



May 13, 2022

Janet M. de Jesus, MS, RD

Office of Disease Prevention and Health Promotion
1101 Wootton Parkway, Suite 420
Rockville, MD 20852
RE: Docket 2022-08043

Dear Ms. de Jesus:

Dairy Council of California appreciates the opportunity to submit comments for consideration by the Departments of Agriculture (USDA) and Health and Human Services (HHS) on the Scientific Questions to be examined in support of the development of the Dietary Guidelines for Americans, 2025-2030.

Dairy Council of California is a nutrition education organization who has championed community health for more than a century. The organization empowers and collaborates with stakeholders, including educators, health professionals and community leaders, to elevate the health of children and families through the pursuit of lifelong healthy eating habits. Funded by California's dairy farm families and milk processors and under the guidance of California Department of Food and Agriculture, Dairy Council of California's nutrition education resources, which includes science-based nutrition curriculum and programs, educate millions of students and families each year in California and throughout the United States. Dairy Council of California also provides expertise and technical assistance to federal feeding programs in California to help ensure vulnerable populations have access to healthy food.

Thank you for the opportunity to submit these comments.

Sincerely,

A handwritten signature in black ink that reads "Tammy Anderson-Wise".

Tammy Anderson-Wise, MS, CAE
Chief Executive Officer
Dairy Council of California

A handwritten signature in black ink that reads "Ashley Rosales".

Ashley Rosales, RDN
Nutrition Science Officer
Dairy Council of California

2025 DGAC Questions (Proposed)

This comment is in support of:

“What is the relationship between dietary patterns consumed and:

- growth, size, body composition, risk of overweight and obesity, and weight loss and maintenance?
- risk of cardiovascular disease?
- risk of type 2 diabetes?
- risk of certain types of cancer (breast, colorectal, lung, prostate)?
- bone health?
- risk of cognitive decline, mild cognitive impairment, dementia, and Alzheimer’s disease?
- risk of sarcopenia?
- all-cause mortality?”

Suggested changes to question:

Recommend expanding list to include (1) cognition in childhood development such as academic achievement, learning and behavior; and (2) microbiome, immune system regulation and inflammatory markers.

Rationale for changes:

- (1) Dietary patterns impact cognitive health across the lifespan and fuel brain growth and development from the start. Nutrition lays the foundation for cognitive abilities, motor skills and socio-emotional development, which in turn profoundly influence success in school and economic opportunities later in life.¹ In addition to considering the relationship between dietary patterns and cognitive decline, it is important to understand the relationship between dietary patterns and cognitive health from the earliest stages of development.
- (2) There is a growing understanding of how the unique collection of bacteria that lives in the gut is impacted by dietary intake and how the gut microbiome plays a role in human health. The food people eat directly influences the microbiome, which in turn impacts metabolism and immunity, ultimately affecting health and risk for chronic diseases.² Because of the potential benefits to health, consumers are increasingly interested in foods that will have a positive impact on the gut microbiome. Advancing knowledge of the gut microbiome is driving science to look beyond the traditional nutrients in foods and examine lesser-understood components like bioactive compounds and microbes found within a food’s matrix, and the impact and/or lack of these components in dietary patterns should be considered.

References:

1. Schwarzenberg SJ, Georgieff MK et al. Advocacy for improving nutrition in the first 1000 days to support childhood development and adult health. *Pediatrics*. 2018;141(2):e20173716. doi: [10.1542/peds.2017-3716](https://doi.org/10.1542/peds.2017-3716)
2. Ogunrinola GA, Oyewale JO, Oshamika OO et al. The human microbiome and its impacts on health. *Int J Microbiol*. 2020; 8045646. DOI: [10.1155/2020/8045646](https://doi.org/10.1155/2020/8045646).

This comment is in relation to:

“What is the relationship between consumption of dietary patterns with varying amounts of ultra-processed foods and growth, size, body composition, risk of overweight and obesity, and weight loss and maintenance?”

