



March 30, 2018

Dr. Donald Wright  
Deputy Assistant Secretary for Health  
Office of Disease Prevention and Health Promotion  
Office of the Assistant Secretary for Health  
United States Department of Health and Human Services  
11001 Wootton Parkway, Suite LL 100  
Rockville, MD 20852

Mr. Brandon Lipps  
Administrator  
Food and Nutrition Service  
United States Department of Agriculture  
3101 Park Center Drive  
Alexandria, VA 22302

Kristin Koegel  
Food and Nutrition Service  
Center for Nutrition Policy and Promotion  
United States Department of Agriculture  
3101 Park Center Drive, Suite 1034  
Alexandria, VA 22302

**Re: Topics and comments to be examined in the review of the scientific evidence supporting the development of the 2020-2025 Dietary Guidelines for Americans; Docket No. FNS-2018-0005-0001**

Dear Dr. Wright, Mr. Lipps, and Ms. Koegel

Thank you for this opportunity to comment on the topics and questions to be addressed in the 2020 Dietary Guidelines for Americans (DGAs). The United States Breastfeeding Committee (USBC) is an independent nonprofit coalition of more than 50 nationally influential professional, educational, and governmental organizations that share a common mission to drive collaborative efforts for policy and practices that create a landscape of breastfeeding support across the United States. The USBC commends the decision to include guidelines for pregnant women and young children from birth to 24 months because the dietary intake during gestation and from birth through two years is essential for building a foundation for life-long health.

The 2020 Dietary Guidelines for Americans will be critical to the health of our nation's mothers and children. The guidelines will serve as a trusted source of information for parents, health care providers, policymakers and others who influence the lives of Americans. Furthermore, the guidelines will provide critically important guidance with which to develop or modify programs and policies that aim to prevent disease. Of particular importance to our organization, these guidelines will inform the dietary standards for critically important federal

4044 North Lincoln Avenue, # 288 • Chicago, IL 60618 • Phone: 773/359-1549 • FAX: 773/313-3498

E-mail: [office@usbreastfeeding.org](mailto:office@usbreastfeeding.org) • Website: [www.usbreastfeeding.org](http://www.usbreastfeeding.org)

nutrition programs that serve pregnant and post-partum women, infants and young children, such as the Special Supplemental Nutrition Program for Women, Infants and Children (WIC), the Supplemental Nutrition Assistance Program (SNAP) and the Child and Adult Care Food Program (CACFP). These programs are foundational to the health and nutrition of children and families in the United States.

Pregnancy and the first two years of life offer a unique window of opportunity to build healthier and more prosperous futures. Evidence shows that proper nutrition during pregnancy and the first years of a child's life provides the essential building blocks for brain development, normal growth and an effective immune system. In addition, a growing body of scientific research in epigenetics indicates that the foundations for lifelong health—including predispositions to obesity and certain chronic diseases—are largely set during pregnancy and the first two years.

That is why it is so critical that the 2020 Dietary Guidelines:

1. Are structured to accurately align with known transitional periods in pregnancy, lactation, infancy, and early childhood.
2. Explain the benefits of breastfeeding and focus on both short- and long-term health and developmental outcomes, as well as related issues such as: neurocognitive development, taste preference formation, ability to achieve and recognize satiety, self-regulation, childhood origins of adult disease, infection risk and immunity.
3. Address the importance of avoiding added sugars in all forms, including corn syrup, corn syrup solids, sucrose, corn maltodextrin (common ingredients in infant formulas).
4. Address the impact of nutrition during pregnancy and childhood on the short and long-term health of women, infants and young children.
5. Address food insecurity, including the unique ways it impacts pregnant and post-partum women, infants and young children.
6. Address the importance of feeding styles in ensuring healthy socialization to eating.
7. Be culturally relevant. Identify and address religious and cultural factors related to dietary patterns during pregnancy and lactation, as well as infant and young child feeding practices across the continuum from harmful to beneficial.
8. Include breastfeeding research and data free of formula industry bias.

In order to support the creation of guidelines for mothers and young children, we submit the following recommendations:

**Revise the structure of the topics and questions to more accurately reflect key transitional periods.**

The USBC recommends that the topics and questions be reframed in order to address:

- Children 0-6 months: the period of sole nutrient source feeding
- Children 6-24 months: this includes the periods of complementary [6-12 months] and transitional feeding [12-24 months]
- Preconceptional and pregnant women
- Lactation and post-partum recovery

We encourage you to either a) create the following new life stages as recommended above; or b) maintain the current life stages, but evaluate the topics and questions separately for each of the four aforementioned groups.

There are many differences in the nutritional and dietary needs of infants younger than six months and those between the ages of 6 months and 2 years. In particular, infants younger than six months should be exclusively

fed human milk and/or infant formula (as opposed to common practice of introducing calorically and nutritionally empty foods before 6 months of age).

The nutritional and dietary needs of pregnant women also differ from those of postpartum women. For example, scientific data suggests that pregnant women should avoid consuming certain foods that are acceptable for postpartum women, even if they are breastfeeding. Further, pregnant women need different nutrient supplements than postpartum breastfeeding and non-breastfeeding women<sup>1</sup>.

Finally, it is essential to explore the differences in health outcomes among infants fed human milk, those fed infant formula, and those fed a combination of the two in order to create recommendations that help families make optimal decisions and to create recommendations that acknowledge the realities of infant feeding. We know that families experience uncertainty around infant feeding, which are not helped by ubiquitous conflicting information from many sources, impacting infant nutrition and health. The Dietary Guidelines provides an opportunity to address this public health concern by offering clear and consistent guidance on the differences between human milk and infant formula, breastfeeding and bottle-feeding, and other infant feeding practices.

