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Comment on FR Doc # 2019-12806

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Comment

RE: Evidence to Support the Need for Item Clusters in Food Pattern Modeling to Distinguish Fresh vs. Processed Meat and Use of AMDRs to Demonstrate Multiple Patterns to Achieve Nutrient Targets

The Beef Checkoff appreciates the opportunity to submit questions and evidence relevant to how fresh vs. processed meat is considered in food pattern modeling, as well as the use of flexible patterns within the Acceptable Macronutrient Distribution Range (AMDR). Importantly, the Committee appointed by the National Academies of Sciences, Engineering, and Medicine recognized the importance of food pattern modeling to accomplish the purpose of the Dietary Guidelines for Americans (DGA), as well as noting the opportunity to include "expansion of food patterns to show multiple ways to achieve targets." The Beef Checkoff is a producer-funded marketing and research program, which includes a significant commitment to supporting nutrition research to better understand beef's role in healthy diets.

As discussed during Meeting 5 of the 2020 DGAC, item clusters will be created during the food pattern modeling process, and those clusters will be populated using representative nutrient-dense foods. The 2015 DGAC item cluster for red meat indicates that nearly one-third of the cluster is represented by processed meat. Processed and fresh meats are not the same nutritionally, and this type of combination has been criticized by experts as contributing to errors of interpretation regarding meat intake levels and associated health outcomes. In fact, unique item clusters for fresh and processed meat may provide greater flexibility for food patterns to achieve nutrient targets, and is consistent with expert advice to avoid the combination of processed and unprocessed meat.

In addition, while the 2015-2020 DGA recognize that "...healthy eating patterns can be flexible with respect to the intake of carbohydrate, protein, and fat within the context of the AMDR," 18% protein is commonly modeled, yet the AMDR for protein ranges from 10-35% of energy. A recent food pattern modeling study (Wolfe et al, 2017) demonstrates that application of the higher end of the AMDR for protein (30%) to a 2000-calorie Healthy USDA Eating Pattern that replaces discretionary calories from added sugars and solid fats with higher protein foods meets nutrient intake recommendations for adults and can provide a more favorable nutrient intake profile compared to a lower (18%) protein diet.

Thank you for the opportunity to share the attached evidence, to help ensure the DGA is based on food pattern modeling data that recognizes the unique contributions of fresh vs processed meat through revised item clusters, and exercises the full range of the AMDR for protein.

Attachments (1)

Beef Checkoff Food Pattern Modeling Comments032720

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Food industry

National Cattlemen's Beef Association
a contractor to the Beef Checkoff

March 27, 2020

Barbara Schneeman, PhD
Chair, 2020-2025 Dietary Guidelines Advisory Committee

Ron Kleinman, MD
Vice-Chair, 2020-2025 Dietary Guidelines Advisory Committee

CC: 2020-2025 Dietary Guidelines Advisory Committee Members
U.S. Department of Agriculture
U.S. Department of Health and Human Services
Brandon Lipps, Deputy Undersecretary for Food and Nutrition Consumer Services

RE: Evidence to Support the Need for Item Clusters in Food Pattern Modeling to Distinguish Fresh vs. Processed Meat and Use of AMDRs to Demonstrate Multiple Patterns to Achieve Nutrient Targets

Dear Members of the Dietary Guidelines Advisory Committee (DGAC):

The Beef Checkoff appreciates the opportunity to submit questions and evidence relevant to how fresh vs. processed meat is considered in food pattern modeling, as well as the use of flexible patterns within the Acceptable Macronutrient Distribution Range (AMDR). Importantly, the Committee appointed by the National Academies of Sciences, Engineering, and Medicine (NASEM) recognized the importance of food pattern modeling to accomplish the purpose of the Dietary Guidelines for Americans (DGA), as well as noting the opportunity to include "expansion of food patterns to show multiple ways to achieve targets."[1] The Beef Checkoff is a producer-funded marketing and research program, which includes a significant commitment to supporting nutrition research to better understand beef's role in healthy diets.

