



LIFESTYLE MEDICINE CONFERENCE

# Food as Medicine From the Start

*A Transformative Life Course Approach to Addressing Food & Nutrition Insecurity*

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# Learning Objectives

- Recognize the role of food and nutrition in disease management.
- Discuss food and nutrition insecurity as barriers to optimizing health of young children and their families.
- Explore effective strategies to incorporate food as medicine into clinical settings.

# Limited Medical Training on Nutrition

Majority of medical schools failed to provide the minimum of 25hrs on nutrition (71%, 86/121)

36% provided less than 1/2 of 25hrs of minimum education

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*Research Article*

## The State of Nutrition Education at US Medical Schools

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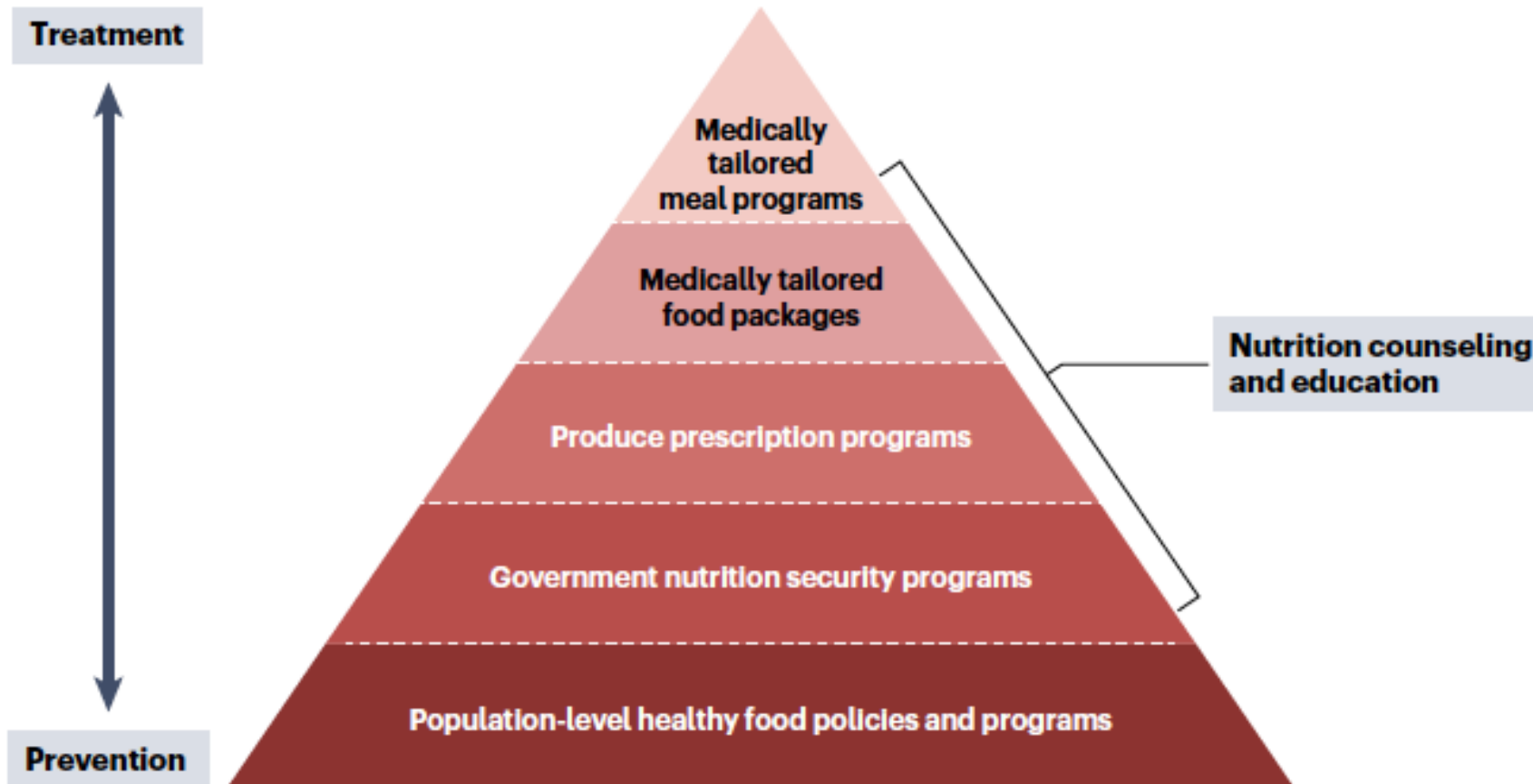
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# Clinical Nutrition Internship Program(CNIP)



American Society for Nutrition  
*Excellence in Nutrition Research and Practice*



**Fig. 1 | The Food is Medicine pyramid.** An evolving framework of programs and interventions in healthcare and population health to integrate food-based nutrition interventions at multiple levels for specific health needs of different focus populations. Nutrition security programs include the Supplemental Nutrition Assistance Program (SNAP), Special Supplemental Nutrition Program for Women, Infants and Children (WIC), and school meals. Figure adapted and updated from Food is Medicine Massachusetts (<https://foodismedicinema.org/food-is-medicine-interventions>).

# FAM Findings in the Literature

- **Decrease Emergency Department visits**
  - **Decrease hospital readmissions**
    - **Improve dietary intake**
    - **Decrease blood pressure**
  - **Decrease in hemoglobin A1c**
  - **Improve overall health status**
  - **Decreased mental health risk**
  - **Decrease food insecurity**
    - *And much more...*

Supplement 1

REPORT

### A Review of Current Guidelines for the Treatment of Obesity

Marc-André Cozzini, MD

#### Introduction

In 2013, the American Medical Association (AMA) designated obesity as a chronic disease.<sup>1</sup> In 2014, the American College of Cardiology (ACC), the American Heart Association (AHA), and the Obesity Society (OS) published clinical practice guidelines for the management of overweight and obesity in adults.<sup>2</sup> In 2016, the American Association of Clinical Endocrinologists (AACE) and the American College of Endocrinology (ACE) published evidence-based clinical practice guidelines that built upon the AMA's designation, the AACE's novel diagnostic paradigm that incorporated both body mass index (BMI) and weight-related complications, and the AACE's framework that suggested that weight-related complications rather than a universal weight loss target determine treatment modality selection.<sup>3</sup> These 2 comprehensive documents remain the most accepted guidelines for the treatment of obesity.

