

# 2020 Dietary Guidelines Advisory Committee: Birth to 24 Months Subcommittee

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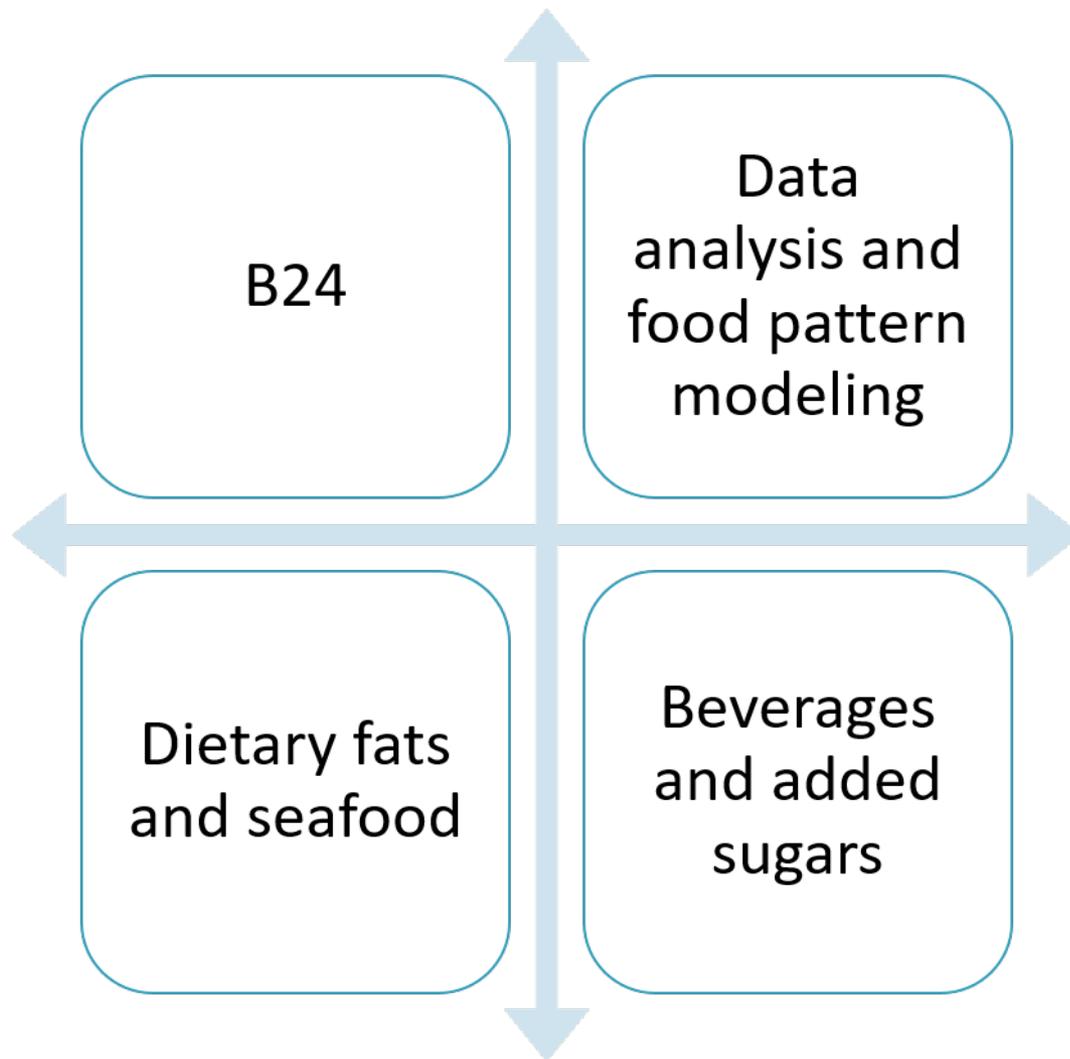
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# B24 Topics are being addressed by 4 different Subcommittees



# Topics addressed by B24 only

Lead Subcommittee	Topic	Questions
B24	Recommended duration of exclusive human milk and/or infant formula feeding	What is the relationship between the duration of exclusive human milk and/or infant formula consumption and 1) growth, size, and body composition; 2) food allergies and atopic allergic diseases; 3) long-term health outcomes; 4) micronutrient status; and 5) developmental milestones, including neurocognitive development?
	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?
	Dietary supplements (e.g., iron, vitamin D, vitamin B12, omega-3 fatty acids)	What is the relationship between specific nutrients from supplements and/or fortified foods consumed and 1) nutrient status; 2) growth, size, and body composition; and 3) bone health?