As discussed during Meeting 5 of the 2020 DGAC, item clusters will be created during the food pattern modeling process, and those clusters will be populated using representative nutrient-dense foods. The 2015 DGAC item cluster for red meat indicates that nearly one-third of the cluster is represented by processed meat.[2] Processed and fresh meats are not the same nutritionally, and this type of combination has been criticized by experts as contributing to errors of interpretation regarding meat intake levels and associated health outcomes.[3] In fact, a recent analysis demonstrates that unique item clusters for fresh and processed meat may provide greater flexibility for food patterns to achieve nutrient targets, and is consistent with expert advice to avoid the combination of processed and unprocessed meat.[3,4]

In addition, while the 2015-2020 DGA recognize that "…healthy eating patterns can be flexible with respect to the intake of carbohydrate, protein, and fat within the context of the AMDR",[5] 18% protein is commonly modeled, yet the AMDR for protein ranges from 10-35% of energy.[6] A recent food pattern modeling study demonstrates that application of the higher end of the AMDR for protein (30%) to a 2000-calorie Healthy USDA Eating Pattern that replaces discretionary calories from added sugars and solid fats with higher protein foods meets nutrient intake recommendations for adults and can provide a more favorable nutrient intake profile compared to a lower (18%) protein diet.[6]

Thank you for the opportunity to share the attached evidence, to help ensure the DGA is based on food pattern modeling data that recognizes the unique contributions of fresh vs processed meat through revised item clusters, and exercises the full range of the AMDR for protein.

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1 National Academies of Sciences, Engineering, and Medicine. 2017. Redesigning the process for establishing the Dietary Guidelines for Americans. Washington, DC: The National Academies Press. doi: https://doi.org/10.17226/24883. Accessed March 20, 2020
2 Appendix E-3.1.A2. USDA Food Patterns—Item Clusters, Representative Foods, and Percent of Consumption
3 Gifford CL, O'Connor LE, Campbell WW, Woerner DR, Belk KE. Broad and Inconsistent Muscle Food Classification Is Problematic for Dietary Guidance in the U.S. Nutrients 2017;9(9).
4 Internal report. Data available upon request.
5 U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015–2020 Dietary Guidelines for Americans. 8th Edition. December 2015. Available at http://health.gov/dietaryguidelines/2015/guidelines/
6 Wolfe RR, et al. Optimizing Protein Intake in Adults: Interpretation and Application of the Recommended Dietary Allowance Compared with the Acceptable Macronutrient Distribution Range. Adv Nutr 2017;8:266-75.

Evidence to Support the Need for Item Clusters in Food Pattern Modeling to Distinguish Fresh vs. Processed Meat and Use of AMDRs to Demonstrate Multiple Patterns to Achieve Nutrient Targets
Evidence Overview and Supporting Citations

In their review of the DGA process, the Committee appointed by the National Academies of Sciences, Engineering, and Medicine (NASEM Committee) recognized the importance of food pattern modeling to accomplish the purpose of the Dietary Guidelines for Americans (DGA) by translating **"…nutritional recommendations into food intake recommendations that take account of the totality of the diet."[1] The NASEM Committee also recognized that "Food pattern modeling is dependent on the accuracy of the assumptions, which need to be presented transparently to facilitate broad understanding of the methodology."[1]** On March 10, 2020 protocols regarding food pattern modeling were updated on the 2020 Dietary Guidelines Advisory Committee (DGAC) website. The methodology outlined in the updated protocols was discussed during Meeting 5. Based on the information provided regarding the implementation of these protocols, we have follow-up questions and wish to offer **evidence for further consideration regarding the expansion of food modeling efforts to demonstrate the flexible macronutrient ranges afforded by the Acceptable Macronutrient Distribution Range (AMDR) and the opportunity to create distinct item clusters for fresh versus processed meat.**

Creation of item clusters that distinguish fresh from processed meat
On August 6, 2019[2] and again on March 6, 2020[3] we provided evidence, via written public comment, to the DGAC regarding best practices for recognition of specific meat types in diets and dietary patterns in an effort to support the formulation of high-quality, evidence-based dietary guidance for meat. Among the best practices highlighted in our evidence overview was recognition of **methods that define individual meat types and avoid overlap between meat groups, particularly as it relates to fresh versus processed meat.[2, 3]**