However, much has changed since the development of these 2 guidelines. After the critical questions of the ACC/AHA/TOS guideline were chosen and before the AACE/WCE guidelines were published, the FDA approved 4 new medications for the long-term treatment of obesity.<sup>4-7</sup> Further, since publication of the AACE/ACE guidelines, another long-term anti-obesity medication (NOM) was approved, an ADM was withdrawn from the market, and several procedures and device types for weight loss and weight management were recommended or FDA-approved.<sup>8-12</sup> These guidelines remain cornerstones for treatment for obesity. However, since their publication, input from the Centers for Disease Control and Prevention and several professional organizations—including the Endocrine Society, the National Institute of Diabetes and Digestive and Kidney Diseases, the American Society for Metabolic & Bariatric Surgery (ASMBS), the Obesity Medicine Association, and the American Society of Anesthesiologists—have advanced our understanding of the disease.<sup>13-16</sup>

This article summarizes and synthesizes the 2013 ACC/AHA/TOS guideline and the 2016 AACE/ACE guidelines and supplements that foundation with recent guidance from the aforementioned organizations. It also highlights consensus that obesity is a serious, progressive, and chronic disease.<sup>17,18</sup>

#### Clinical Review & Education

JAMA | US Preventive Services Task Force | RECOMMENDATION STATEMENT

### Behavioral Counseling Interventions to Promote a Healthy Diet and Physical Activity for Cardiovascular Disease Prevention in Adults With Cardiovascular Risk Factors

US Preventive Services Task Force Recommendation Statement

US Preventive Services Task Force

**IMPORTANCE:** Cardiovascular disease (CVD) is a leading cause of death in the US. Known modifiable risk factors for CVD include smoking, overweight and obesity, diabetes, elevated blood pressure or hypertension, dyslipidemia, lack of physical activity, and unhealthy diet. Adults who adhere to national guidelines for a healthy diet and physical activity have lower cardiovascular morbidity and mortality than those who do not. All persons, regardless of their CVD risk status, benefit from healthy eating behaviors and appropriate physical activity.

**OBJECTIVE:** To update its 2014 recommendation, the USPSTF commissioned a review of the evidence on behavioral counseling to promote a healthy diet and physical activity for CVD prevention in adults with cardiovascular risk factors.

**POPULATION:** This recommendation statement applies to adults 18 years or older with known hypertension or elevated blood pressure, those with dyslipidemia, or those who have had any of the following risk factors: smoking, overweight or an estimated 10-year CVD risk of 7.5% or higher, or moderate to high risk for CVD. The recommendation is based on moderate to high certainty that behavioral counseling or referring adults with CVD risk factors to a health professional to promote a healthy diet and physical activity.

**CONCLUSIONS:** The USPSTF concludes that the benefits of behavioral counseling or referring adults with CVD risk factors to a health professional to promote a healthy diet and physical activity outweigh the harms.

2024

Cardiovascular disease (CVD) risk factors include smoking, overweight and obesity, diabetes, elevated blood pressure or hypertension, dyslipidemia, lack of physical activity, and unhealthy diet. Adults who adhere to national guidelines for a healthy diet and physical activity have lower cardiovascular morbidity and mortality than those who do not. All persons, regardless of their CVD risk status, benefit from healthy eating behaviors and appropriate physical activity.

#### ABSTRACT

Two guidelines—one by the American College of Cardiology (ACC)/American Heart Association (AHA)/The Obesity Society (TOS), and the other by the American Association of Clinical Endocrinologists (AACE)/American College of Endocrinology (ACE)—remain the standard of care in the management of overweight and obesity in adults. However, since the publication of the ACC/AHA/TOS document, several relevant pharmacotherapies have been approved by the FDA, a medication was withdrawn from the market, and several procedures and device types for weight loss have been recommended or FDA-approved. Simultaneously, research in obesity treatment has advanced, and leaders in the field have issued complementary guidance. This article summarizes and synthesizes the 2013 ACC/AHA/TOS and the 2016 AACE/ACE guidelines and includes updates from more recent professional association guidelines. Measurement of body mass index is recommended to initiate evaluation for overweight and obesity and determine disease classification. To stage disease severity, weight-related conditions should be assessed. Although lifestyle therapy remains the cornerstone of treatment for this disease, both pharmacotherapy and metabolic and bariatric surgery produce greater and more sustained weight loss in treatment-approved populations as compared with lifestyle modifications alone. An ongoing partnership between the patient and clinician is highly recommended to manage this serious, progressive, chronic disease.

*Am J Manag Care. 2022;28(12):S288-S294.*

For author information and disclosures, see end of text.

- Editorial page 2026
- Author Audio Interview
- Related article page 2076 and JAMA Patient Page page 214
- Supplemental content
- Related article at [jama.ama-assn.org](http://jama.ama-assn.org)

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#### PRACTICE GUIDANCE

### AASLD Practice Guidance on the clinical assessment and management of nonalcoholic fatty liver disease

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#### PREAMBLE

The study of NAFLD has intensified significantly, with more than 1400 publications since 2018, when the last American Association for the Study of Liver Diseases (AASLD) Guidance document was published.<sup>[1]</sup> This new AASLD Guidance document reflects many advances in the field pertinent to any practitioner caring for patients with NAFLD and emphasizes advances in noninvasive risk stratification and therapeutics. A separate guideline focused on the management of patients with NAFLD in the context of diabetes has been written jointly by the American Association of Clinical Endocrinology and AASLD.<sup>[2]</sup> Given the significant growth in pediatric NAFLD, it will not be covered here to allow for a more robust discussion of the diagnosis