## **Topic 1: Pregnancy & Lactation**

### **New topic: Diet quality**

#### **Suggested questions:**

- What is the relationship between diet quality during pregnancy and 1) risk of gestational diabetes; 2) risk of hypertensive disorders during pregnancy; 3) gestational age at birth; and 4) birth weight standardized for gestational age and sex; 5) the risk of excessive weight gain during pregnancy; 6) the micronutrient status of the mother and infant; 7) the long-term health of both mothers and infants; and 8) the infant's predisposition to chronic disease later in life?
- What is the relationships between diet quality of post-partum women and 1) excessive weight gain; 2) the short and long-term health of mothers; and 3) micronutrient status?

#### **Rationale**

##### *Relevance:*

The food that a woman eats before, during and after pregnancy has an impact on the health of her infant as well as on her own short- and long-term health.

##### *Importance:*

The impact that diet quality has on women's health shows why it is so important that the topics and questions that inform the 2020-2025 DGAs include an emphasis on maternal health. The U.S. has the highest maternal mortality rate of any wealthy industrialized country in the world – questions and topics highlighting women's health outcomes will provide opportunities to better understand the nutritional needs of women in and around pregnancy.

Evidence clearly shows that diet quality and content during pregnancy impacts women's lifelong health. Diet quality is related to the micronutrient status and weight of women, factors that are intrinsically linked to birth outcomes and the health of mothers. Nearly half of women in the U.S. gain an excessive amount of weight during pregnancy<sup>ii</sup>. Being overweight or obese can create or exacerbate complications, such as preeclampsia and gestational diabetes, which lead to higher-risk pregnancies. Similarly, key nutrients play important roles in women's health during and after pregnancy. It is clear that diet plays a critical role in the health and well-being of women, both during and after pregnancy.

##### *Potential Federal Impact:*

Guidance highlighting maternal health would significantly inform Federal food and nutrition policies and programs such as WIC. As the supplemental foods available in this program align with the Dietary Guidelines, the food available to women and very young children using this program would be directly impacted by the content of these guidelines. The advice and recommendations that women receive through WIC counselors and staff would also be impacted.

*Avoiding Duplication:*

There are currently no federal nutrition guidelines for pregnant women.

**Topic 1: Infants & Toddlers Birth to 24 Months (Healthy, Full-Term Infants)**

**Original topic and questions: Recommended duration of exclusive human milk or infant formula feeding**

- What is the relationship between the duration of exclusive human milk or infant formula consumption and 1) growth, size, and body composition; 2) food allergies and other atopic allergic diseases; and 3) "long-term health outcomes?"

**Suggested changes**

- Add short and long-term health outcomes, neurocognitive development, self-regulation, taste preference formation, infection risk and immunity to the topic.
- Add a question about the timing of initiation of exclusive breastfeeding.

**Rationale:**

*Relevance:*

Early introduction and sufficient duration of breastfeeding are key to the short and long-term health and development of infants. The timing of introduction of breastmilk is within in the scope of the DGAs and relevant because of the impact that timing of introduction has on the success and duration of breastfeeding. Information about the **timing of initiation** will help families (and those that support them) meet their breastfeeding goals.

*Importance:*

Low breastfeeding rates are a public health concern and early initiation is a vital tool for addressing it. **Early introduction of breastmilk**, defined as breastfeeding within the first hour of birth, can help to ensure that infants consume colostrum, which is beneficial to the immunity and overall short and long-term health of the infant. Further, early introduction can make it easier for mothers to reach their goals related to the duration of exclusive breastfeeding.

**Short and long-term health outcomes** must be considered as part of the questions in this topic because new research in the fields of neuroscience and the early origins of adult health is shedding light on how our brains develop, how our bodies become susceptible to diseases and how our capacities and skills are either nourished or thwarted – beginning during pregnancy and through the first two years of life. A growing body of scientific research indicates that the foundations for lifelong health—including predispositions to obesity and certain chronic diseases—are largely set during pregnancy and the first two years. Emerging research also indicates that the effects of poor nutrition early in life impact not only a child’s health but also that of the child’s offspring. In this way, the damaging effects caused by poor nutrition in early life have the potential to cascade down through generations of children and lock families into a cycle of poor health.

Pregnancy and the first two years are a unique opportunity to help children develop **taste preferences** for healthy foods that will make it easier to eat according to the recommendations laid out in the

Dietary Guidelines for the rest of their lives. The first two years are a critical period when children learn what and how to eat.

The first two years are also an important time for children in terms of developing their **self-regulation skills**. Self-regulation includes important skills for maintaining a healthy weight throughout life - like understanding when one is full and being able to stop eating. Breastfeeding facilitates a naturally “responsive style” of meeting babies’ needs. With responsive feeding, a parent or caregiver attends to a child’s signals of hunger or fullness and responds appropriately.<sup>iii</sup> Through breastfeeding, a mother can learn to allow her baby to guide her as he regulates his own intake of food and learns to stop eating when he feels full—a skill that is important throughout life.

Nutrition during pregnancy and the first years of a child’s life provides the essential building blocks for **neurocognitive development**. It lays the foundation for cognitive abilities, motor skills and socio-emotional development, which in turn profoundly influences success in school and economic opportunities later in life. Poor nutrition can damage the healthy development of the brain in two ways: first, directly through the absence of key nutrients required for proper cognitive functioning and neural connections, and second, indirectly through the “toxic stress” experienced by a young child whose family has experienced prolonged or acute adversity, such as food insecurity.

