B₁₂, Pantothenic Acid, Biotin, and Choline. National Academy Press. Washington, DC. 2000.

¹¹ Sharma, S., et al. (2013). Contribution of meat to vitamin B(12), iron and zinc intakes in five ethnic groups in the USA: implications for developing food-based dietary guidelines" J Hum Nutr Diet 26(2): 156-168.

¹² U.S. Department of Agriculture, Agricultural Research Service. FoodData Central. USDA National Nutrient Database for Standard Reference legacy NDB Number 13364. April 2018. <https://fdc.nal.usda.gov/fdc-app.html#/food-details/170208/nutrients>.

¹³ National Nutrient Database for Standard Reference, Release 23. Based on 3-ounce cooked servings (roasted), separable lean only.

¹⁴ National Pork Board. <https://www.pork.org/cooking/pork-nutrition/>. Accessed February 2, 2025.

milligrams per ounce.¹⁵ These are just a few examples of high quality nutrient dense meat and poultry products. By including meat and poultry in the diet, consumers maintain a steady balance of key nutrients that support overall health.

The Committee found that iron is a nutrient of public health concern for adolescent females, women ages 20-49 years; and individuals who are pregnant.¹⁶ The Committee also found that many individuals over the age of one year consume below the nutrient intake requirements for dietary protein, dietary fiber, calcium, potassium, magnesium, iron, zinc, copper, phosphorous, vitamin A, thiamin, vitamin B₆, folate (DFE), vitamin B₁₂, vitamin C, vitamin D, vitamin E, and vitamin K.¹⁷ A healthy dietary pattern that includes meat can help fill these nutrient gaps.

Protein Foods Are Consumed Within Recommended Ranges.

Using the Healthy Eating Index 2020 (HEI) to evaluate adherence to the 2020-2025 *Dietary Guidelines for Americans*, the average diet quality score was 56 out of 100, demonstrating Americans have poor diet quality.¹⁸ The overall HEI-2020 score is made up of 13 components that reflect different food groups and key recommendations. Of the nine adequacy components, where a higher score indicates higher consumption, which is desired, total Protein Foods is the only food group, consumed at or above recommendations.^{19,20} Of the eight remaining adequacy and four moderation components, there appear to be significant gaps to improving the overall diet quality of Americans. Further, the Report recognizes mean intake for total protein is 5.7 oz. eq. per day, which is within the range of recommended amounts. However, it also shows that 78 percent of females ages 14-18 do not meet recommended daily protein intakes.²¹ Nutrient and dietary shortfalls that most adolescent females experience can persist into young adulthood, the common life stage during which pregnancy and lactation occur.²² Left unaddressed, nutrient shortfalls during these life stages have the potential to impact health in the short-term, throughout the lifespan, and for future generations.²³ These age groups are life stages when nutrients provided in animal sourced proteins are critical to development and muscle maintenance.

¹⁵ National Turkey Federation. <https://www.eatturkey.org/healthy-eating-made-easy/>. Accessed February 2, 2025.

¹⁶ 2025 Dietary Guidelines Advisory Committee. 2024. *Scientific Report of the 2025 Dietary Guidelines Advisory Committee: Advisory Report to the Secretary of Health and Human Services and Secretary of Agriculture*. U.S. Department of Health and Human Services. <https://doi.org/10.52570/DGAC2025>. Part D. Chapter 1: Current Dietary Intakes and Prevalence of Nutrition-Related Chronic Health Conditions p. 42-43.

¹⁷ Ibid. p. 9.

¹⁸ 2025 Dietary Guidelines Advisory Committee. 2024. *Scientific Report of the 2025 Dietary Guidelines Advisory Committee: Advisory Report to the Secretary of Health and Human Services and Secretary of Agriculture*. U.S. Department of Health and Human Services. <https://doi.org/10.52570/DGAC2025>. Part D. Chapter 1: Current Dietary Intakes and Prevalence of Nutrition-Related Chronic Health Conditions p. 4.

¹⁹ How the Healthy Eating Index is Scored. <https://www.fns.usda.gov/cnpp/how-hei-scored>. Accessed February 2, 2025.

²⁰ 2025 Dietary Guidelines Advisory Committee. 2024. *Scientific Report of the 2025 Dietary Guidelines Advisory Committee: Advisory Report to the Secretary of Health and Human Services and Secretary of Agriculture*. U.S. Department of Health and Human Services. <https://doi.org/10.52570/DGAC2025>. Part D. Chapter 1: Current Dietary Intakes and Prevalence of Nutrition-Related Chronic Health Conditions p. 9.

²¹ Ibid. p.13.

²² Ibid. p. 56.