**Abbreviations:** AASLD, American Association for the Study of Liver Diseases; AI, artificial intelligence; ALT, alanine aminotransferase; AST, aspartate aminotransferase; AUCROC, area under the receiver operating characteristic curve; BMI, body mass index; CAP, controlled attenuation parameter; CHD, chronic kidney disease; CTI, controlled T1; CVD, cardiovascular disease; DM, diabetes mellitus; DNL, de novo lipogenesis; DPP-4, dipeptidyl peptidase-4; ELF, Enhanced Liver Fibrosis; FAST, FibroScan-AST; FDA, US Food and Drug Administration; FIB-4, fibrosis-4 index; GH, growth hormone; GLP-1RA, glucagon-like peptide-1 receptor agonist; LDL-C, LDL cholesterol; LSM, liver stiffness measurement; MAST, score derived from MRI-PDFF; MRI, and serum AST; MRE, MRE combined with FIB-4; MRE, magnetic resonance elastography; NIT, noninvasive test; OSA, obstructive sleep apnea; PCR, polygenic overton syndrome; PDFF, proton density fat fraction; PIVENS, Fingertone versus Vitamin E versus Placebo for the Treatment of Nonalcoholic Patients with NAFLD; RCT, randomized controlled trial; SGLT-2, sodium glucose cotransporter-2; T2DM, type 2 diabetes mellitus; TMS2F2, transmembrane 8 superfamily member 2; UDCA, ursodeoxycholic acid; VCTE, vibration-controlled elastography

Brent A. Neuschwander-Tetri and Rohit Loomba are co-senior authors.

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#### Circulation

#### CHOLESTEROL CLINICAL PRACTICE GUIDELINES

### 2018 AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA Guideline on the Management of Blood Cholesterol

A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines

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**Key Words:** AHA Scientific Statements  
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# Food Insecurity

Food insecurity describes “the limited or uncertain availability of nutritionally adequate and safe foods, or limited, or uncertain ability to acquire acceptable foods in socially acceptable ways.”

- Core Indicators of Nutritional State for Difficult to Sample Populations, 1990

“Food insecurity is as much about the threat of deprivation as it is about deprivation itself: **A food-insecure life means a life lived in fear of hunger**, and the psychological toll that takes.”

- New York Times, Brenda Ann Kenneally, 2020



# Food insecurity is associated with worse cardiometabolic disease

Disease	Food Insecurity	Food Security	
Diabetes	19.5%	11.5%	p<.0001
Hypertension	14.1%	11.1%	P=.0003
Coronary Heart Disease	20.5%	11.9%	P<.001
Congestive Heart Failure	18.4%	12.1%	P=.004
Obesity	14.3%	11.1%	P<.001

RESEARCH ARTICLE

## Trends in food insecurity for adults with cardiometabolic disease in the United States: 2005–2012

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### Abstract

#### Background

Food insecurity, the uncertain ability to access adequate food, can limit adherence to dietary measures needed to prevent and manage cardiometabolic conditions. However, little is known about temporal trends in food insecurity among those with diet-sensitive cardiometabolic conditions.

#### Methods

We used data from the Continuous National Health and Nutrition Examination Survey (NHANES) 2005–2012, analyzed in 2015–2016, to calculate trends in age-standardized rates of food insecurity for those with and without the following diet-sensitive cardiometabolic conditions: diabetes mellitus, hypertension, coronary heart disease, congestive heart failure, and obesity.

#### Results

21,196 NHANES participants were included from 4 waves (4,408 in 2005–2006, 5,607 in 2007–2008, 5,934 in 2009–2010, and 5,247 in 2011–2012). 56.2% had at least one cardiometabolic condition, 24.4% had 2 or more, and 8.5% had 3 or more. The overall age-standardized rate of food insecurity doubled during the study period, from 9.06% in 2005–2006 to 10.82% in 2007–2008 to 15.22% in 2009–2010 to 18.33% in 2011–2012 (p for trend < .001). The average annual percentage change in food insecurity for those with a cardiometabolic condition during the study period was 13.0% (95% CI 7.5% to 18.6%), compared with 5.8% (95% CI 1.8% to 10.0%) for those without a cardiometabolic condition, (parallelism test p = .13). Comparing those with and without the condition, age-standardized rates of food insecurity were greater in participants with diabetes (19.5% vs. 11.5%, p < .0001), hypertension (14.1% vs. 11.1%, p = .0003), coronary heart disease (20.5% vs. 11.9%,

### OPEN ACCESS

**Citation:** Berkowitz SA, Berkowitz TSZ, Meigs JB, Wexler DJ (2017) Trends in food insecurity for adults with cardiometabolic disease in the United States: 2005–2012. PLoS ONE 12(5): e0179172. <https://doi.org/10.1371/journal.pone.0179172>