From birth through the first year, breastfeeding provides unparalleled brain-building benefits and gives babies the healthiest start to life. Because of the unsurpassed benefits of breastfeeding, the world’s leading health agencies including the World Health Organization (WHO) and the American Academy of Pediatrics (AAP) recommend that babies are fed only breastmilk for their first 6 months.

In addition to the brain-building benefits it provides, breastfeeding gives babies the healthiest start to life. The nutritional and immunological properties unique to breastmilk help protect babies from infection and illness while simultaneously boosting their immunity. Breastfeeding is key to helping reduce infant mortality as breastfed infants are less likely to die as a result of Sudden Infant Death Syndrome (SIDS)—a leading cause of infant mortality in the U.S.—as well as respiratory infections and necrotizing enterocolitis, which is a devastating condition mainly affecting premature babies.<sup>iv</sup> There is also now compelling evidence showing that a longer duration of breastfeeding is associated with lower risk for overweight, obesity and type-2 diabetes later in life.<sup>v</sup> It is not just the babies who benefit from breastfeeding. For every year a mother breastfeeds, she significantly reduces her risk of developing ovarian cancer, invasive breast cancer and heart disease.<sup>vi,vii</sup>

*Potential Federal Impact:*

These guidelines will inform the dietary standards for critically important federal nutrition programs that serve young children and their families such as the WIC, SNAP and CACFP. These programs are foundational to the health and nutrition of children and families in the United States.

*Avoiding Duplication:*

There are currently no federal nutrition guidelines for pregnant women and children under age

**Topic 2: Infants & Toddlers Birth to 24 Months (Healthy, Full-Term Infants)**

**Original topic and questions: Frequency and volume of human milk and/or infant formula feeding**

- What is the relationship between the frequency and volume of human milk and/or infant formula consumption and 1) micronutrient status; and 2) growth, size, and body composition?

### **Suggested changes**

- Add short and long-term health outcomes, neurocognitive development, self-regulation, taste preference formation, infection risk and immunity to the topic.

### **Rationale**

#### *Relevance:*

Short and long-term health outcomes; neurocognitive development; self-regulation; taste preference formation; and infection risk and immunity are all relevant to the DGAs because they are each affected by the foods that are eaten during the first two years.

#### *Importance:*

For the importance of short and long-term health outcomes; neurocognitive development; self-regulation; taste preference formation; and infection risk and immunity please see the rationale section for number 3, topic 1.

#### *Potential Federal Impact:*

Please see the Potential Federal Impact section for number 3, topic 1.

#### *Avoiding Duplication:*

Please see the Avoiding Duplication section for number 3, topic 1.

### **Topic 2: Infants & Toddlers Birth to 24 Months (Healthy, Full-Term Infants)**

#### **Original topic and questions: Complementary foods and beverages\*: Timing of introduction, types, and amounts. \*Beverages (cow's milk, water, 100% fruit juice, sugar-sweetened beverages, milk alternatives)**

- What is the relationship between complementary feeding and 1) micronutrient status; 2) growth, size, and body composition; 3) developmental milestones; 4) food allergies and other atopic allergic disease; and 5) bone health?
- What is the relationship between complementary feeding, including foods and beverages, and achieving nutrient and food group recommendations of infants and toddlers?

### **Suggested changes:**

- Add short and long-term health outcomes, neurocognitive development, self-regulation and taste preference formation to the topic.
- Address the negative health impacts of early introduction of solid foods (before 6 months) in the questions.
- Address the consumption of fruit juice as a secondary, less-desirable means of consuming nutrients that are found in whole fruits and vegetables-- the primary recommended source of these nutrients
- Add the following two new questions:
  - o What are the long-term health impacts of fruit juice and sugar-sweetened beverages including impacts on short and long-term growth and obesity risk?
  - o What is the relationship between diet quality and 1) excessive weight gain; 2) short and long-term health outcomes; and 3) micronutrient status?

### **Rationale**

#### *Relevance:*

Short and long-term health outcomes; neurocognitive development; self-regulation; taste preference formation; and infection risk and immunity are all relevant to the DGAs because they are each affected by the foods that are eaten during the first two years. The DGAs must address the early introduction of

complementary foods because early introduction can have a large and lasting impact on a mother's ability to reach her breastfeeding goals.

The new question - **What are the long-term health impacts of fruit juice and sugar-sweetened beverages including impacts on short and long-term growth and obesity risk?** – is relevant because fruit juice and other sweet beverages are often consumed by children under 2 years of age. Additionally, addressing consumption of juice only after stressing the importance, first and foremost, of whole fruits and vegetables in the diet is relevant because fruit juice offers no nutritional advantage over whole fruit, but does lack most of the fiber of whole fruit, and the processing and manufacturing processes may decrease the vitamin and mineral content of the fruit juice compared to the whole fruit.<sup>viii</sup>

The new question - **What is the relationship between diet quality and 1) excessive weight gain; 2) short long-term health outcomes; and 3) micronutrient status** – is relevant because the quality of the diet (in particular, the consumption of fresh fruits and vegetables) is key to good health.

*Importance:*

Analysis reveals that almost 40% of mothers in the U.S. first gave their babies solid foods before their babies were 4 months of age.<sup>ix</sup> This reveals a knowledge gap – and puts infants at risk for poorer nutrition. If those are replaced by foods too early, babies are at risk for poorer nutrition.