²³ Ibid. p. 63.

While animal protein intake has increased slightly over the last 50 years, there has been a shift in the product category. Attributable to nutritional recommendations to reduce red meat consumption and cost, per capita consumption of all red meats, e.g. beef, veal, pork, lamb, and mutton, has decreased from 145.8 pounds (retail) in 1970 to 109.5 pounds in 2023 – a 25 percent decrease.²⁴ During that same time, poultry consumption increased from 48.4 pounds in 1970 to 115.9 pounds in 2023.²⁵ The American population has been listening to dietary guidance to reduce red meat intake and choose poultry as a nutrient dense alternative. Given that obesity and adverse health outcomes have increased over the same time period, red meat consumption alone cannot be the root cause. Americans generally do not understand the relationship that portion size and energy balance have with weight. The Departments should recognize this fact and provide context in the *Guidelines*.

The Proposed Dietary Pattern Omits Key Nutrient Dense Foods: Meat and Poultry.

The Committee has recommended a single dietary pattern, *Eat Healthy Your Way*, emphasizing that the three dietary patterns (Healthy U.S.-Style (HUSS), Healthy Mediterranean-Style, Healthy Vegetarian) from the 2020-2025 *Dietary Guidelines for Americans* as well as the updated systematic reviews all share similar dietary attributes, e.g. higher in vegetables, fruits, legumes, nuts, whole grains, fish/seafood, and vegetable oils higher in unsaturated fats; and lower in red and processed meats, sugar-sweetened foods and beverages, refined grains, and saturated fat. A healthy dietary pattern may also include fat-free or low-fat dairy and foods lower in sodium, and may include plant-based dietary options.

The Committee recommends modifications to healthy dietary patterns emphasizing dietary intakes of beans, peas, and lentils while reducing intakes of red and processed meats. The Committee further recommends the Beans, Peas, and Lentils Subgroup move from the Vegetables Food Group to the Protein Foods Group to encourage greater consumption of plant-based Protein Foods and reorganizing the order of the Protein Foods Subgroups to list Beans, Peas, and Lentils first, followed by Nuts, Seeds, and Soy Products, then Seafood, and finally Meats, Poultry, and Eggs. However, in the proposed dietary pattern, Meat, Poultry, and Eggs remains the Protein Foods subgroup with the greatest number of serving recommendations.²⁶ It does not make sense to “deprioritize” the subgroup providing the greatest nutrient contribution to the food group.

The Report stresses the importance of nutrient dense foods to meet nutrient requirements while limiting energy intake. However, the Report’s proposed dietary pattern omits meat and poultry, which the Committee agrees are nutrient-dense foods that help Americans meet their macronutrient requirements. The human body more readily absorbs the high quality protein, e.g. containing all essential amino acids, of animal-sourced products due to digestibility.²⁷ While only 30% of calories are obtained from animal-sourced foods, they provide nearly 100% of daily

²⁴ USDA Economic Research Service. *Livestock, Dairy and Poultry Outlook*. All Supply and Disappearance, Historical, table 5. <https://www.ers.usda.gov/data-products/livestock-and-meat-domestic-data>. Accessed February 2, 2025.

²⁵ Ibid.

²⁶ Part E. Chapter 1: Overarching Advice to the Departments. P. 7.

²⁷ Sheffield S, Fiorotto ML and Davis TA (2024) Nutritional importance of animal-sourced foods in a healthy diet. *Front. Nutr.* 11:1424912. doi: 10.3389/fnut.2024.1424912

requirements for vitamin B₁₂, and vitamin D and about 60% of requirements for zinc, iron, vitamin B₆, and niacin.²⁸ Further, the Report shows that the Protein Foods group, not including Beans, Peas and Lentils, contributes approximately 40-50 percent of the total choline and approximately 30-40 percent of the total protein, total niacin, and total vitamin B₁₂ to the 2020 HUSS across most age groups starting at age 12 months. The Protein Foods group also contributes at least 15 percent of the total nutrient content for more than 1 dozen additional nutrients in the 2020 HUSS for most calorie levels.²⁹ Given this, it is clear that meat and poultry play a role in healthy dietary patterns.

The benefits of meat and poultry consumption as part of healthy, balanced dietary patterns cannot be overstated, especially in vulnerable population groups. Providing clear and consistent language supported by the scientific evidence and in context with actual food group intake is critical. The Departments have the opportunity and the responsibility to provide concise, uniform language about the role of meat and poultry in healthy dietary patterns throughout all life stages. The Meat Institute urges the Departments to recognize the valuable nutrition contributions of meat and poultry and include it as part of healthy dietary patterns. USDA and HHS must provide a clear, consistent message about the role of meat and poultry in healthy dietary patterns through all life stages.