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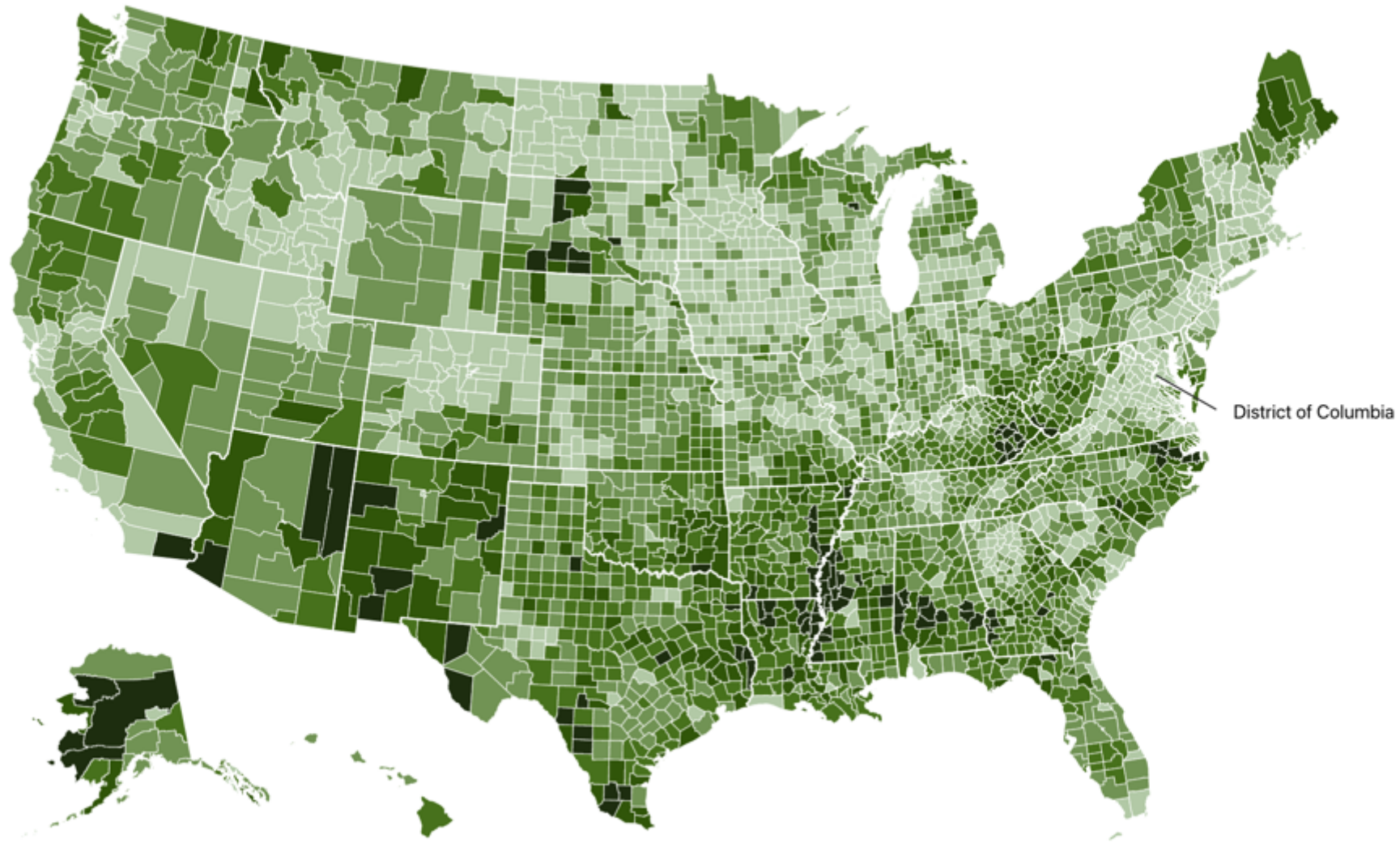
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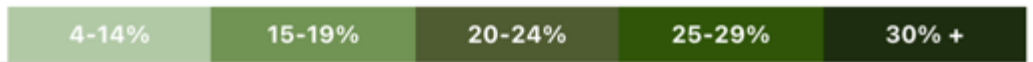
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**Data Availability Statement:** This study made use of third-party data from the United States' National Center for Health Statistics which cannot be deposited directly per data use agreement. However, these data can be freely downloaded under a data use agreement at: <https://www.cdc.gov/nchs/nhanes/Datafile.aspx>.

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Food Insecurity Rates



Feeding America, Map the Gap, 2020, <https://map.feedingamerica.org/county/2019/child>

# Repeated Exposure is the Key to Raising Adventurous Eaters

May take 8-15x of trying a food on different days to adapt to the new food item.



## Repeated exposure to food and food acceptability in infants and toddlers: a systematic review

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### ABSTRACT

**Background:** Repeated exposure has been found to be an effective strategy to increase acceptability of foods in older children and adults, but little is known about its effectiveness in the birth to 24-mo population.

**Objectives:** This systematic review was conducted to examine the effects of repeated exposure to a single or multiple foods on acceptance of those or other foods among infants and toddlers.

**Methods:** A search was conducted for peer-reviewed articles related to food acceptability, flavor, taste, and infants and toddlers in 12 databases (e.g., PubMed, Embase, Cochrane, and CINAHL) with a date range of January 1980 to July 2017. The Nutrition Evidence Library (NEL) Bias Assessment Tool was used to assess potential bias in the included studies, and the NESR grading rubric was used to grade evidence supporting the conclusion statement.

**Results:** From the 10,844 references obtained, 21 studies (19 controlled trials and 2 longitudinal cohort studies) published from 1980 to 2015 were included in this review. Moderate evidence indicates that tasting a single vegetable or fruit or multiple vegetable(s) or fruit(s) 1 food per day for 8–10 or more days is likely to increase acceptability of an exposed food (indicated by an increase in intake or faster rate of feeding after comparison with before the exposure period) in infants and toddlers 4–24 mo old. The effect of repeated exposure on acceptability is likely to generalize to other foods within the same food category but not foods from a different food category. Findings are based on the effects of repeated exposure to mostly vegetables with some findings on repeated exposure to fruits.

**Conclusion:** This review advances the understanding of early food experiences and the development of food acceptability. Additional research is needed using diverse foods and textures with a focus on the transition to table foods. *Am J Clin Nutr* 2019;109(Suppl):978S–989S.

**Keywords:** complementary feeding, introduction of solids, infants, toddlers, vegetables, fruits, systematic review, food acceptability

### Introduction

Early child nutrition is influential in growth and development and can contribute to long-term dietary behaviors and health

outcomes (1). The USDA and Department of Health and Human Services initiated the Pregnancy and Birth to 24 Months Project to examine topics of public health importance for women who are pregnant and infants and toddlers from birth to 24 mo of age (1, 2). As part of the project, USDA's Nutrition Evidence Systematic Review (NESR) team, formerly known as the Nutrition Evidence Library (NEL), conducted systematic reviews (SRs) on select topics of public health importance for these specific populations (1–3).

