



January 14, 2020

Barbara Schneeman, PhD  
Chair, 2020 Dietary Guidelines Advisory Committee  
c/o Eve Stoody, PhD  
Designated Federal Officer  
Center for Nutrition Policy and Promotion  
Food and Nutrition Service  
U.S. Department of Agriculture  
3101 Park Center Drive, Room 1034  
Alexandria, VA 22301

Dear Dr. Schneeman and Members of the 2020 Dietary Guidelines Advisory Committee:

Nutrition Policy Institute, University of California, Division of Agriculture and Natural Resources, is pleased to offer these comments to inform the work of the Dietary Guidelines Advisory Committee (DGAC) as it reviews evidence related to diet and health and writes its scientific report to advise the development of the *2020-2025 Dietary Guidelines for Americans* (DGA). Nutrition Policy Institute (NPI) conducts and translates policy-relevant research with the intent to create healthy environments for children, families and communities. NPI's work across a broad swathe of federal food programs, in community settings, and in partnership with public health professionals makes us acutely aware of the importance of the Dietary Guidelines for Americans in underlying food and nutrition policy, procurement and education in myriad settings.

These comments focus on nutrition for pregnant and lactating women and children from birth to 24 months. The comments are organized into sections based on DGAC subcommittee topics and questions.

### ***Pregnancy and Lactation Subcommittee***

With respect to **all topics and questions related to pregnancy and lactation:**

- The DGAC has an important opportunity to improve the nutritional status of U.S. women prior to conception and during pregnancy.<sup>1</sup> The prenatal period is a critical time to modify later chronic disease risk for mother and offspring.<sup>2</sup>

<sup>1</sup> Bodnar LM, et al. Racial or Ethnic and Socioeconomic Inequalities in Adherence to National Dietary Guidance in a Large Cohort of US Pregnant Women. *J Acad Nutr Diet.* 2017;117(6):867-877; Bailey RL, et al. Estimation of Total Usual Dietary Intakes of Pregnant Women in the United States. *JAMA Net Open.* 2019;2(6):e195967.

<sup>2</sup> Hanson MA, et al. The International Federation of Gynecology and Obstetrics (FIGO) Recommendations on Adolescent, Preconception, and Maternal Nutrition: "Think Nutrition First". *Int J Gynaecol Obstet.* 2015;131(Suppl 4):S213-S253.

- We encourage the DGAC to acknowledge the importance of nutrition prior to conception when examining pregnancy-related topics and questions.<sup>3</sup>
- We ask the DGAC to recognize the different nutritional needs of pregnant adolescents when examining pregnancy-related topics and questions.<sup>4</sup>

With respect to **dietary patterns during pregnancy**:

- We urge the DGAC to acknowledge that consuming a healthy dietary pattern before and during pregnancy helps to support a healthy pregnancy and optimal birth outcomes.<sup>5</sup>
- The best available evidence supports advising women to consume a similar dietary pattern during pregnancy as recommended by the 2015 DGA for the general U.S. adult population: high in vegetables, fruits, whole grains, nuts, legumes, low-mercury fish, low-fat dairy or nutritionally equivalent alternatives, and vegetable oils, and lower in red and processed meats, refined grains, added sugars, sodium, and saturated and trans fats.

With respect to **dietary patterns during lactation**:

- Evidence suggests that by consuming a healthy, nutrient-dense dietary pattern, breastfeeding mothers can increase the likelihood of sustaining lactation, support healthy growth and development of the infant, and achieve optimal postpartum weight loss.<sup>6</sup>
- To help ensure more lactating women obtain these benefits, we recommend that the DGAC advise them to consume a healthy dietary pattern—high in vegetables, fruits, whole grains, nuts, legumes, low-fat dairy or nutritionally equivalent alternatives, and low-mercury fish, and lower in red and processed meats, refined grains, added sugars, sodium, and saturated and trans fats.

<sup>3</sup> Hanson, 2015.

<sup>4</sup> Wallace JM. Competition for Nutrients in Pregnant Adolescents: Consequences for Maternal, Conceptus and Offspring Endocrine Systems. *J Endocrinol*. 2019.