The new question - **What are the long-term health impacts of fruit juice and sugar-sweetened beverages including impacts on short and long-term growth and obesity risk?** – is important because more than half of toddlers and preschoolers drink one or more sugar-sweetened beverages per day. In fact, on any given day, a young child in America is more likely to get sweets or sugar-sweetened beverages than a serving of fruit or a vegetable.<sup>x</sup>

The new question - **What is the relationship between diet quality and 1) excessive weight gain; 2) short long-term health outcomes; and 3) micronutrient status** – is important because the quality of the diet (in particular, the consumption of fresh fruits and vegetables) is essential to the health of children. Older infants and toddlers need diverse, nutritious foods to fuel their growth and development. A study that analyzed over a decade of dietary patterns in children from birth to 2 years in the U.S. found that only 40% of infants and toddlers regularly eat vegetables.<sup>xi</sup>

*Potential Federal Impact:*

These guidelines will inform the dietary standards for critically important federal nutrition programs that serve young children and their families such as the Special Supplemental Nutrition Program for Women, Infants and Children (WIC), the Supplemental Nutrition Assistance Program (SNAP) and the Child and Adult Care Food Program (CACFP). Consider, for example, that half of all babies born in the United States are served by the WIC program. These programs are foundational to the health and nutrition of children and families in the United States.

*Avoiding Duplication:*

There are currently no federal nutrition guidelines for pregnant women and children under age 2. These guidelines will set a precedent for nutrition guidance for many policies and programs.

**Topic 1: Infants and toddlers from birth to 24 months (healthy, full-term infants)**  
**New Topic: Feeding Styles**

### **Suggested question**

- What is the relationship between establishing healthy eating patterns for infants and toddlers ages 2 and younger and 1) cognitive development 2) short and long-term health 3) growth, size, and body composition 4) future obesity risk?

*Address the importance of feeding styles*

### **Rationale**

#### *Relevance:*

The period from birth to age 2 represents a highly sensitive period of time for children to learn to accept and like healthy food. Recommendations addressing feeding patterns and responsive feeding practices are critical and relevant to include in the upcoming Dietary Guidelines for Americans.

#### *Importance:*

In order to help infants and young children establish and maintain healthy eating patterns, caregivers need to be aware and understand how food preferences are developed, the role they play in helping infants and toddlers develop those preferences, how infants and toddlers signal hunger and satiety, and the role of responsive feeding in developing healthy food habits. In addition, knowing how and when to feed complimentary foods, the role of sleep patterns on healthy eating, physical activity needs of infants and toddlers, and screen time recommendations are also critical topics that should be included in future Dietary Guidelines for Americans.

#### *Potential Federal Impact:*

There is also a direct federal impact of addressing feeding practices - not only will recommendations in this area be important for parents and health care providers, they will also be critical for child care providers and others working with the CACFP Program and with mothers, fathers and young children enrolled in WIC. In February 2017, Healthy Eating Research, a national program of the Robert Wood Johnson Foundation, published: Feeding Guidelines for Infants and Young Toddlers: A Responsive Parenting Approach that includes evidence-based guidelines for infant and toddler feeding practices in the US.

#### *Avoiding Duplication:*

While other related guidelines exist, this document provides new, important information on responsive feeding practices coupled with feeding guidelines, and therefore should be included in the upcoming Dietary Guidelines for Americans.<sup>xii</sup>

**Topic: Infants and toddlers from birth to 24 months (healthy, full-term infants), Pregnancy, Lactation**

**New topic: Cultural Relevance**

### **Suggested questions:**

- How do socio-cultural beliefs, values and traditions impact dietary practices during pregnancy and lactation?
- How might cultural influences on dietary practices during pregnancy impact 1) risk of - gestational diabetes; 2) risk of hypertensive disorders during pregnancy; 3) gestational age at birth; and 4) birth weight standardized for gestational age and sex?
- How do current nutrition guidelines support cultural and religious diversity in dietary practices among American families?

- How might cultural factors related to feeding practices among infants and toddlers ages 2 and younger impact 1) cognitive development; 2) short and long-term health; 3) growth, size, and body composition; and 4) future obesity risk?

*Identify and address religious and cultural issues related to dietary patterns during pregnancy and lactation, and infant and young child feeding practices.*

#### **Rationale**

##### *Relevance:*

The United States is highly diverse with many races making up the total population of more than 318 million. With the rapidly changing racial and ethnic profile, non-Hispanic whites will no longer be the majority population group within three decades.<sup>xiii</sup> The population is driven by a high level of immigration. Growth in the Hispanic and Asian populations is predicted to almost triple over the next 40 years. By 2055, the breakdown is estimated to be 48% White, 24% Hispanic, 14% Asian, and 13% Black.<sup>xiv</sup>

##### *Importance:*

The Dietary Guidelines for pregnancy, lactation, infancy, and childhood will be critical to the health and wellbeing of our nation's mothers and children. There are religious and racial/ethnic influences<sup>xv</sup> in dietary practices during pregnancy and postpartum periods.<sup>xvi</sup> Racial and ethnic differences exist in infant and toddler feeding practices, including breastfeeding, introduction of complementary foods before 4 months of age<sup>xvii</sup>, and consumption of sugar-sweetened beverages and highly processed foods. **Serving as a trusted and scientifically-based source of information for parents, health care providers, policymakers and others who influence the lives of our youngest children, it is crucial that the 2020-2025 DGA be culturally congruent with the population of the United States.** Since dietary intake during gestation and from birth through two years impacts health outcomes throughout the lifespan, the development of culturally relevant dietary guidelines for these key population groups could play a pivotal role in preventing the incidence of gestational diabetes, obesity and chronic disease while ensuring optimal infant feeding practices, thereby helping to eliminate disparities in health.