Reducing Animal-Based Protein Foods Will Result in Significant Nutrient Impacts.

While modeling showed general nutrient adequacy, it is important to recognize that all protein sources are not equivalent. Animal-based Protein Foods are high quality and contain all essential amino acids in adequate amounts to support growth, while plant-based Protein Foods, except for soy, do not. The quality of the protein source translates to how much protein is bioavailable for the body to use to build and maintain muscles and for brain development in children as examples. As studies show, the same ounce equivalent portions from animal-based and plant-based protein foods do not provide equivalent essential amino acid content and protein bioavailability in young and older adults.³⁰ Animal proteins exceed the benefits provided by plant proteins in this respect. Similarly, a modeling study using a similar approach to USDA's food pattern modeling showed that removing a "three oz serving of meat or poultry resulted in decreases of 10% or more from baseline in protein and several key micronutrients including iron, phosphorus, potassium, zinc, selenium, thiamine, riboflavin, niacin, vitamin B₆, vitamin B₁₂, and choline as well as cholesterol and sodium in Healthy Dietary Patterns."³¹ The nutrient decreases were consistent with the removal of either minimally processed or further processed meat or poultry, even after adjusting for calories.

²⁸ Sheffield et al.

²⁹ Part D. Chapter 10: Food Group and Subgroup Analyses p. 26

³⁰ Connolly G, Hudson JL, Bergia RE, Davis EM, Hartman AS, Zhu W, Carroll CC, Campbell WW. Effects of Consuming Ounce-Equivalent Portions of Animal- vs. Plant-Based Protein Foods, as Defined by the Dietary Guidelines for Americans on Essential Amino Acids Bioavailability in Young and Older Adults: Two Cross-Over Randomized Controlled Trials. *Nutrients*. 2023; 15(13):2870. <https://doi.org/10.3390/nu15132870>.

³¹ Agarwal S, McCullough KR, Fulgoni VL III. Nutritional Effects of Removing a Serving of Meat or Poultry from Healthy Dietary Patterns—A Dietary Modeling Study. *Nutrients*. 2023; 15(7):1717. <https://doi.org/10.3390/nu15071717>

Because animal-based proteins are more bioavailable and absorbable by the body compared to plant-based proteins, Americans may need to consume a higher volume of calories from plant-based proteins to achieve the same biological effect in the body. It's unclear whether the Committee considered the impact higher calorie intake would have on overall public health. If not, this is an important factor that must be weighed against any perceived downside to animal-based protein consumption.

Animal-based proteins occupy an important place in dietary patterns because they provide high concentrations of key nutrients critical to health. These foods help us feel full and satisfied and energize us to be physically active and to sleep well. Plant-based protein foods may not have the same satiating effect, potentially leading to increased hunger and caloric intake. Shifting towards a more plant-based diet will require careful consideration of diet preparation to ensure the quantity and quality of protein consumed and micronutrient intake meet requirements for optimal health.

A modified Healthy U.S.-Style Dietary Pattern risks the potential for unintended consequences for nutrient and energy intakes. Americans need to improve their eating patterns to promote health. Considering dietary choices based on taste and cultural preferences, health and economic status, and food availability will be key to improving the dietary habits of Americans. A recommendation to reduce, limit or avoid nutrient dense products like meat and poultry will have significant unintended nutritional consequences across all life stages.

Context and Clarity around Dietary Patterns is Critical.

While the Committee noted that systematic reviews allowed for a comparator of high vs. low intake, it is important to provide detail and clarity to quantitative amounts of red and processed meat in dietary patterns especially since the modified HUSS Dietary Pattern uses these findings as rationale for reducing intake of Meat, Poultry and Eggs. The Departments must weigh all the evidence, including the important nutrient contributions of animal source foods for nutrient adequacy, when evaluating the overall body of evidence.

Recognizing that red and processed meats are just two components in the Protein Foods group, this category is among the only food groups generally consumed at the recommended levels. The overall discussion about the role of meat and poultry, including processed meat, in the diet should have greater context about the nutrient contribution of these products and how they can fit in healthy dietary patterns that meet lifestyle and dietary constraints. Conflicting information will only further consumer confusion about how to improve diets and may result in replacing a nutrient and/or energy dense food with an alternative of lesser nutritive value. Given that 95% of Americans consume meat and poultry, it is important the Departments consider how meat fits in healthy dietary patterns.³²

The inconsistent language about the role of meat and poultry products in healthy dietary patterns could be misunderstood to support removing lean red meat and processed meat from diets. Including the reference to "lower" or limit intake is confusing because there is no reference point for lowering consumption. Advising people to consume lower or less of something without

³² 2023 Gallup Poll. <https://news.gallup.com/poll/510038/identify-vegetarian-vegan.aspx>. Accessed October 3, 2024.

providing a tangible measure is confusing and misleading within the context of nutrient dense food choices. Unfortunately, an understanding of appropriate portion size of these energy and nutrient dense foods by much of the population is lacking.