Suggested changes to question:

“What is the relationship between consumption of dietary patterns with varying amounts of ultra-processed foods and growth, size, body composition, risk of overweight and obesity, and weight loss and maintenance, and how do they impact overall diet quality?”

Rationale for changes:

As currently written, this question only assesses health outputs and doesn’t consider the impact of ultra-processed foods on overall diet quality. Evidence shows that ultra-processed foods displace high-quality, nutrient-dense foods in diets.¹ Researchers consider ultra-processed foods as hyper-palatable foods, characterized by combinations of fat, sugar, sodium and refined carbohydrates designed to maximize taste and thereby increase consumption.² As a result, these foods may worsen diet quality by displacing important foods and nutrients Americans already fall short on. A large and growing body of evidence shows poor-quality diets are linked to worsening health outcomes.³ According to researchers at the Centers for Disease Control and Prevention, about half of the calories Americans consume come from ultra-processed foods, and it is taking a toll on health.⁴

References:

1. Monteiro CA, Moubarac JC, Cannon G, Ng SW, Popkin B. Ultra-processed products are becoming dominant in the global food system. *Obs Rev.* 2013;14(S2):21-28. doi: [10.1111/obr.12107](https://doi.org/10.1111/obr.12107)
2. Fazzino TL, Rohde K, Sullivan DK. Hyper-palatable foods: development of a quantitative definition and application to the US food system database. *Obesity.* 2019;27(11):1761-1768. doi:[10.1002/oby.22639](https://doi.org/10.1002/oby.22639)
3. Afshina, Sur PJ, Fay KA et al. Health effects of dietary risks in 195 countries, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. *Lancet.* 2019;393(10184):1958-1972. doi: [10.1016/S0140-6736\(19\)30041-8](https://doi.org/10.1016/S0140-6736(19)30041-8)
4. Too much ultra-processed foods linked to lower heart health. American Heart Association Newsroom website. <https://newsroom.heart.org/news/too-much-ultra-processed-foods-linked-to-lower-heart-health>. Published November 11, 2019. Accessed May 6, 2022.

This comment is in relation to:

“What is the relationship between dietary patterns consumed before and during pregnancy and lactation and developmental milestones, including neurocognitive development, in the child?”

Suggested changes to question:

We recommend adding a focus on the relationship between dietary patterns and maternal and infant micronutrient status.

Rationale for changes:

Understanding the relationship between dietary patterns during pregnancy and lactation and infant micronutrient status is essential, as there are several key nutrients that support fetal and infant growth and

neurodevelopment. For example, pregnant and breastfeeding women need higher amounts of some nutrients including vitamin B12, iodine and choline. In a 2013 study published in the Lancet, children with mothers that had low iodine status were shown to demonstrate lower verbal IQ and reading accuracy¹. Nutrition during the first 1,000 days impacts cognitive abilities, motor skills and socio-emotional development, which in turn profoundly influences health and success later in life². Additionally, scientific evidence increasingly suggests that eating a low-quality diet during pregnancy to two years of life raises the risk to the child for chronic diseases such as obesity, high blood pressure and diabetes², reinforcing the urgency to focus on diet quality and its relation to micronutrient status to better inform unique dietary needs during this critical life stage.

References:

1. Bath SC et al. Lancet, 2013. Doi:10.1016/S0140-6736(13)60436-5
2. Schwarzenberg SJ, Georgieff MK et al. Advocacy for improving nutrition in the first 1000 days to support childhood development and adult health. Pediatrics. 2018;141(2):e20173716. doi: [10.1542/peds.2017-3716](https://doi.org/10.1542/peds.2017-3716)

This comment is in relation to:

“Considering each life stage, should changes be made to the USDA Dietary Patterns (Healthy U.S.-Style, Healthy Mediterranean-Style, and/or Healthy Vegetarian), and should additional Dietary Patterns be developed/proposed based on:

- Findings from systematic reviews, data analysis, and/or food pattern modeling analyses
- Population norms (e.g., starchy vegetables are often consumed interchangeably with grains), preferences (e.g., emphasis on one staple grain versus another), or needs (e.g., lactose intolerance) of the diverse individuals and cultural foodways within the U.S. population?