The topic that this article addresses is the relationship between repeated exposure to food and food acceptance in infants and toddlers from birth to 24 mo of age, a time when many new foods are being introduced to the diet (1, 2). The evidence reviewed herein follows from extensive research on older children (4), adults (5, 6), and animal models (7) that showed that repeated exposure to new foods can promote acceptance and increased intake of the exposed foods. Further, because research in older children and adults revealed that new foods and flavors tend to

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Abbreviations used: NEL, Nutrition Evidence Library; NESR, Nutrition Evidence Systematic Review; SR, Systematic review; TEC, Technical Expert Collaborative.

First published online March 28, 2019; doi: <https://doi.org/10.1093/ajcn/nqy308>.

# Lived Experiences of Households with Food Insecurity

## **“Food Anxiety”**

*Basic anxiety or worry about food. Preoccupation with access to enough food.*

## **“Monotony of Diet”**

*Decrease in Nutritional Quality, Variety, and/or Desirability of diet*

## **“Adult intake decreases”**

*Food shortage experienced and adults decrease intake*

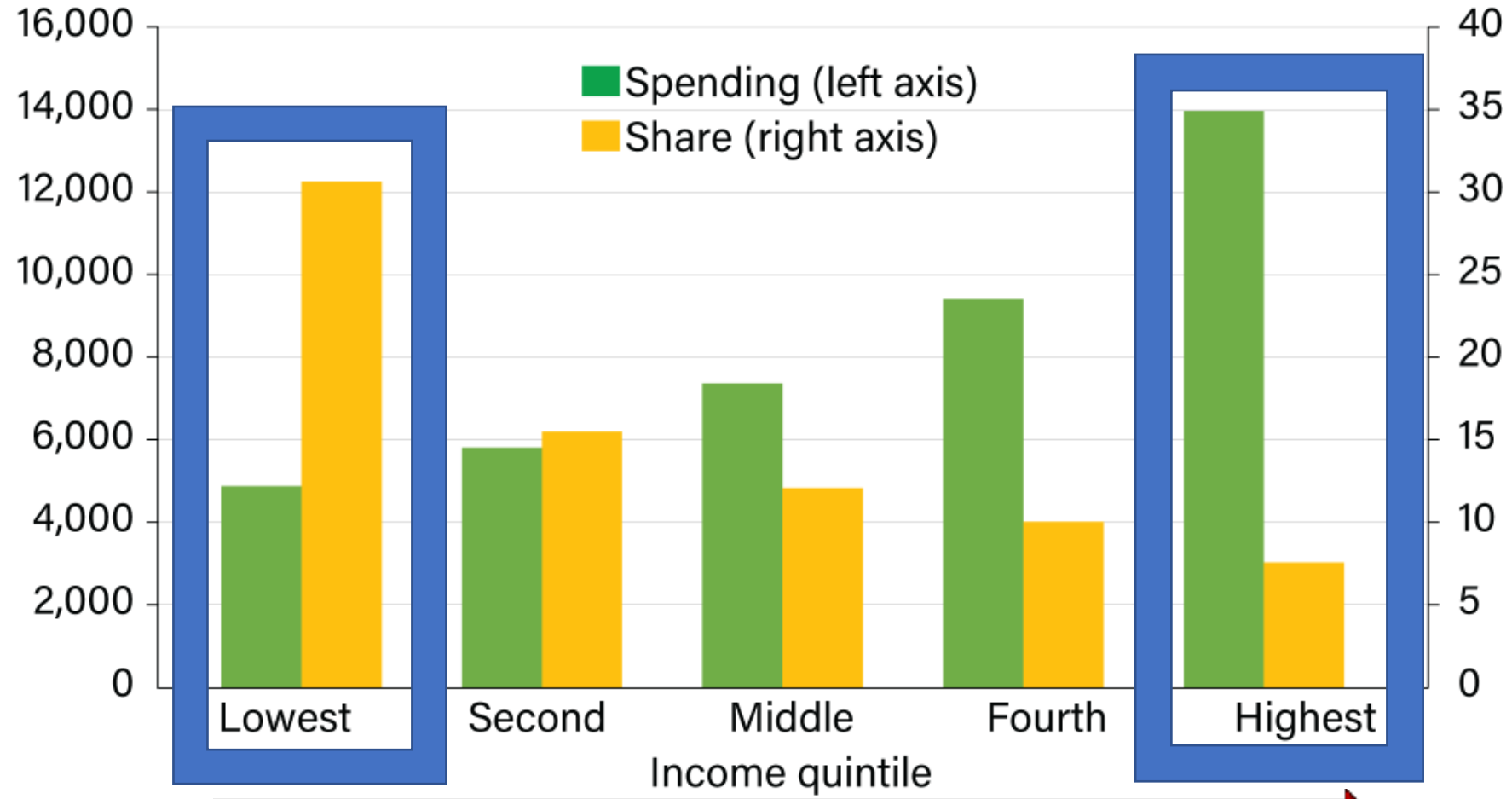
## **“Child intake decreases”**

*Food intake of children decreases*

# Food spending and share of income spent on food across U.S. households, 2021

Average annual food spending, dollars

Percent of income spent on food



Source: USDA, Economic Research Service using U.S. Department of Labor, Bureau of Labor Statistics, 2021 Consumer Expenditure Survey data.



# Nutrition Insecurity Complements Food Insecurity



## USDA ACTIONS ON NUTRITION SECURITY

### WHAT IS NUTRITION SECURITY?

Consistent and equitable access to healthy, safe, and affordable foods that promote optimal health and well-being.



### HOW DOES NUTRITION SECURITY INTERSECT WITH HEALTH EQUITY?

Structural racism increases food insecurity and the risk of diet-related chronic diseases for historically underserved populations. Efforts to improve nutrition security also promote health equity.

### WHY DOES NUTRITION SECURITY MATTER?



Poor nutrition is a leading cause of illness in the United States.

**600,000**  
Americans die each year due to diet-related diseases



Obesity    Diabetes    Heart Disease



Diet-related chronic diseases disproportionately impact historically underserved populations and hit hardest in communities with high food insecurity.

**—3x—**

Black households experience food insecurity at more than triple the rate of white households.