Red and processed meats are often grouped together as foods to reduce or limit, and lean meats and poultry as foods to encourage. Rarely is it recognized that red meat and processed meats can be different foods or the same, and that they can be lean. The overall discussion about the role of meat and poultry, including processed meat, in the diet should have greater context about the nutrient contribution of these products and how they can fit in healthy dietary patterns that meet lifestyle and dietary constraints. It would be confusing, if not misleading, to make dietary recommendations based on unclear or inconsistently defined terms.

Dietary Recommendations Based on Level of Processing is Not Appropriate and May Result in Unintended Consequences.

Using the processing level of a food, instead of its nutrient content, to determine whether a food can be part of healthy dietary patterns is misguided. Food processing is an important component of ensuring a safe, accessible, affordable, nutritious, and sustainable food supply. Processing allows perishable products to last longer through freezing, canning, and other preservation methods. Such production practices allow for maximum utilization of crop yields and minimize the potential for food waste. Processing also allows for fortifying nutrients that may not be consumed naturally in adequate quantities to meet nutrition requirements. Processed foods can be nutrient-dense foods that provide numerous health benefits to consumers in a safe, accessible, and sustainable way.³³

Meat and poultry products, including processed meats, are a part of healthy dietary patterns. Processing extends the shelf-life of an otherwise perishable food, reduces waste by using all the cuts of meat available, and provides consumers with convenience, flavor, and cultural identity. However, the perceived lack of health benefits and potential adverse health outcomes with meat consumption are at the center of many scientific studies. Among the issues further clouding the debate are confusion, misinformation, and misunderstandings of how meat is processed. Specifically, there are many misunderstandings with the science underpinning meat and processing nomenclature, product labeling claims, and ingredient safety.

All foods require preparation and processing to varying levels. Meat may simply be the primary ingredient in a product, just as flour is the base ingredient in a host of cereal, bakery, and pasta products, but having multiple ingredients does not necessarily render a product inappropriate for a healthy dietary pattern. Meat preparation for consumption generally includes cutting meat into a smaller size; adding non-meat ingredients; and cooking.³⁴ All of these actions

³³ Weaver, C.M, Dwyer, J., Fulgoni, V., King, J., Leveille, G.A., MacDonald, R.S., Ordovas, J. and Schnakenberg, D. 2014. Processed Foods: Contributions to Nutrition. *Am J Clin Nutr* DOI: 10.3945/ajcn.114.089284. <http://ajcn.nutrition.org/content/99/6/1525>.

³⁴ Seman, D. L., D. D. Boler, C. C. Carr, M. E. Dikeman, C. M. Owens, J. T. Keeton, T. D. Pringle, J. J. Sindelar, D. R. Woerner, A. S. de Mello, and T. H. Powell. 2018. Meat Science Lexicon. *Meat and Muscle Biology* 2:1-15. doi:10.22175/mmb2017.12.0059.

constitute processing, the same way similar actions would constitute processing with a vegetable, fruit, dairy, or grain-based product.

Generally, the ingredients used in preparing many processed meats are water, salt, nitrite or nitrate, phosphates, sugar, spices, and fat, which are recognized as safe by the Food and Drug Administration. Many ingredients serve multiple purposes, such as enhanced flavor, functionality, enhanced nutrition profile, and microbial safety. For example, salt plays a critical role in producing meat products – whether used by large commercial processors, local butchers, or in the consumer’s home – to improve the flavor, texture, and safety of those products. Safe ingredients that play an important role in food palatability and safety should not be unnecessarily criticized.

Common processed meat and poultry products are deli meats like turkey, ham, bologna, pastrami, and corned beef. Other common products are bacon, sausages, and salami. Each product can be prepared with different ingredients and product formulations. Several processing techniques can be used when preparing these products. Processed meat and poultry products can be smoked, dried, cured, cooked, ground, and marinated, among other processes. These processes add flavor, texture, or can act as a preservation step to extend a product’s shelf-life. More importantly, some of these processes destroy pathogens and are integral for food safety.

Nutrient needs vary widely due to each individual’s disease status, age, and preference, and there are processed meat and poultry products available to meet everyone’s individual nutrient and lifestyle needs. Given the variety of product types and formulations, there are thousands of different processed meat products.