Changes to Dietary Patterns may include increases or decreases in amounts of food groups/subgroups and/or recategorization of food groups/subgroups, as well as subsequent changes to calories available for other uses, including for added sugars.”

Suggested changes to question:

Consider adding the following bullet points:

- (1) Findings from systematic reviews, data analysis, and/or food pattern modeling analyses that promote diversity, wide-variety of nutrient-dense foods from both plant and animal sourced foods and support overall diet quality.
- (2) Microbiome, immune system regulation and inflammatory markers

Rationale for changes:

- (1) Access to high-quality foods like dairy, vegetables, fruits, whole grains and lean protein is important to ensure children and families have the nutrients needed for optimal health. As plant-based eating patterns and sustainable diets become further defined, it is critical to utilize the totality of evidence-based nutrition research, which continues to demonstrate the health-promoting benefits of a balanced eating approach that includes nutrient-dense plant and animal choices and embraces the specific nutrient needs of individuals, diverse cultures and economies.¹ Caution should be exercised to ensure that guidance supportive of plant-based, sustainable eating patterns does not unnecessarily narrow nutrient-dense food options like milk and dairy foods in recommendations for individuals. It is

important to ensure that foods that provide nutrients and support improved diet quality, such as milk and dairy foods, are not minimized in dietary pattern recommendations.

- (2) There is a growing understanding of how the unique collection of bacteria that lives in the gut is impacted by dietary intake and how the gut microbiome plays a role in human health. The food people eat directly influences the microbiome, which in turn impacts metabolism and immunity, ultimately affecting health and risk for chronic diseases. Because of the potential benefits to health, consumers are increasingly interested in foods that will have a positive impact on the gut microbiome. Advancing knowledge of the gut microbiome is driving science to look beyond the traditional nutrients in foods and examine lesser-understood components like bioactive compounds and microbes found within a food's matrix², and the impact and/or lack of these nutrients in dietary patterns should be considered.

References:

1. Comerford KB, Miller GD, Kapsak WR et al. The complementary roles for plant-source and animal-source foods in sustainable healthy diets. *Nutrients*. 2021;13(10):3469. DOI:[10.3390/nu13103469](https://doi.org/10.3390/nu13103469)
2. Mozaffarian D. *Adv Nutr*, 2019; 10(5):917S-923S. DOI:10.1093/advances/nmz053

This comment is in relation to: "In relation to the scientific question: What is the relationship between beverage consumption (beverage patterns, dairy milk and milk alternatives, 100% juice, low- or no-calorie sweetened beverages, sugar-sweetened beverages, coffee, tea, water) and:

- growth, size, body composition, risk of overweight and obesity, and weight loss and maintenance?
- risk of type 2 diabetes?"

Suggested changes to question:

Recommendation to also examine the relationship between beverage consumption and the microbiome, immune system regulation and inflammatory markers, as well as multiple disease states beyond diabetes, such as cardiovascular disease and cancer.

Rationale for changes:

Research on the importance of a healthy gut microbiome is growing, with increasing evidence of its role in supporting the health of other systems throughout the body. Beverages including dairy milk, milk alternatives, 100% juice, low-or no calorie sweetened beverages, sugar sweetened beverages, coffee, tea, kombucha and kefir all have varying levels of processing and nutrient content that affect their impact on the microbiome. Minimally processed beverages, like milk or fermented beverages such as kefir contain complex structures of nutrients and other bioactive compounds that may positively impact the microbiome¹. Additionally, beverages contribute to overall diet quality and nutrient intake and can potentially have a significant impact on risk of chronic disease or confer health benefits. Research questions can continue to examine the impact different beverages have on diet quality, the microbiome, immunity, inflammation, cardiovascular disease, and cancer at all life stages.