<sup>5</sup> Raghavan R, et al. Dietary Patterns Before and During Pregnancy and Maternal Outcomes: A Systematic Review. *Am J Clin Nutr*. 2019a;109(Suppl\_7):705S-728S; Raghavan R, et al. Dietary Patterns Before and During Pregnancy and Birth Outcomes: A Systematic Review. *Am J Clin Nutr*. 2019b;109(Suppl\_7):729S-756S.

<sup>6</sup> Tahir MJ, et al. Higher Maternal Diet Quality during Pregnancy and Lactation Is Associated with Lower Infant Weight-For-Length, Body Fat Percent, and Fat Mass in Early Postnatal Life. *Nutrients*. 2019;11:632; Stendell-Hollis NR, et al. A Comparison of Mediterranean-Style and MyPyramid Diets on Weight Loss and Inflammatory Biomarkers in Postpartum Breastfeeding Women. *J Womens Health (Larchmt)*. 2013;22:48-57; Bertz F, Winkvist A, Brekke HK. Sustainable Weight Loss Among Overweight and Obese Lactating Women is Achieved With an Energy-Reduced Diet in Line with Dietary Recommendations: Results from the LEVA Randomized Controlled Trial. *J Acad Nutr Diet*. 2015;115:78-86; Huseinovic E, et al. Effectiveness of a Weight Loss Intervention in Postpartum Women: Results from a Randomized Controlled Trial in Primary Health Care. *Am J Clin Nutr*. 2016;104:362-70. Sen S, et al. Dietary Inflammatory Potential during Pregnancy Is Associated with Lower Fetal Growth and Breastfeeding Failure: Results from Project Viva. *J Nutr*. 2016;146:728-36.

- Exposing infants to a variety of flavors through the breastmilk from mothers who eat a variety of healthy foods can also increase acceptance of healthy foods of children later in life.<sup>7</sup>

### ***Beverages and Added Sugars Subcommittee***

With respect to **beverage consumption during pregnancy and lactation:**

- We urge the DGAC to adopt expert recommendations for pregnant women to avoid consuming soda and other sugary drinks to prevent excessive energy intake during pregnancy.<sup>8</sup>
- We further urge inclusion of specific recommendations promoting drinking water as the substitute for soda and other sugary drinks; awareness of sugar content and of the health risks of sugary drinks can be low.<sup>9, 10</sup>

### ***Birth to 24 Months Subcommittee***

With respect to the **recommended duration, frequency and volume of exclusive human milk and/or infant formula feeding:**

- We urge the DGAC to recommend exclusive breastfeeding as the superior method of infant feeding from birth to approximately six months of age. Breastfeeding should continue through at least 12 months of age as complementary foods and beverages are introduced. These recommendations are supported by broad consensus among public health organizations and experts and evidence demonstrating health benefits for the child and the mother.<sup>11</sup>
- In the absence of breastfeeding, or after breastfeeding is discontinued, infant formula is the only acceptable replacement for human milk until 12 months of age.
- Because some mothers are unable or choose not to breastfeed exclusively, the DGAC should address opportunities to improve the nutritional quality of infant formula and

<sup>7</sup> Ventura AK. Does Breastfeeding Shape Food Preferences? Links to Obesity. *Ann Nutr Metab.* 2017;70 Suppl 3:8-15.

<sup>8</sup> American College of Obstetricians and Gynecologists. Healthy Eating. November 2013.

<https://www.acog.org/Patients/FAQs/Healthy-Eating?IsMobileSet=false#intake>; Procter SB, Campbell CG.

Position of the Academy of Nutrition and Dietetics: Nutrition and Lifestyle for a Healthy Pregnancy Outcome. *J Acad Nutr Diet.* 2014;114:1099-1103; Perrine CG, et al. Some Subgroups of Reproductive Age Women in the United States May Be at Risk for Iodine Deficiency. *J Nutr.* 2010;140:1489-94; Pawlak R. To Vegan or Not to Vegan When Pregnant, Lactating, or Feeding Young Children. *Eur J Clin Nutr.* 2017;71:1259-62; Harvey NC, et al. Vitamin D Supplementation in Pregnancy: A Systematic Review. *Health Technol Assess.* 2014;45(18).

<sup>9</sup> Miller C, et al. Who drinks sugar sweetened beverages and juice? An Australian population study of behaviour, awareness and attitudes. *BMC Obes.* 2019;6(1).