Beyond health, this has negative impacts on other things.

**—85%—**  
of health care spending is related to diet-related chronic disease



Military Readiness    Healthcare Costs    Productivity

**Nutrition Insecurity:** Consistent and equitable access to healthy, safe, and affordable foods that promote optimal health and well-being.



# **Differential Facial Responses to Four Basic Tastes in Newborns**

**Diana Rosenstein**

*University of Pennsylvania*

**Harriet Oster**

*Adelphi University*



Rosenstein, D., Oster, H., Child Dev, 1988

**Parents  
may give  
what child  
wants in  
order to...**

---

Enjoy seeing child **Happy**

---

Habit/**Food Jags**

---

**Conflict Avoidance** and Reduce Stress

---

**Save time** at home

---

Reduce **Waste**

# Commercial Foods for Infants & Toddlers

- Study explored >500 vegetable containing products sold in stores for infants and toddlers
- 52 (9%) out of 548 products were single-vegetable products
- Veggie flavors were covered by other flavors especially fruit flavor allowing foods to be sweeter
- None contained Dark Green Veggies



## Variety and content of commercial infant and toddler vegetable products manufactured and sold in the United States

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### ABSTRACT

**Background:** Exposure to vegetable flavors during infancy and toddlerhood is hypothesized to enhance vegetable acceptance when children transition to table foods.

**Objective:** We sought to examine the vegetable types, ingredients, and nutrient contents of vegetable-containing infant and toddler foods (ITFs) manufactured and sold in the United States.

**Design:** A database of ITFs that contain vegetables ( $n = 548$ ) was compiled from websites of companies based in the United States ( $n = 24$ ). Product information was recorded, including intended age or stage, ingredient lists, and selected nutrients from the Nutrition Facts label. Ingredient lists were used to categorize vegetables using the USDA vegetable categories: dark green (e.g., spinach), red and orange (e.g., carrots), starchy (e.g., green peas, corn), beans and peas (e.g., black beans), and other (e.g., green beans, beets). Furthermore, products were categorized as single-vegetable, multi-vegetable, vegetable and fruit, vegetable and meat, or vegetable and other combinations (e.g., grains and/or dairy). Nutrients were examined, including energy (kilocalories), carbohydrates, fiber, and total sugars [per serving, per 100 g, per reference amount customarily consumed (RACC), and percentage of kilocalories from sugars].

**Results:** Of the 548 vegetable products, only 52 single-vegetable products (9.5%) were identified, none of which contained dark green vegetables or beans and peas. Red and orange vegetables most often appeared as the first ingredient (23.7%) compared to other vegetable types, such as dark green vegetables, which were rarely listed first (1.1%). Fruits were listed as the first ingredient more commonly than all vegetables (37.8%). One-way ANOVA revealed that vegetable and fruit products contained more sugars on average than did vegetable products with other ingredients, such as dairy and/or grains (all  $P$  values  $< 0.001$ ).

**Conclusions:** Current available products do not provide caregivers with a sufficient variety of single-vegetable products or products containing dark green vegetables to facilitate children's subsequent acceptance of these vegetables. Guidance should include making caregivers aware of the limitations of commercial ITFs manufactured and sold in the US market. *Am J Clin Nutr* 2018;107:576–583.

**Keywords:** vegetables, infants, fruits, dietary intake, food preference

### INTRODUCTION

Infant and toddler vegetable consumption in the United States is much lower than recommended, and ~30% of infants and toddlers do not consume any vegetable within a given day (1). Dark green vegetables are consumed at remarkably low amounts, and are the least consumed vegetable type by all infants and toddlers (1). This intake pattern is unsurprising when children's innate taste preferences are considered: positive responses for sweetness and negative responses to bitterness are innate, although aversion to bitterness, common in dark green vegetables, can be overcome by learning (2, 3). Early experience with flavor during infancy and toddlerhood may influence food preferences in childhood, and exposure to nutrient-dense foods, such as vegetables, helps facilitate later acceptance of these foods (4–6).

Recommendations from the American Academy of Pediatrics (AAP) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) suggest caregivers introduce infants to new foods one at a time, using single-ingredient foods, to allow caregivers to monitor allergic reactions and

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Abbreviations used: ITF, infant and toddler food; RACC, reference amount customarily consumed per eating occasion; WIC, Special Supplemental Nutrition Program for Women, Infants, and Children.