Recognizing that food choices can be improved, a more appropriate approach is shifting dietary practices. Guidance to limit or reduce red and processed meats could affect an aging population, a population with decreased appetite and increased protein needs relative to calories. The importance of the high protein quality in meat and meat products in maintaining autonomy and musculoskeletal health (*i.e.*, preventing falls, sarcopenia) in older adults cannot be overstated. A review in the journal *Applied Physiology, Nutrition, and Metabolism* stated that the growing body of evidence indicates that protein intakes well above the current Recommended Dietary Allowance help promote healthy aging.³⁵ Higher protein intakes may help prevent age-related sarcopenia, loss of muscle mass that predisposes older adults to frailty, disability, and loss of autonomy. Processed products are options to help this population subgroup meet nutrient requirements.

Processed foods, including meat and poultry, should not be vilified but recognized for the important role they play in the diet. Discouraging consumption of processed foods, including meats, may discourage the consumption of nutritionally adequate food with negative consequences on nutrient intakes. It is critical the Departments take a holistic approach to analyzing food products and consider possible unintended consequences when making recommendations for or against processed foods.

³⁵ Phillips SM, Chevalier S, Leidy HJ. Protein "requirements" beyond the RDA: implications for optimizing health. *Appl Physiol Nutr Metab*. 2016 May;41(5):565-72. doi: 10.1139/apnm-2015-0550. Epub 2016 Feb 9.

Sodium is Critical to the Safety, Functionality and Quality of Meat and Poultry Products.

Salt, or sodium chloride, plays a critical role in producing meat products – whether used by large commercial processors, local butchers, or even within the consumer’s home – to improve the flavor, texture, and safety of those products. In addition to playing a critical role in meat production, salt is also intrinsic to certain food products. Reducing sodium is not as simple as adding less and sending the product to market. The meat and poultry industry must ensure there are no unintended food safety consequences to product reformulation, while still meeting consumer flavor and quality expectations.

Salt’s role as a preservative and food safety ingredient is one aspect of a multi-hurdle approach used to maintain product safety. In the last 35 years, the meat and poultry industry has learned in more quantitative fashion the importance of sodium chloride in managing pathogenic bacterial risks presented by *Listeria monocytogenes*, *Salmonella*, and pathogenic *Escherichia coli* in meat and poultry items.

L. monocytogenes is of particular concern in ready-to-eat processed meat and poultry items. It is very difficult to eradicate from the environment and if products are contaminated, the organism will survive and grow – even at refrigerated temperatures – unless growth inhibitor systems are used. Three common ingredients used for growth inhibitor purposes are sodium chloride, sodium or potassium lactate, and sodium diacetate. These inhibitors are used in a majority of processed meat and poultry items in the U.S. marketplace, in part, to address these food safety concerns. Reducing one inhibitor requires a concomitant increase in another to maintain the same degree of safety. Alternatives to these ingredients exist, but are not widely used because of ease of use, economic factors, and product quality issues - specifically loss of consumer acceptance for flavor, decreased shelf-life, and loss of myofibrillar functionality, among others.

If sodium substitutes cannot be used, another option is to shorten product shelf-life. However, if this approach is taken, costs would increase. Products with a shorter shelf life could also lead to food waste. The current production and distribution system is complex. It balances manufacturing efficiency gained from long production runs with minimal changeovers, coupled with the time needed to distribute products to a variety of retail outlets. Shorter product shelf life will require more frequent product changeovers in facilities. Efficiency losses are caused by the need to address essential safety and regulatory functions involving allergen control, proper labeling, and meat and poultry species segregation. These efficiency losses will result in higher operational costs to manufacture products and higher capital costs to provide additional assets to meet supply requirements. The economic burden of these changes will be felt by the consumer.

Sodium Reduction Reformulation is Occurring in the Meat and Poultry Industry but not Without Challenges.

In response to public requests, the meat and poultry industry has been, and remains actively, involved in efforts to reduce sodium in its products. In a 2017 survey of Meat Institute members, more than half of the respondents had already completed a sodium reduction process, while just under half were in the process. A more recent 2024 survey of Meat Institute members

showed that nearly 80% of companies have reduced sodium before or as part of the Phase I targets. The industry is also reducing sodium separately from FDA's guidance to meet customer requests and publicly stated ESG targets. Others are making reductions when possible considering food safety, product attributes and product yield. FDA's "Sodium Reduction in the U.S. Food Supply 2010-2022: A Preliminary Assessment of Progress" showed that 64% of meat and poultry products have reduced sodium since the 2010 baseline.³⁶

Lower sodium meat and poultry products are being developed and existing products are being reformulated. These reformulations can take several months and often involve a trade-off such as reduced shelf-life, the use of ingredient substitutes that are not familiar to the consumer, or increased price. Meat Institute members consider consumer expectations of their products, specifically safety and shelf-life. Reformulation requires undertaking extensive food safety challenge studies, which take a minimum of four months per product variation to complete. Additional scientific protocols follow for quality, shelf-life, and sensory acceptability.