##### *Potential Federal Impact:*

The federal impact will be substantial because the DGAs serve as the basis for vital nutrition policies and programs and helps guide local, state, and national health promotion and disease prevention initiatives. Guidance highlighting culturally relevant guidelines would significantly inform Federal food and nutrition policies and programs such as WIC. As the supplemental foods available in this program align with the Dietary Guidelines, the food available to women and very young children using this program would be directly impacted by the content of these guidelines. The advice and recommendations that women receive through WIC counselors and staff would also be impacted.

##### *Avoiding Duplication:*

Although USDA provides lifecycle nutrition guidelines and resources such as Ethnic/Cultural Food Pyramids, without previous Dietary Guidelines for pregnancy, lactation, infants and young children 0-2 years, there will not be duplication.

#### **Topic 1: Infants & Toddlers Birth to 24 Months (Healthy, Full-Term Infants)**

##### **New topic: Added Sugars**

##### **Suggested questions:**

- What is the relationship between added sugars in all forms, including corn syrup, corn syrup solids, sucrose, corn maltodextrin consumption before 6 months and 1) taste preference formation; 2) short

and long-term health; 3) growth, size, and body composition; 4) self-regulation; and 5) future obesity risk?

- What is the relationship between added sugars consumption from six to 24 months and achieving nutrient recommendations?
- What is the relationship between added sugars consumption during infancy and 1) taste preferences; 2) short and long-term health outcomes; and 3) future obesity risk?

*Address the importance of avoiding added sugars*

#### **Rationale**

##### *Relevance:*

Added sugars are highly relevant to the Dietary Guidelines for young children. Foods and beverages containing added sugars are unfortunately a part of many young children's diets. A recommendation to completely restrict added sugar from foods and beverages in the diets of children under age 2 is appropriate.

##### *Importance:*

Desserts, cookies, candy and sugar-sweetened beverages are introduced to babies as young as 4 months.<sup>xviii</sup> Over 40% of American infants and over 70% of toddlers eat some type of dessert, sweet or sugar-sweetened beverage at least once a day.<sup>xix</sup> Added sugars add "empty calories" into the diet while providing no real nutritional value. These extra calories contribute to childhood overweight and obesity. Children are biologically primed to like sweet tastes.

While added sugars are pervasive in many food and beverage products, a growing body of evidence points to numerous negative impacts of added sugar on health and development. Added sugar is associated with overweight and obesity, and studies have shown that sugar disrupts the hormonal system that helps the body to signal fullness, leading to overeating. Added sugar is also correlated with higher risk of heart disease and diabetes, both chronic conditions with long-term health implications. In fact, the American Heart Association recommends that children under age 2 consume no added sugars whatsoever.

Evidence suggests that sugar is addictive, and that taste preferences and eating habits begin to form in the earliest years of life. The window from pregnancy through age 2 is critical in ensuring that children get the nutrients they need to grow, develop, and thrive later in life. Yet, added sugars provide no nutritional value, add empty calories to children's diets, and can contribute to excessive weight gain and related conditions like diabetes that impact lifelong health and quality of life.

##### *Potential Federal Impact:*

Please see the Potential Federal Impact section for number 2, topic 2.

##### *Avoiding Duplication:*

There is currently no strong, clear, easily accessible federal guidance on added sugar consumption among children under age 2.

#### **Topic 2: Pregnancy and Lactation**

##### **New Topic: Added Sugars**

##### **Suggested questions:**

- What is the relationship between added sugar corn syrup, corn syrup solids, sucrose consumption among postpartum breastfeeding and non-breastfeeding women and 1) maternal health; 2) weight gain; and 3) micronutrient status?

- What is the relationship between added sugar consumption during pregnancy and achieving nutrient recommendations?
- What is the relationship between added sugar consumption during pregnancy and excessive weight gain?

## **Rationale**

### *Relevance:*

Foods and beverages containing added sugars are prevalent in the United States. Federal guidance related to the consumption of added sugars is appropriate and necessary.

### *Importance:*

While added sugars are pervasive in many food and beverage products, a growing body of evidence points to numerous negative impacts of added sugar on health. Added sugar is associated with overweight and obesity, and studies have shown that sugar disrupts the hormonal system that helps the body to signal fullness, leading to overeating. Added sugar is also correlated with higher risk of heart disease and diabetes, both chronic conditions with long-term health implications.

We know that excessive weight gain in pregnancy is related to increased risk of pregnancy-related complications. The extra calories of added sugar are especially harmful in pregnancy, a period in which women must consume increased amounts of nutrients in their diets while also regulating their weight gain.

### *Potential Federal Impact:*

Federal nutrition programs serve the health and nutritional needs of women. In particular, the WIC program offers healthy food and nutrition counseling for pregnant and postpartum women. The dietary advice that women get from WIC will be informed by the outcome of the DGAs. It is important that women get clear, evidence-based advice on the consumption of added sugars.

### *Avoiding Duplication:*

Added sugar consumption among pregnant and postpartum women is not addressed through existing evidence-based Federal guidance, so these guidelines provide an opportunity to fill a gap in terms of what we know about impact of added sugars on maternal health.