References:

1. Mozaffarian D. *Adv Nutr*, 2019; 10(5):917S-923S. DOI: [10.1093/advances/nmz053](https://doi.org/10.1093/advances/nmz053)

This comment is in relation to:

“What is the relationship between food sources of added sugars consumed and:

1. growth, size, body composition, risk of overweight and obesity, and weight loss and maintenance?
2. risk of type 2 diabetes?”

Suggested changes to question:

Recommendation to add the effects of the food matrix on metabolism and overall diet quality.

Rationale for changes:

Not all foods containing sugar are equal, and evidence shows that using sugar as an indicator of carbohydrate’s impact on health is highly dependent on the food source. Some high-quality food sources that contain carbohydrates and sugar, such as yogurt, kefir, fruit, 100% fruit juice and certain breakfast cereals, are shown to be beneficial to health. These foods contain naturally occurring sugars, and although they may contain limited added sugars, they also provide important nutrients needed for health¹. This scientific insight supports the importance of considering food matrices’ impacts on sugar metabolism, particularly for increasing consumption of nutrient dense foods, such as fruits, vegetables and dairy to improve diet quality.

References:

1. Sievenpiper JL. Low-carbohydrate diets and cardiometabolic health: the importance of carbohydrate quality over quantity. *Nutr Rev.* 2020;78(1):69-77. DOI:[10.1093/nutrit/nuz082](https://doi.org/10.1093/nutrit/nuz082)

This comment is in relation to:

What is the relationship between food sources of saturated fat consumed and risk of cardiovascular disease?

Suggested changes to question:

Amend question to look at food sources of various types of saturated fats consumed and health as well as disease risk. Recommend adding the following for consideration: (1) sources of saturated fat within various dietary patterns; (2) Disease risk expanded to include chronic diseases such as type 2 diabetes and cancer; (3) assess consumption of various types of saturated fat and positive health benefits such as cognitive development, growth, weight maintenance/satiety, metabolic pathways, hormones, fat-soluble vitamins.

Rationale for changes:

- (1) The reductionist approach to dietary guidance focuses myopically on isolated nutrients as the cause of disease and minimizes the important role that the food matrix, food synergy and overall dietary patterns has on health outcomes. Though U.S. Dietary Guidelines have historically posited that saturated fat causes cardiovascular disease and have thereby recommended reducing saturated fat in the diet, research shows that this may be oversimplifying the relationship. The impact of saturated fat depends on the food source, overall dietary pattern of the individual and their health status.¹ Expanding the question to consider sources of saturated fat within different dietary patterns will better address the functional and nutritional nuances present in saturated fats and allow for a more comprehensive view of the impact of saturated fat on health outcomes, specifically cardiovascular disease.
- (2) Saturated fat is frequently identified as a key nutrient to limit to reduce risk of chronic diseases, meriting the need to expand the question beyond looking solely at cardiovascular disease to consider food sources of saturated fat and the risks on chronic diseases beyond heart disease, including type 2 diabetes and cancer. Additionally, this question could also assess possible benefits of various saturated



fats present in healthy eating patterns, such as cognitive function, growth and development and satiety.

- (3) Dairy foods are often a source of saturated fat, among other fat types; however, scientists are beginning to understand more about dairy foods' unique food matrix and health-promoting benefits. A growing body of evidence suggests that full-fat dairy foods, particularly yogurt and cheese, are not associated with adverse effects on cardiometabolic health regardless of saturated fat and sodium content.² This question should explore how nutrient-dense animal source foods promote health benefits despite containing certain fats, and how the food matrix for those foods interacts, specifically within the context of healthy eating patterns.

References:

1. Unger AL, Torrez-Gonzales M, Kraft J. Dairy fat consumption and the risk of metabolic syndrome: an examination of the saturated fatty acids in dairy. *Nutrients*. 2019; 11, 2200. DOI:10.3390/nu11092200
2. Timon CM, O'Connor A, Bhargava N, Gibney ER, Feeney EL. Dairy consumption and metabolic health. *Nutrients*. 2020;12(10):3040. DOI:10.3390/nu12103040