<sup>10</sup> Park S, et al. Knowledge of Sugar-Sweetened Beverage-Related Health Conditions and Sugar-Sweetened Beverage Intake among US Hispanic Adults. *J Nutr Educ Behav.* 2017;49(7):S81-S82

<sup>11</sup> American Academy of Pediatrics. Breastfeeding and the Use of Human Milk. *Pediatrics.* 2012;129:e827-41; World Health Organization. Infant and Young Child Feeding. February 16, 2018. <https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding>; World Health Organization. *Global Strategy for Infant and Young Child Feeding.* 2003.

formula-feeding practices. In particular, iron and protein content of infant formula are subjects of ongoing controversies and worthy of the DGAC's attention and comment.<sup>12</sup>

With respect to **complementary feeding**:

- Consistent with existing public health recommendations, we urge the DGAC to recommend that complementary foods and beverages (CFBs) be introduced when the infant is developmentally ready, around six months of age; ideally introduction of CFBs will coincide with about six months of exclusive human milk feeding, with breastfeeding continuing for a minimum of one year. Introduction of complementary foods should not occur before four or after seven months of age.<sup>13</sup>
- Caregivers need recommendations on types and amounts of foods and beverages for infants and toddlers based on the best available scientific evidence. Where there are gaps in the evidence on topics of public health importance, we ask the DGAC to endorse existing authoritative guidelines for feeding infants and toddlers that are supported by robust expert consensus.<sup>14</sup>
- There is broad agreement among recommendations from authoritative health organizations and experts that specific foods and beverages should be limited in the first two years of life. We encourage the DGAC to consider these existing recommendations in addition to its systematic review findings when making recommendations. Specifically, we agree with recommendations of authoritative health organizations, such as those from Healthy Eating Research,<sup>15</sup> that:

<sup>12</sup> Hernell O, et al. Summary of Current Recommendations on Iron Provision and Monitoring of Iron Status for Breastfed and Formula-Fed Infants in Resource-Rich and Resource-Constrained Countries. *J Pediatr*. 2015;167(Suppl):S40-S47; Fewtrell M, et al. Complementary Feeding: A Position Paper by the European Society for Pediatric Gastroenterology, Hepatology, and Nutrition (ESPGHAN) Committee on Nutrition. *J Pediatr Gastroenterol Nutr*. 2017;64:119-132.

<sup>13</sup> Fewtrell M, et al. Complementary Feeding: A Position Paper by the European Society for Pediatric Gastroenterology, Hepatology, and Nutrition (ESPGHAN) Committee on Nutrition. *J Pediatr Gastroenterol Nutr*. 2017;64:119-132.

<sup>14</sup> Perez-Escamilla R, et al. *Feeding Guidelines for Infants and Young Toddlers: A Responsive Parenting Approach*. Healthy Eating Research. 2017: 36-37; Fewtrell, 2017; American Academy of Pediatrics. Complementary Feeding. In: Kleinman R, Greer F, eds. *Pediatric Nutrition* 2019: 163-188; Health Canada, Canadian Paediatric Society, Dietitians of Canada, Breastfeeding Committee for Canada. *Nutrition for Healthy Term Infants: Recommendations from Six to 24 Months*. 2014. <https://www.canada.ca/en/health-canada/services/canada-food-guide/resources/infant-feeding/nutrition-healthy-term-infants-recommendations-birth-six-months/6-24-months.html>; U.S. Department of Agriculture. Updated Child and Adult Care Food Program Meal Patterns: Infant Meals. [https://fns-prod.azureedge.net/sites/default/files/cacfp/CACFP\\_InfantMealPattern\\_FactSheet\\_V2.pdf](https://fns-prod.azureedge.net/sites/default/files/cacfp/CACFP_InfantMealPattern_FactSheet_V2.pdf); U.S. Department of Agriculture. Updated Child and Adult Care Food Program Meal Patterns: Child and Adult Meals. [https://fns-prod.azureedge.net/sites/default/files/cacfp/CACFP\\_MealBP.pdf](https://fns-prod.azureedge.net/sites/default/files/cacfp/CACFP_MealBP.pdf).