## **Topic 3: Pregnancy and Lactation**

### **Original topic and questions: Beverages (cow's milk, water, 100% fruit juice, sugar-sweetened beverages, milk alternatives, caffeinated beverages)**

- What is the relationship between beverage consumption during pregnancy and lactation and 1) achieving nutrient and food group recommendations; 2) birth outcomes; and 3) human milk composition and quantity?

### **Suggested changes**

- Add an emphasis on short and long-term maternal health

## **Rationale**

### *Relevance:*

It is imperative that the DGAs address beverage consumption among pregnant women and women in the postpartum period as beverages are a large part of women's diets and have an impact on their short and long-term health.

*Potential Federal Impact:*

Federal nutrition programs serve the health and nutritional needs of women. In particular, the WIC program offers healthy food and nutrition counseling for pregnant and postpartum women. The dietary advice that women get from WIC will be informed by the outcome of the DGAs. It is important that women get clear, evidence-based advice regarding their beverage choices.

*Avoiding Duplication:*

Beverages for pregnant and postpartum women are not addressed through existing evidence-based Federal guidance, so these guidelines provide an opportunity to fill a gap in terms of what we know about impact of added sugars on maternal health.

**Topic 1: Pregnancy and Lactation**

**Original topic and questions: How additional calorie needs should be met during pregnancy and lactation**

- What is the relationship between specific dietary patterns (Dietary Guidelines-related, Mediterranean-style, Dietary Approaches to Stop Hypertension (DASH), vegetarian/vegan, and low-carbohydrate diets) consumed among women who are pregnant and 1) risk of gestational diabetes; 2) risk of hypertensive disorders during pregnancy; 3) gestational age at birth; and 4) birth weight standardized for gestational age and sex?
- What is the relationship between specific dietary patterns (Dietary Guidelines-related, Mediterranean-style, Dietary Approaches to Stop Hypertension (DASH), vegetarian/vegan, and low-carbohydrate diets) consumed among women who are lactating and human milk composition and quantity?
- Are changes to the USDA Food Patterns needed based on the relationships identified? If so, how well do USDA Food Pattern variations meet nutrient recommendations for women who are pregnant or lactating?

**Suggested changes**

- Add an emphasis on maternal health.

*Address the impact of nutrition during pregnancy and childhood on both maternal and young child health.*

**Rationale**

We recommend asking the stated questions twice: once in regard to pregnant women and once in regard to breastfeeding women. There are important distinctions between pregnant and breastfeeding women in terms of the impact of dietary patterns. The additional emphasis on maternal health is relevant because dietary patterns during breastfeeding not only have the potential to impact breastmilk composition and quantity, but also impacts the short and long-term health of mothers.

**Topic 1: Infants and toddlers from birth to 24 months (healthy, full-term infants) and Pregnancy/Lactation/Postpartum**

**New Topic: Food Insecurity**

**Suggested questions:**

- Infants and Toddlers from Birth to 24 Months: What is the relationship between food insecurity and 1) dietary intake; 2) nutritional risk/deficiency; 3) cognitive development; 4) short and long-term health; 5) obesity risk; and 6) growth, size, and body composition?
- Pregnancy/Lactation/Postpartum: What is the relationship between food insecurity and 1) dietary intake; 2) pregnancy outcomes (e.g., pregnancy weight gain); 3) birth outcomes (e.g., birth weight); 4) postpartum weight retention/health; and 5) breastfeeding initiation and duration?

## *Address food insecurity*

### **Rationale**

#### *Relevance:*

These food insecurity related questions are well within the scope of the Dietary Guidelines. The 2015 Dietary Guidelines addressed poverty and food insecurity (as well as food access) to some extent in, for example, “Chapter 3. Everyone Has a Role in Supporting Healthy Eating Patterns.” The 2020 Dietary Guidelines should build on the socio-ecological approach in the 2015 edition. In addition, food-based recommendations are a critical component of the Dietary Guidelines, but food-based recommendations that are out of reach for millions of Americans are meaningless. Recommendations need to be affordable, accessible, and realistic for families with limited income, food access, time, food storage and preparation space, and transportation.

#### *Importance:*

Food insecurity is a significant public health concern given the high prevalence and negative consequences for health and well-being. In 2016, 12.9 million children (17.5 percent of all children) lived in food-insecure households.<sup>xx</sup> Rates of food insecurity were higher than the national average for households with children under age 6 (16.6 percent) and households with children headed by a single woman (31.6 percent).<sup>xxi</sup>

Food insecurity during pregnancy and the critical first years of a child’s life can negatively impact child development in both the short and long-terms and hinder adult achievement, health, and productivity. Adequate prenatal nutrition is critical to ensure normal development of children’s bodies and brains and to bolster child food security.<sup>xxii</sup> Inadequate dietary intake during pregnancy and early childhood — which may be a consequence of food insecurity — can increase the risk for birth defects, anemia, low birth weight, preterm birth, and developmental risk.<sup>xxiii,xxiv,xxv</sup> Of particular concern is the risk of mothers, especially for food-insecure mothers, entering pregnancy with insufficient iron stores and with low folate diets. Poor iron and folic acid status are linked to preterm births and fetal growth retardation, respectively.<sup>xxvi,xxvii</sup> Prematurity and intrauterine growth retardation are critical indicators of medical and developmental risks that affect not only children’s short-term well-being, but also extend into adulthood.<sup>xxviii</sup>