As discussed during Meeting 5 of the 2020 DGAC, and described in the corresponding protocol, to estimate the nutrients that will be obtained by consuming foods from various food groups, item clusters will be created and those clusters will be populated using representative *nutrient-dense foods*. While the item clusters for the 2020 DGAC have not yet been provided, the **2015 DGAC item cluster for red meat indicates that nearly a third of the cluster is represented by processed meat, including two different versions of ham along with beef hot dogs.[4]** *Processed and fresh meats are not the same nutritionally.* For example, while lean ham may be the most nutrient-dense representative food in the processed meat category, a consumption of the reference amounts customarily consumed (RACC) **of a leading brand of cooked ham provides up 571 mg of sodium while a fresh, cooked 97% lean beef patty (85 g) provides 48 mg of sodium.[5]** Similarly the "poultry" meat composite used in 2015 DGA food pattern modeling included 10% processed poultry or "luncheon meat".[4] The inclusion of processed meat along with fresh meat in the same item cluster may be consistent with the approach taken in most epidemiological studies, i.e. presenting results for the category "red and processed meat" without further specification, but this type of combination has been criticized by experts as there is no inherent correlation between consumption of one meat type with the other, and such combination contributes to errors of interpretation regarding meat intake levels and associated health outcomes.[6]

The 2020 DGAC has the ability to model individual fresh vs processed meat item clusters that would avoid misrepresentation of the nutrients expected from the consumption of fresh red meat and poultry. In fact, a modeling exercise has demonstrated that using the 2015 red and processed meat item cluster to add one additional ounce equivalent of meat to the 2015 Healthy U.S-style Eating Pattern would increase sodium

content of the pattern by 7%. In contrast, modeling the same added amount using a fresh beef item cluster results in roughly a half percent increase in sodium, or about one-tenth the sodium contributed by an additional ounce equivalent of the 2015 meat item cluster. Additionally, adding 1 ounce equivalent of fresh meat to the 2015 Healthy U.S-style Eating Pattern using a fresh beef item cluster increases the iron and choline contributed by this pattern, 42% and 26%, respectively.[7] **These data demonstrate that creation of unique, rather than combined, item clusters for fresh and processed meat for use in food pattern modeling may provide greater flexibility for development of food patterns, and is consistent with expert advice to avoid the combination of processed and unprocessed meat in the same category.**

Expansion of food patterns to show multiple ways to achieve nutrient intake targets

The NASEM Committee for the redesign of the DGA has observed the following, "…enhancements to the process could allow food pattern modeling to respond to a broader range of research questions, increasing its usefulness to the general population. Proposed enhancements include moving toward systems modeling, incorporating other factors and mechanisms that may affect the food composition and choice, further breaking down and representing the heterogeneity of the population and their behaviors, establishing more and different tailored scenarios, and conducting sensitivity analyses to determine how critical various food groups are as well as other key drivers."[1] In particular, the NASEM Committee notes, **"This includes expansion of food patterns to show multiple ways to achieve targets. To some degree, the Mediterranean and vegetarian patterns reflect this concept, but further deviations from the American norm could be explored."[1]** While the 2015-2020 DGA recognize that "…healthy eating patterns can be flexible with respect to the intake of carbohydrate, protein, and fat within the context of the AMDR,"[8] **18% protein is commonly modeled, but the Acceptable Macronutrient Distribution Range (AMDR) for protein ranges from 10-35% of energy**.[9]

A food pattern modeling study demonstrates that application of the **higher end of the AMDR for protein (30% of energy) to a 2000-calorie Healthy USDA Eating Pattern that replaces discretionary calories from added sugars and solid fats (e.g., commercial baked goods and snacks) with higher protein foods (e.g., lean meats, including lean beef) meets nutrient intake recommendations for adults and can provide a more favorable nutrient intake profile compared to a lower (18% of energy) protein diet.[9]** Implementing the full range of the AMDR in a variety of healthful dietary patterns may confer health benefits for older Americans, such as preserving muscle mass, improving strength and function, and supporting weight management and bone health.[10-12] **There is a strong body of scientific evidence that underscores the importance of higher intakes of high-quality protein to promote positive health outcomes across the lifespan, including healthy growth and development,[13, 14] achieving and maintaining a healthy body weight,[15, 16] improving metabolic function,[17] and reducing risk of chronic disease**.[18] For a complete overview of the evidence related to beneficial health outcomes with healthy, higher-protein dietary patterns, please consult our June 18, 2019 posting to the DGAC public comment docket.[19]

In closing, we look forward to food pattern modeling data from the 2020 DGAC that 1) recognizes the unique contributions of fresh vs processed meat through revised item clusters, and 2) exercises the full range of the AMDR for protein.

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