# Topic: Complementary feeding

Lead Subcommittee	Questions
B24	What is the relationship between complementary feeding and 1) micronutrient status; 2) growth, size, and body composition; 3) developmental milestones, including neurocognitive development; 4) food allergies and atopic allergic diseases; and 5) bone health?
Data analysis and food pattern modeling	Can USDA Food Patterns be established based on the relationships identified? If so, how well do USDA Food Pattern variations meet nutrient recommendations? If nutrient needs are not met, is there evidence to support supplementation and/or consumption of fortified foods to meet nutrient adequacy?

# Topic: Beverages

Lead Subcommittee	Questions
B24	What is the relationship between beverage consumption and growth, size, and body composition?
Data analysis and food pattern modeling	What is the relationship between beverage consumption and achieving nutrient and potential food group recommendations?

# Topic: Added sugars

Lead Subcommittee	Questions
B24 and/or Beverages and added sugars TBD	What is the relationship between added sugars consumption and 1) growth, size, and body composition; 2) risk of cardiovascular disease; and 3) risk of type 2 diabetes?
Data analysis and food pattern modeling	What is the relationship between added sugars consumption and achieving nutrient and potential food group recommendations?  How much added sugars can be accommodated in a healthy diet while still meeting food group and nutrient needs?

# Topic: Types of dietary fats

Lead Subcommittee	Questions
Dietary fats and seafood	What is the relationship between types of dietary fat consumed and 1) neurocognitive development; 2) risk of cardiovascular disease; 3) risk of certain types of cancer; and 4) all-cause mortality?

# Topic: Seafood

Lead Subcommittee	Questions
B24 and/or Dietary fats and seafood TBD	What is the relationship between seafood consumption and 1) neurocognitive development; and 2) risk of cardiovascular disease?

# Human Milk/Infant Formula protocols (presented in July) are being implemented

## New systematic reviews:

- Duration, frequency, and volume of exclusive human milk and/or infant formula consumption and growth, size, and body composition
- Duration, frequency, and volume of exclusive human milk and/or infant formula consumption and micronutrient status
- Duration of exclusive human milk and/or infant formula consumption and developmental milestones, including neurocognitive development

## Update of existing NESR systematic reviews:

- Duration of exclusive human milk and/or infant formula consumption and food allergy and atopic allergic diseases
- Duration of exclusive human milk and/or infant formula consumption and long-term health outcomes

# Human Milk/Infant Formula protocols (presented in July) are being implemented (continued)

## New systematic reviews:

- Duration, frequency, and volume of exclusive human milk and/or infant formula consumption and growth, size, and body composition
- Duration, frequency, and volume of exclusive human milk and/or infant formula consumption and micronutrient status
- Duration of exclusive human milk and/or infant formula consumption and developmental milestones, including neurocognitive development

## Update of existing NESR systematic reviews:

- Duration of exclusive human milk and/or infant formula consumption and **food allergy** and atopic allergic diseases
- Duration of exclusive human milk and/or infant formula consumption and long-term **Diagnosis: food challenge OR food sensitization AND history of clinical reaction**

# Human Milk/Infant Formula protocols (presented in July) are being implemented (continued)

Presented in July:

- ✓ Analytic frameworks
- ✓ Inclusion/exclusion criteria

Update:

- ✓ Literature searches

Pregnancy & Birth to 24 Months Project

1980-2016

Human milk/infant formula and:

- ✓ Food allergies and atopic allergic diseases
- ✓ Cardiovascular disease outcomes
- ✓ Diabetes outcomes

*Update*

- Growth, size, and body composition
- Micronutrient status
- Developmental milestones

2020 Dietary Guidelines Advisory Committee

2016-2019

Human milk/infant formula and:

- ✓ Food allergies and atopic allergic diseases
- ✓ Long-term health

- ✓ Growth, size, and body composition
- Micronutrient status
- Developmental milestones

# Human Milk/Infant Formula protocols (presented in July) are being implemented (continued)

Presented in July:

- ✓ Analytic frameworks
- ✓ Inclusion/exclusion criteria

Update:

- ✓ Literature searches
- ✓ Two NESR analysts independently screened the literature search results
- ✓ Data extraction is underway for:

*What is the relationship between the duration, frequency, and volume of exclusive human milk and/or infant formula consumption and micronutrient status?*

Iron: 8 articles

Zinc: 3 articles

Iodine: 0 articles

Vitamin D: 1 article

Vitamin B12: 0 articles

Fatty acids: 10 articles

# Nutrients from Supplements and Fortified Foods protocols (presented in July) are being implemented

## New systematic reviews:

- Specific nutrients\* from supplements and/or fortified foods consumed during infancy and toddlerhood and nutrient status
- Specific nutrients\* from supplements and/or fortified foods consumed during infancy and toddlerhood and growth, size, and body composition
- Specific nutrients\* from supplements and/or fortified foods consumed during infancy and toddlerhood and bone health

\*Iron, Vitamin D, Vitamin B12, Omega-3 Fatty Acids

# Nutrients from Supplements and Fortified Foods protocols (presented in July) are being implemented (continued)

Presented in July:

- ✓ Analytic frameworks
- ✓ Inclusion/exclusion criteria

Update:

- ✓ Literature search is underway

# We have been meeting with other subcommittees to discuss cross-cutting topics relevant to B24

## Data Analysis and Food Pattern Modeling

- Availability of data for B24 age group:  
0<6 mo, 6<12 mo, 12<24 mo
- Minimum sample size needed/ feasibility of stratifying by milk source (human milk, formula, mixed) to examine food group and nutrient intake at 6<12 and 12<24 mo
- Adequacy of information on human milk nutrient content
- Identification of priority nutrients

## Dietary Fats and Seafood

- Developmental outcomes 0-2 years
- Developing protocols for B24 (pending)

# Next Steps

## Continue to implement the developed protocols:

- Duration, frequency, and volume of human milk/infant formula and growth, size, and body composition
- Duration, frequency, and volume of human milk/infant formula and micronutrient status
- Duration of human milk/infant formula and developmental milestones
- Duration of human milk/infant formula and food allergy/atopic allergic diseases
- Duration of human milk/infant formula and long-term health outcomes
- Specific nutrients from supplements and fortified foods and nutrient status
- Specific nutrients from supplements and fortified foods and growth, size, and body composition
- Specific nutrients from supplements and fortified foods and bone health

# Next Steps (continued)

Continue working across subcommittees on cross-cutting topics

- Data Analysis and Food Pattern Modeling
- Dietary Fats and Seafood
- Beverages and Added Sugars

Develop the remaining protocols:

- Complementary feeding and micronutrient status
- Complementary feeding and growth, size, and body composition
- Complementary feeding and developmental milestones
- Complementary feeding and food allergy/atopic allergic diseases
- Complementary feeding and bone health

**Birth to 24 Months Subcommittee**  
**2020 Dietary Guidelines Advisory Committee: Meeting 3**

# 2020 Dietary Guidelines Advisory Committee: Birth to 24 Months Subcommittee

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# Updates to B-24 Elements of Existing Protocol

Approach to Answer Question: Data Analysis

# Status of Questions

- Developing the plan:
  - Current intakes of food groups and nutrients
  - Nutrients of public health concern
  - Current dietary patterns and beverages
  - Tracking of dietary intake, particularly dietary patterns, across life stages

**All protocols discussed in this presentation are available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov)**

# Updates to Protocols Presented in July

## General Updates:

- The life stage for infants and toddlers is specified as birth to less than 24 months in the analytic framework.