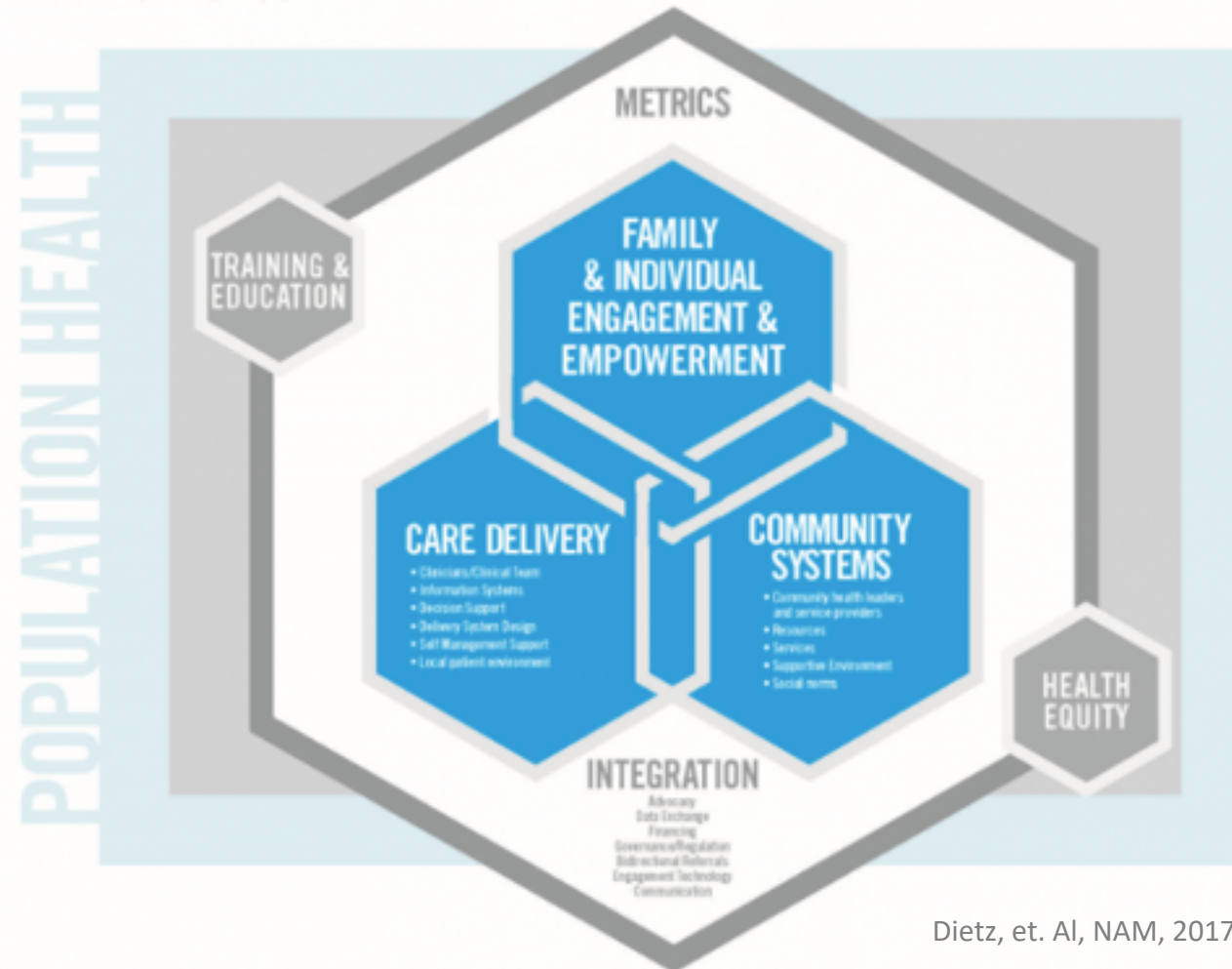
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# CLINICAL-COMMUNITY INTEGRATION TO ACHIEVE HEALTHY PEOPLE & COMMUNITIES:

## A FRAMEWORK TO OPTIMIZE THE PREVENTION AND TREATMENT OF OBESITY AND IMPROVE POPULATION HEALTH

People are more likely to engage in a healthcare system integrated within their community, where settings and resources reinforce healthy behaviors, provide person-centered care, and undergo continuous evaluation and improvement. Stakeholders recognize their interdependency and act in a coordinated and collaborative fashion to improve health and achieve health equity. This drives behavior change and ultimately helps to prevent and treat obesity and improve population health.