Many alternative ingredients for the production of traditional products, as a matter of business and historical practice, are not added and are not an option for sodium replacement. Reformulation of these traditional meat products may cause loss of product functionality, shorter shelf-life, and considerable food safety concerns if salt was reduced.

Changing the formulation of a product can also result in reduced manufacturing efficiency and sustainability. Altering products requires more changeover time as the product moves through various facilities in the food supply chain. One important aspect of the food supply chain is ensuring adequate cold storage is available to maintain the highest food safety and quality expectations.

New formulations generally also necessitate allergen control, approval of new ingredients, and label revisions, which for meat and poultry products must receive regulatory approval from the Food Safety and Inspection Service after reformulation and safety testing is complete. This regulatory approval process can add weeks, sometimes months, to the reformulation process. Finally, using multiple ingredients to replace salt contradicts current consumer demands for processed products with fewer, more recognizable ingredients.

Challenges remain to further reduce sodium through reformulation. Concerns range from flavor perception, texture, function, cost, and yield, all of which impact consumer preference. Alternative salt with reduced sodium content can be achieved by utilizing combination of calcium and sodium salt or potassium and sodium salt. However, these alternative salts are primarily bitter and salty, and can have metallic, astringent, and irritative sensations. Sodium chloride can enhance the salty taste of other alternative salts while suppressing other tastes, especially bitterness from potassium and calcium salt. To reduce the amount of sodium in product formula, potassium and or calcium must be blended with sodium salt into the product formula proportionally. Achieving the correct balance to reduce the amount of sodium concentration in the product and limit the undesired bitter flavor on the product can be a challenge. For category

³⁶ <https://www.fda.gov/food/nutrition-food-labeling-and-critical-foods/sodium-reduction-us-food-supply-2010-2022-preliminary-assessment-progress>

leading products, the current flavor, taste, and consumer experience must be maintained, which would require significant technical expertise. Sodium replacers increase recipe cost, which increases overall food production costs. Sodium replacing ingredients can cost five to 20 times more than sodium chloride, with costs continuing to escalate due to demand. Continuous innovation is necessary to overcome the challenges to reducing sodium in products.

The *Dietary Guidelines for Americans* Inform Product Development.

The meat and poultry industry, and the food industry generally, is committed to providing safe, wholesome, and diverse nutritious products to consumers so they can make informed decisions when choosing the foods that best fit their personal lifestyle and family needs. The food industry uses outcomes of the *Guidelines* policy to guide much of its product development. For example, since the first *Guidelines* in 1980, and based on consumer research, the food and beverage industry has added new, healthier products to the food supply for consumers of all ages.

Over the years, the *Guidelines* have led to the development and increased availability and diversity of product choices that provide options for sodium, fat, sugars, caloric restriction, and fiber-rich products, among others. The Meat Institute encourages HHS and USDA to develop strategies to better educate the public on how to choose options that allow for the greatest adoption in their lifestyle. This will be achieved not by restricting red meat or processed foods, but by providing guidance on portion control and ways to create and choose healthier meals.

Consumers need practical, affordable, and achievable guidance demonstrating how to choose healthier alternatives or incorporate mixed dishes in a balanced diet. Guidance that does not consider how Americans live and eat will not be adopted and therefore will not improve public health outcomes. The American public would be well served with dietary guidance that provides strategies that help consumers achieve their healthy diet within their lifestyle constraints.

Dietary Guidance Should Be Practical, Affordable, and Achievable.

The *Dietary Guidelines* should be practical, affordable, and achievable. This common-sense approach incorporates a broad range of foods to meet nutrition needs over time and allows dietary choices based on taste and cultural preferences, health and economic status, and food availability.

Providing guidance to consumers on how they can make positive changes, even small ones, to their diet without abandoning foods they love can move the needle and lead to a measurable health impact. Small changes made over time are likely to be retained and improve health versus rejection of drastic changes by overly prescriptive guidance.

HHS and USDA Must Develop Final Policy With the Expertise of Food Scientists and Consumer Behaviorists.

The 2025 DGAC consisted of nutritional science experts, but lacked critical expertise in the area of consumer behavior and food science that would have made the recommendations realistic, not aspirational. Food scientists and behaviorists provide a translation perspective that

would have provided biological context resulting in the final DGAC recommendations being more robust and likely achievable. Due to the lack of this expertise, it is incumbent upon HHS and USDA to develop the final policy document with the guidance of food scientists and consumer behaviorists.