Children born to mothers who were food-insecure during pregnancy also are at increased risk of birth defects, including cleft palate, d-transposition of the great arteries, tetralogy of Fallot, spina bifida, and anencephaly.<sup>xxix</sup> Finally, research shows that women who were marginally food insecure and had restricted their eating in an unhealthy way prior to becoming pregnant are more likely to gain excessive weight during pregnancy, which puts the mother at risk for gestational diabetes and obesity postpartum, and can predispose the baby to chronic disease through the phenomenon of prenatal nutritional programming.<sup>xxx</sup>

Adequate nutrients are required to support normal growth and development, but food insecurity can compromise this. Research has shown that there is a statistically robust association between household food insecurity and physical health and developmental risk during early childhood, when brain growth is rapid.<sup>xxxi</sup> More specifically, compared to food-secure children, food-insecure children have odds of “fair or poor” health nearly twice as great, and odds of being hospitalized since birth almost a third larger.<sup>xxxii</sup> Even mild nutritional deficits during critical periods of brain growth among infants and toddlers, also known as marginal food security, may be detrimental, as they are associated with higher odds of child fair or poor health status, hospitalizations, and mothers’ depressive symptoms and fair or poor health

status, compared with children and mothers in food-secure households.<sup>xxxiii</sup> This is especially concerning since the adverse effects of food insecurity on health and development in young children occur before the appearance of readily identifiable clinical markers, such as underweight.<sup>xxxiv</sup>

*Potential Federal Impact:*

The federal impact will be substantial because the meal patterns and nutrition recommendations in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and the Child and Adult Care Food Program, are based on the Dietary Guidelines.

*Duplication:*

While USDA, in particular, has worked to improve food security in the nation through research, food assistance, and nutrition education, the proposed questions have not been sufficiently addressed through existing federal guidance. Addressing food insecurity in the Dietary Guidelines has the potential to meaningfully support and enhance the efforts of USDA and others.

**Conclusion:**

Thank you for the opportunity to provide comments on the proposed topics for the 2020 DGAC. The USBC appreciates the addition of guidance for pregnant and post-partum women, infants and toddlers. We strongly encourage the Agencies to consider adding to and amending several of the proposed topics to better serve Americans.

The evidence for the value of breastfeeding to children's and women's health is scientific, solid, and continually being reaffirmed by new research. There are racial and ethnic disparities in breastfeeding rates and practices and barriers that are unique and more frequent to among women of racial/ethnic minority groups. Breastfeeding is one of the most critical elements in closing the gap in the high mortality and morbidity rates that we see among infants of color and in poor health outcomes in children generally, as well. The inclusion of this population to the Dietary Guidelines would be a big step in eliminating the glaring racial disparities in health outcomes.

We also support opportunities to make the DGA process more transparent. We recommend that the guidelines for pregnancy, post-partum and newborn to 2 years be informed by national and international guidelines for breastfeeding initiation, duration and exclusivity. We commend the Dietary Guidelines' contribution to translate the most recent science and improve dietary intake and prevent diet-related chronic disease in the U.S. We strongly urge that the same rigor continue, and breastfeeding research and data included be free of formula industry bias. We applaud the outstanding work of USDA and HHS on the scientific, evidence-based nutrition for Pregnancy/Birth through 24 months (P/B-24). The results of that project will be vitally important for the 2020 Dietary Guidelines Advisory Committee (DGAC)