Dietz, et. Al, NAM, 2017

# FLiP

FAMILY  
LIFESTYLE  
PROGRAM



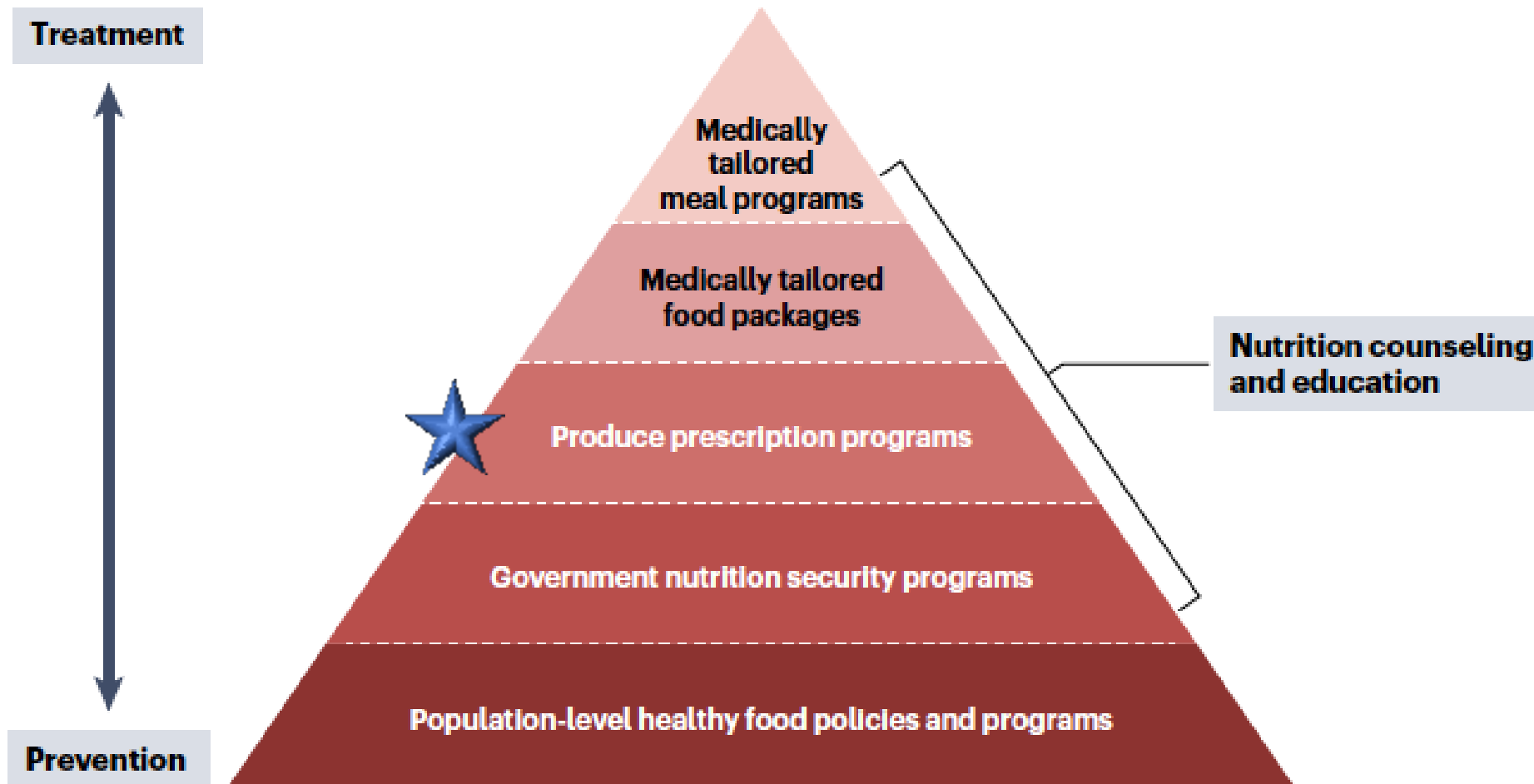
## **Our Vision:**

*A District that supports family health and wellness.*

## **Our Mission:**

*To connect residents to a family-centered lifestyle program that promotes physical activity, nutrition education, and links residents to community resources. We're here to support lasting health for all residents.*

***Established in 2018 through funding from DCHealth as a family centered community-clinical collaborative focused on addressing food/nutrition security and the prevention and reduction of diet related chronic diseases amongst families in the District.***



**Fig. 1 | The Food is Medicine pyramid.** An evolving framework of programs and interventions in healthcare and population health to integrate food-based nutrition interventions at multiple levels for specific health needs of different focus populations. Nutrition security programs include the Supplemental Nutrition Assistance Program (SNAP), Special Supplemental Nutrition Program for Women, Infants and Children (WIC), and school meals. Figure adapted and updated from Food Is Medicine Massachusetts (<https://foodismedicinema.org/food-is-medicine-interventions>).

# Practical Strategies & Take Home Points

- Caregivers in food insecure households often **offer a more pressured feeding behavior to young children, overall poorer diet quality, and have increased anxiety over wasting foods.**
- **Eating behaviors in childhood track into adulthood**
- **Recognize the challenges** around building expanding taste preferences in households experiencing food insecurity
- Support caregivers by connecting to resources that allow them to **reduce the anxiety of waste** while giving them the opportunity to explore a variety of options.
- Consider **walking up the pyramid/ladder with families.** Building trust, addressing immediate needs and optimizing nutrition security
- Overall be **sensitive** to the challenges around early childhood feeding and recognize the role the whole family can play.



## PHA's "Veggies Early & Often Campaign"

- **Clinical Handouts designed to support clinicians counsel on nutrition with patient's in the first 1,000 days**
- **Disseminated January 2023**





# Overview guide

## Key takeaways

- Series of 7 guides from pregnancy to 24 months of age
- Available in English & Spanish
- Multidisciplinary team
- Sensitivity review
- Focus groups

## RAISING ADVENTUROUS EATERS with first foods

Overview

Feeding a baby during the first 1,000 days — from pregnancy to age two — can be an exciting adventure for parents, caregivers, and babies alike. It's a period of development, learning, and bonding. It's also a time when healthy eating patterns can be established for life. As the brain and body are rapidly maturing it's important that babies eat a variety of healthy foods at the right time to get the essential nutrients they need.

For anyone involved in feeding little ones — whether that's a parent, caregiver, family member, or friend — timely guidance can make it easier to navigate the ups and downs of each child's feeding journey. Clinicians can play an important role in providing families with credible education on feeding development since they provide continuity of care during pregnancy, infancy and early childhood.

That's why Partnership for a Healthier America, in collaboration with the Dr. Yum Project and a multidisciplinary team of child experts, is providing anticipatory guidance on infant feeding and early veggie introduction.

Use these first foods guides to share proactive tips and practical activities to boost feeding development and build healthy habits at every stage of a child's feeding journey.

### Prenatal and Postnatal Guide

This guide includes tips to help parents and caregivers understand how food choices can support a healthy pregnancy and impact the short and long-term health of themselves and their child.

### 1-4 Months Guide

This guide explains the responsive feeding model and provides families with guidance on how to boost developmental skills that will be helpful when their child starts eating solid foods around 6 months.

### 4-6 Months Guide

While breast milk and/or iron-fortified formula are still the main food in a baby's diet, it is almost time to introduce new flavors and textures. This guide highlights the signs of readiness to begin solid foods.

### 6-9 Months Guide

This guide provides information for families on how to safely introduce babies to a variety of new tastes and textures alongside the important nutrients in breast milk and/or iron-fortified formula.



### 9-12 Months Guide

This guide provides tips for families on how to offer a wide variety of textures and flavor combinations by enjoying modified family meals and building self feeding skills.

### Toddler Guide

Starting around one year, children may be less hungry and not as interested in foods they once liked. This guide offers toddler feeding tips to create a positive mealtime environment for the whole family.

### Supplemental: Safe Eating Tips

Use these tips to help make food introduction even more safe for your baby including in-depth information on introducing the top 9 food allergens, ways to serve a variety of foods safely, and more.

Overview

## RAISING ADVENTUROUS EATERS with first foods

Raising Adventurous Eaters with First Foods is an initiative of Partnership for a Healthier America's Veggies Early & Often campaign, in collaboration with the Dr. Yum Project, which aims to raise a generation of adventurous eaters in partnership with health professionals, food manufacturers, and early childhood educators.

For more information, visit [www.ahealthieramerica.org/firstfoods](http://www.ahealthieramerica.org/firstfoods)

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### About Partnership for a Healthier America

Partnership for a Healthier America is the premier national nonprofit organization working to create lasting, systemic changes that transform the food landscape in pursuit of health equity. PHA develops evidence-based approaches that are implemented in partnership with the private sector, nonprofits, and government, leveraging PHA's assets and the partner's knowledge to accelerate the pace of transformation.

### dr.yumproject

#### About the Dr. Yum Project

The Dr. Yum Project is a pediatrician-led non-profit that empowers families and communities to overcome barriers to eating well through a collection of free tips, activities and recipes, along with curricula for preschools and families.





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