Why is this requirement so critical? Food scientists can assist in translating the biological significance of nutritional research in the perspective of food production, food processing, food preparation, and food biochemistry. Food scientists could prove or raise concerns in many of the epidemiological findings because associations may not be causal and should not be used in isolation, as it has not been as successful in identifying specific nutrients as causes to chronic diseases.³⁷ While many experts agree that causative relations between various foods and diseases likely exist, the evidence for many relations is weak.³⁸ As a result, food scientists are needed to put biological context around the nutritional epidemiological findings that are stated with certainty, using only the most strongly supported evidence instead of weak data and likely personal beliefs. Because of this, HHS and USDA need to include food scientists in developing the final policy document. Their expertise is important to provide context about the availability of food in the American diet and when crafting nutrition policy recommendations.

The absence of consumer behaviorists on the DGAC was concerning because behavior change is needed to make significant improvements in the health of Americans. After 45 years of dietary guidance, Americans have still not changed their eating habits. Many factors can explain the difference between the recommendations and consumer behavior, such as cultural forces, societal norms, family influences, personal food preferences, changes in meal patterns, food availability, advertising, and a lack of understanding of how to translate dietary guidance into realistic and permanent lifestyle behaviors, among others.^{39,40} But how do we overcome these factors?

Consumer behaviorists can translate the nutritional epidemiological findings into guidance that is achievable and attainable. Good nutritional policy should be developed while considering: how consumers think, feel, reason, and select between alternative foods, restaurants, etc.; how consumers are influenced by their environment; the consumers' behavior during decision-making; and the limitations of consumer knowledge and how that can hamper decisions. It is important to consider these factors and provide realistic guidance, as well as develop corresponding messaging that will help Americans achieve a more healthful diet.

³⁷ Alpers, D. H., et al. (2014). History and Impact of Nutritional Epidemiology. *Advances in Nutrition: An International Review Journal* 5(5): 534-536.

³⁸ Bohan Brown, M. M., et al. (2013). Nutritional epidemiology in practice: learning from data or promulgating beliefs? *Am J Clin Nutr* 97(1): 5-6.

³⁹ Rowe S, Alexander N, Almeida N, Black R, Burns R, Bush L, Crawford P, Keim N, Kris-Etherton P, Weaver C. Food science challenge: Translating the Dietary Guidelines for Americans to bring about real behavior change. *J Food Sci.* 2011;76:R29-R37.

⁴⁰ Webb D, Byrd-Bredbenner C. Overcoming consumer inertia to dietary guidance. *Adv Nutr.* 2015 Jul 15;6(4):391-6. doi: 10.3945/an.115.008441. PMID: 26178023; PMCID: PMC4496743.

For guidance to be adopted, information must be communicated so it is understandable and easily translatable. Guidance should focus on improving dietary habits within the foods Americans already consume; not the idealistic recommendations that will likely never be implemented because they may not be achievable or may be too confusing or expensive.

Guiding Americans on which nutrient rich food choices to make versus not to make, and focusing on portion guidance to provide “how to” practical advice, can help them make wise food choices within the context of the total diet. The *Guidelines* can help Americans achieve a healthful lifestyle by teaching them to focus on balance, variety and moderation while providing tools to make healthy food choices that work with their lifestyle.

Updates to the Existing Guidelines Must Be Clear and Consistent.

The Report provides considerations and suggested updates to the four guidelines from the 2020-2025 *Dietary Guidelines*. Generally, the suggested updates are appropriate; however, the messaging must be clear and consistent. For example, the guidelines focus on healthy patterns and nutrient density. Lean meat and poultry are recognized as nutrient-dense foods.⁴¹ Yet, the guidelines reference limiting saturated fat and sodium, which can be part of these nutrient-dense foods. The Departments must provide consistent language that nutrient-dense foods should not be reduced or eliminated from the diet because there may be inherent nutrients to limit. The 2025-2030 *Dietary Guidelines* should communicate to Americans that all foods can fit in healthy dietary patterns and that balance, variety and moderation are key.

Additional Scientific Disciplines, Including Food Scientists, Should be on the 2030 Advisory Committee.

The Meat Institute recognizes the tremendous time, energy, and dedication of the Committee and the USDA and HHS staff involved in delving through the nutritional data to translate research into recommendations based in sound science, a process the Meat Institute supports. However, the Meat Institute encourages USDA and HHS, when considering the make-up of the 2030 Committee, to include food scientists. This discipline plays an important role in contextualizing the availability of food in the American diet and is critical in making nutritional policy recommendations.