# Protocol Discussion

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Approach to Answer Question: Data Analysis

# Analytic Framework: Population

## Nationally representative sample of the U.S. population

### Life stages:

- Infants and toddlers (B<24 months)

*Note: Exceptions will be noted*

### **Analysis of Intakes Stratified by Infant Milk Source**

#### Ages 6<12 months

- All infants
- Human milk feeding – no formula
- Those receiving any formula, includes mixed feeding

#### Ages 12<24 months

- All infants
- Human milk feeding – no formula
- Those receiving any formula, includes mixed feeding
- Those receiving neither formula nor human milk

**Data Analysis and Food Pattern Modeling  
2020 Dietary Guidelines Advisory Committee: Meeting 3**

# Analytic Framework: Data Sources

## **What We Eat in America, National Health and Nutrition Examination Survey (WWEIA, NHANES)**

- Cross-sectional, nationally representative dietary intake data
  - USDA Food and Nutrient Database for Dietary Studies*
  - USDA Food Patterns Equivalents Database*
  - WWEIA Food Categories*
  - NHANES Dietary Supplement Database*

## **Breastfeeding initiation and duration:**

U.S. National Immunization Survey 2017-2018

# Key Definitions

- **Human milk** – Mother’s own milk provided at the breast (i.e., nursing) or expressed and fed fresh or after refrigeration/ freezing; donor milk is not examined in this review
- **Complementary foods and beverages (CFB)** – Foods and beverages other than human milk or infant formula (liquids, semisolids, and solids) provided to an infant or young child to provide nutrients and energy
- **Human milk feeding** – Feeding human milk alone or in combination with infant formula and/or CFB such as cow’s milk

# Key Definitions

- **Infant formula** – Commercially prepared infant formula meeting FDA and/or Codex Alimentarius international food standards
- **Mixed feeding** – Feeding human milk and infant formula but not CFB such as cow’s milk
- **Exclusive human milk feeding** – Feeding human milk alone and not in combination with infant formula and/or CFB such as cow’s milk; inclusive of WHO definitions of “exclusive” and “predominant” breastfeeding, which permit limited quantities of drops or syrups containing vitamins, minerals, or medicines; water and water-based drinks such as sweetened water and teas; fruit juice; oral rehydration salts solution; and ritual fluids

# Question

Describe/evaluate current intakes of  
food groups and nutrients  
*B-24 Elements*

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Approach to Answer Question: Data Analysis

# Analytic Framework: Food Group Intakes

- Breastfeeding initiation and duration rates
- Prevalence of any reported food group intake
- Mean intakes of food groups and subgroups
- Food category sources of food group intakes

# Analytic Framework: Food Group Intakes

## Proposed Analyses and Stratification Plan

	Age in Months			
	<4	4<6	6<12	12<24
Prevalence of CFB	Total	Total	--	--
Prevalence of Food Groups	--	--	Total & Stratified	Total
Mean Intakes of Food Groups	--	--	Total & Stratified	Total
Food Category Sources of Food Groups	--	--	Total	Total

# Analytic Framework: Nutrient Intakes

- **Mean intakes of nutrients from**
  - Infant milk sources, foods and beverages, and dietary supplements
- **Usual intake distribution of nutrients**
  - Infant milk sources, foods and beverage
  - Infant milk sources, foods, beverages, and dietary supplements
- **Nutrient intakes compared to DRIs**

1 yr olds are a part of 2013-2016 analysis  
of the 1-3 yr old DRI age grouping
- **Food category sources of nutrient intakes**

# Question

Describe/evaluate nutrients of public health concern  
*B-24 Elements*

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Approach to Answer Question: Data Analysis

# Analytic Framework: Nutrient Intakes

- **Usual intake distribution of nutrients**
  - Infant milk sources, foods and beverage
  - Infant milk sources, foods, beverages, and dietary supplements
- **Nutrient intakes compared to Dietary Reference Intakes**

*NOTE: Analysis stratified by infant milk source*

1 yr olds are a part of 2013-2016 analysis  
of the 1-3 yr old DRI age grouping

# Question

Describe/evaluate current dietary patterns and  
beverage consumption  
*B-24 Elements*

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Approach to Answer Question: Data Analysis

# Analytic Framework

## Dietary Patterns

- Food group and subgroup\* intakes per 100 calories of complementary foods and beverages

## Beverage consumption

- Percent reporting a given beverage type
- Average amount consumed per day in ounces
- Nutrient/food component contribution of reported beverages

# Discussion

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Approach to Answer Question: Data Analysis

# Next Steps

- **Integrate nutrient intakes from dietary supplements**
  - data anticipated for release in fall 2019
- **Review and Summarize data analysis results**
- **Draft conclusion statements**
- **Draft food pattern modeling protocols**

# 2020 Dietary Guidelines Advisory Committee: Dietary Patterns Subcommittee



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