Respectfully submitted



Mona Liza Hamlin  
USBC Board Chair

- 
- <sup>i</sup> Marangoni F, Cetin I, Verduci E, et al. Maternal Diet and Nutrient Requirements in Pregnancy and Breastfeeding. An Italian Consensus Document. *Nutrients*. 2016;8(10):629. doi:10.3390/nu8100629.
- <sup>ii</sup> Branum AM, Kirmeyer SE, Gregory EC. Prepregnancy Body Mass Index by Maternal Characteristics and State: Data From the Birth Certificate, 2014. *National Vital Statistics Reports*. 2016;65:1–11.
- <sup>iii</sup> Black, M. M., & Aboud, F. E. Responsive feeding is embedded in a theoretical framework of responsive parenting. *The Journal of Nutrition*. 2011;141(3):490–94.
- <sup>iv</sup> Victora, C. G., Barros, A. J. D., Franca, G. V. A., Horton, S., Krasevec, J., Murch, S., Sankar, M. J., Walker, N., & Rollins, N.C. Breastfeeding in the 21st century: Epidemiology, mechanisms, and lifelong effect. *The Lancet*, 2016;387:475– 89.
- <sup>v</sup> Ibid.
- <sup>vi</sup> Ibid.
- <sup>vii</sup> Schwarz, E. Duration of Lactation and Risk Factors for Maternal Cardiovascular Disease. *Obstetrics & Gynecology*. 2009;113:974–82 .
- <sup>viii</sup> Heyman MB, Abrams SA, AAP Section on Gastroenterology, Hepatology, and Nutrition, AAP Committee on Nutrition. Fruit Juice in Infants, Children, and Adolescents: Current Recommendations. *Pediatrics*. 2017;139(6).
- <sup>ix</sup> Clayton, H. B., Li, R., Perrine, C. G., & Scanlon, K. S. Prevalence and reasons for introducing infants early to solid foods: Variations by milk feeding type. *Pediatrics*. 2013;131:1108–14.
- <sup>x</sup> Saavedra, J. M. et al. Lessons from the Feeding Infants and Toddlers Study in North America: What Children Eat, and Implications for Obesity Prevention. *Annals of Nutrition and Metabolism*. 2013;62:27–36.
- <sup>xi</sup> Beech-Nut. New Research Reveals Infants As Young As Nine Months Are Eating Diets Low In Vegetables And Whole Grains, Yet High In Sodium And Added Sugars. PR Newswire. 2016. Retrieved from: <http://www.prnewswire.com/news-releases/new-research-reveals-infants-as-young-as-nine-months-are-eating-diets-low-in-vegetables-and-whole-grains-yet-high-in-sodium-and-added-sugars-300247118.html>
- <sup>xii</sup> Healthy Eating Research. Feeding Guidelines for Infants and Young Toddlers: A Responsive Parenting Approach. Guidelines for Health Professionals. 2017. Available at <http://healthyeatingresearch.org/research/feeding-guidelines-for-infants-and-young-toddlers-a-responsive-parenting-approach-guidelines-for-health-professionals/>
- <sup>xiii</sup> United States Population. (2018-02-09). Retrieved 2018-03-21, from <http://worldpopulationreview.com/countries/united-states-population/>
- <sup>xiv</sup> Pew Research Center, 2015. Modern Immigration Wave Brings 59 Million to U.S., Driving Population Growth and Change Through 2065: Views of Immigration’s Impact on U.S. Society Mixed. Washington, D.C.: September.
- <sup>xv</sup> Donaldson, H. CNM, MS; Kratzer, J. CNM, MS; Okutero-Ketter, S. CNM, MS; Tung, P. CNM, MS. Breastfeeding among Chinese Immigrants in the United States. *Journal of Midwifery and Women’s Health*. 2010; 55(3):277- 281.
- <sup>xvi</sup> Groth SW, Morrison-Beedy D. Low-income, Pregnant African American Women’s Views on Physical Activity and Diet. *Journal of midwifery & women’s health*. 2013;58(2):195-202. doi:10.1111/j.1542-2011.2012.00203.x.
- <sup>xvii</sup> Pak-Gorstein, S. Haq, A. Graham, E. Cultural Influences on Infant Feeding Practices. <http://pedsinreview.aappublications.org/content/30/3/e11>
- <sup>xviii</sup> Saavedra, (2013), op. cit.
- <sup>xix</sup> Ibid.
- <sup>xx</sup> Coleman-Jensen, A., Rabbitt, M. P., Gregory, C. A., & Singh, A. (2017). Household food security in the United States in 2016. *Economic Research Report*, 237. Washington, DC: U.S. Department of Agriculture, Economic Research Service.
- <sup>xxi</sup> Ibid.
- <sup>xxii</sup> Kind K. Diet around conception and during pregnancy – effects on fetal and neonatal outcomes. *Reproductive BioMedicine Online*. 2006;12(5):532-541.
- <sup>xxiii</sup> Black, M. M., Quigg, A. M., Hurley, K. M., & Pepper, M. R. Iron deficiency and iron-deficiency anemia in the first two years of life: strategies to prevent loss of developmental potential. *Nutrition Reviews*, 2011;69:S64-S70.
- <sup>xxiv</sup> Dietary Guidelines Advisory Committee. Scientific Report of the 2015 Dietary Guidelines Advisory Committee. Washington, DC: U.S. Department of Agriculture & U.S. Department of Health and Human Services. 2015
- <sup>xxv</sup> Haider, B. A., Olofin, I., Wang, M., Spiegelman, D., Ezzati, M., & Fawzi, W. W. Nutrition Impact Model Study Group (anaemia). (2013). Anaemia, prenatal iron use, and risk of adverse pregnancy outcomes: systematic review and meta-analysis. *BMJ*, 346, f3443.
- <sup>xxvi</sup> Ibid.
- <sup>xxvii</sup> Scholl, T. O., & Johnson, W. G. (2000). Folic acid: influence on the outcome of pregnancy. *American Journal of Clinical Nutrition*, 71 (Suppl 5), 1295S–1303S.
- <sup>xxviii</sup> Abu-Saad, K., & Fraser, D. (2010). Maternal nutrition and birth outcomes. *Epidemiologic Reviews*, 32(1), 5–25.

- 
- <sup>xxix</sup> Charmichael, S. L., Yang, W., Herring, A., Abrams, B., & Shaw, G. M. (2007). Maternal food insecurity is associated with increased risk of certain birth defects. *Journal of Nutrition*, 137(9), 2087-2092.
- <sup>xxx</sup> Laraia, B., Epel, E., & Siega-Riz, A. M. Food insecurity with past experience of restrained eating is a recipe for increased gestational weight gain. *Appetite*, 2013;65:178-184.
- <sup>xxxi</sup> Rose-Jacobs, R., Black, M. M., Casey, P. H., et al. Household food insecurity: Associations with at-risk infant and toddler development. *Pediatrics*, 2008;121(1):65-72.
- <sup>xxxii</sup> Cook, J. T., Frank, D. A., Berkowitz, C., & Black, M. M. (2004). Food insecurity is associated with adverse health outcomes among human infants and toddlers. *Journal of Nutrition*, 134(6), 1432-1438.
- <sup>xxxiii</sup> Cook, J. T., Black, M., Chilton, M., et al. (2013). Are food insecurity's health impacts underestimated in the U.S. population? Marginal food security also predicts adverse health outcomes in young U.S. children and mothers. *Advances in Nutrition*, 4(1), 51-61.
- <sup>xxxiv</sup> Cook, J. T., & Frank, D. A. (2008). Food security, poverty, and human development in the United States. *Annals of the New York Academy of Sciences*, 1136, 193-209.