<sup>15</sup> Lott M, et al. *Healthy Beverage Consumption in Early Childhood: Recommendations from Key National Health and Nutrition Organizations. Consensus Statement*. Healthy Eating Research. 2019. <https://healthyeatingresearch.org/wp-content/uploads/2019/09/HER-HealthyBeverage-ConsensusStatement.pdf>; Perez-Escamilla, 2017.

- Infants less than one year of age should avoid cow’s milk and plant-based alternatives, fruit juice, sugar-sweetened beverages, and foods with added salt and sugars;
- Toddlers should avoid consuming excess cow’s milk, fruit juice, and added sugar and salt; and
- Children from birth to 24 months should avoid beverages containing low- or no-calorie sweeteners or caffeine.
- Plain drinking water be introduced in a cup during mealtimes starting between ages 6 to 12 months and that plain drinking water should be the “go-to” drink, along with milk, from ages 2 to 5.
- Consistent with advice of other public health experts,<sup>16</sup> we urge the DGAC to recommend that infants and young children categorically avoid sugary drinks and other sources of excess added sugars.
  - Guidance should be included that advises parents that infants – even those fed infant formula – do not need to be transitioned to toddler formulas. Starting at 12 months of age, children should transition to whole cow’s milk, followed by low-fat (1%) or non-fat (skim) milk from age 2 years on.<sup>17</sup> Toddler “milks” (variously called “transition,” “weaning,” or “follow up” formulas) are not recommended<sup>18</sup> as they offer no clear nutritional advantage, and can expose children to added sugars that they do not need.<sup>19</sup>
  - We further urge inclusion of specific recommendations promoting drinking water as the substitute for soda and other sugary drinks; parental attitudes about sugary drinks are an important factor not only in their own consumption habits but in what they provide infants and toddlers.<sup>20</sup>

### ***Pregnancy, Lactation, and Birth-24 Months Nutrition Research Needs***

The DGAC has a platform to influence federal officials and other stakeholders to prioritize nutrition research to inform future updates to the DGA and other critical nutrition policies and programs. We ask the DGAC to delineate the research needed to fill gaps and limitations

<sup>16</sup> Lott, 2019; Perez-Escamilla, 2017; Fidler, 2017; Vos MB, et. al. Added Sugars and Cardiovascular Disease Risk in Children. A Scientific Statement from the American Heart Association. *Circulation*. 2017; 135:e1017-34.

<sup>17</sup> Perez-Escamilla R et al. on behalf of the RWJF HER Expert Panel on Best Practices for Promoting Healthy Nutrition, Feeding Patterns, and Weight Status for Infants and Toddlers from Birth to 24 Months. Feeding Guidelines for Infants and Young Toddlers: A Responsive Parenting Approach. Durham, NC: Healthy Eating Research, 2017. Available at: [https://healthyeatingresearch.org/wp-content/uploads/2017/02/her\\_feeding\\_guidelines\\_report\\_021416-L.pdf](https://healthyeatingresearch.org/wp-content/uploads/2017/02/her_feeding_guidelines_report_021416-L.pdf)

<sup>18</sup> Lott M, et al. Healthy Beverage Consumption in Early Childhood: Recommendations from Key National Health and Nutrition Organizations. Technical Scientific Report. Durham, NC: Healthy Eating Research, 2019. Available at: <https://healthydrinkshealthykids.org/app/uploads/2019/09/HER-HealthyBeverageTechnicalReport.pdf>.

<sup>19</sup> World Health Organization. Infant and Young Child Feeding. February 2018. Available at: <https://www.who.int/en/news-room/fact-sheets/detail/infant-and-young-child-feeding>.

<sup>20</sup> Woo Baidal JA, et al. Sugar-Sweetened Beverage Attitudes and Consumption During the First 1000 Days of Life. *Am J Public Health*. 2018;108(12):1659-1665.

in knowledge with respect to diet during pregnancy and lactation and from birth to 24 months.

We appreciate the opportunity to provide input on the DGAC's review of the evidence and development of recommendations on nutrition during pregnancy and lactation and for infants and toddlers from birth to 24 months.

Thank you for your consideration of our comments.

Sincerely,

*Lorrene D. Ritchie*

Lorrene Ritchie, PhD, RD  
Director and CE Specialist  
Nutrition Policy Institute  
University of California, Division of Agriculture and Natural Resources  
[LRitchie@ucanr.edu](mailto:LRitchie@ucanr.edu)  
510-642-3589