Food scientists can assist in translating the biological significance of nutritional research in the perspective of food production, food processing, food preparation, and food biochemistry. Food scientists could assist in interpreting many epidemiological findings because associations do not translate to causation. These studies also should not be considered in isolation, as they have not been as successful in identifying specific nutrients as causes of chronic diseases.⁴² Although many experts agree that causative relationships between various foods and diseases may exist, the

⁴¹ Appendix F-1: Glossary of Terms p. 7.

⁴² Alpers, D. H., et al. (2014). History and Impact of Nutritional Epidemiology. *Advances in Nutrition: An International Review Journal* 5(5): 534-536.

evidence for many relationships is weak.⁴³ As a result, food scientists are needed to provide biological context around the nutritional epidemiological findings often based upon weak associations yet presented with certainty, and that may reflect researchers' beliefs. Including a food scientist on future committees is essential given the Report's recommendation to continue to evaluate the role of ultra-processed foods.

Additionally, the Meat Institute supports the Committee's recommendation to convene scientists with diverse expertise in behavioral, implementation, and communication sciences to evaluate the science of dietary behavior change and make evidence-based recommendations for strategies to promote dietary intakes that align with *Dietary Guidelines for Americans* recommendations. Behavioral science can identify structural and social drivers of dietary intake that view individual behavior as being nested within complex and interacting interpersonal, organizational, community, and public policy levels. Implementation science provides an opportunity to bring evidence-based dietary guidelines, dietary interventions, and food policy into health care and community settings to move the population toward healthy eating and the goal of improving public health. Communication science is needed to communicate and connect evidence-based guidance on healthy eating to society in a way that is understandable, relevant, and actionable to the diversity of the U.S. population.⁴⁴ For the *Dietary Guidelines* to make meaningful changes in Americans' diets, a more comprehensive approach will help Americans make improved dietary choices.

Summary.

The *Dietary Guidelines for Americans* are intended to encourage Americans to focus on eating a healthy diet — one that focuses on foods and beverages that help achieve and maintain a healthy weight, promote health, and prevent disease.⁴⁵ After 45 years of dietary guidance, Americans have still not changed their eating habits. Many factors can explain the difference between the recommendations and consumer behavior such as cultural forces, societal norms, family influences, personal food preferences, changes in meal patterns, food availability, advertising, and a lack of an understanding of how to translate dietary guidance into realistic and permanent lifestyle behaviors, among others.⁴⁶ When developing the 2025-2030 *Dietary Guidelines for Americans*, it is important to consider these factors and provide realistic guidance that help Americans achieve a more healthful diet.

⁴³ Bohan Brown, M. M., et al. (2013). Nutritional epidemiology in practice: learning from data or promulgating beliefs? *Am J Clin Nutr* 97(1): 5-6.

⁴⁴ Part E. Chapter 1: Overarching Advice to the Departments p. 12

⁴⁵ Purpose of the Dietary Guidelines. <https://www.dietaryguidelines.gov/about-dietary-guidelines/purpose-dietary-guidelines>. Accessed February 2, 2025

⁴⁶ Rowe S, Alexander N, Almeida N, Black R, Burns R, Bush L, Crawford P, Keim N, Kris-Etherton P, Weaver C. Food science challenge: Translating the Dietary Guidelines for Americans to bring about real behavior change. *J Food Sci*. 2011;76:R29–R37.

Meat and poultry products play an important role in a healthy, well-balanced diet. Animal-derived proteins are the only single sources of all essential amino acids. By including meat and poultry in their diet, consumers can more easily fulfill their macronutrient requirements. The industry is committed to providing safe, wholesome, and diverse nutritional products to consumers so they can make educated decisions in choosing the foods that best fit their personal lifestyle and family needs. The industry responds to consumer wants and expectations regarding the production of meat and poultry products.

The Meat Institute acknowledges the important role federal nutrition policy and feeding programs, such as SNAP, WIC and CACFP, play in providing nutrition to various populations of Americans. Improving the diet of Americans is important in reducing adverse health outcomes. Yet, careful attention must be paid when developing the 2025-2030 *Dietary Guidelines for Americans* and related educational pieces to ensure there are no unintended consequences that could adversely affect health outcomes. The Meat Institute cautions against broad and sweeping changes because the tide of science often changes, as has happened with fat and cholesterol.

In summary, the 2025-2030 *Dietary Guidelines for Americans* should include meat and poultry as part of healthy American diet. The Guidelines should not discourage the consumption of red meat and processed products.

If you have questions about any aspect of these comments or would like to discuss them, please contact me at 202-587-4220. Thank you.

Respectfully submitted,



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