# MEANINGFUL MESSENGERS:

## the impacts of food insecurity, trauma, and nutrition and the role USDA child nutrition programs play in reducing hunger

Session 1: Trauma, food insecurity, and respectful messaging to prompt appropriate behavior change

Jessie Gruner, PhD, RDN - Pinnacle Prevention
Noelle Veilleux Markham, RDN - ADHS

# We have no financial disclosures to report.

~Jessie + Noelle

# Meaningful Messengers

# Food Insecurity in Arizona

| | 2019 | 2020* | 2021* |
|---|---|---|---|
| Overall Food Insecurity Rate | 12.6 | 14.7 | 14.4 |
| Child Food Insecurity Rate | 17.6 | 21.2 | 20.4 |
| *Projected | | | |

Feeding America. The Impact of the Coronavirus on National Food Security in 2020 & 2021.
https://feedingamericaaction.org/resources/state-by-state-resource-the-impact-of-coronavirus-on-food-insecurity/

# OBJECTIVES

1. Describe 3 eating behaviors that are associated with trauma.
2. List 3 strategies that can help mitigate behaviors linked to trauma
3. Describe 2 effective messaging strategies about nutrition.
4. Describe how social determinants of health impact nutrition choices.
5. Describe Ellyn Satter’s framework for developmentally appropriate nutrition education.

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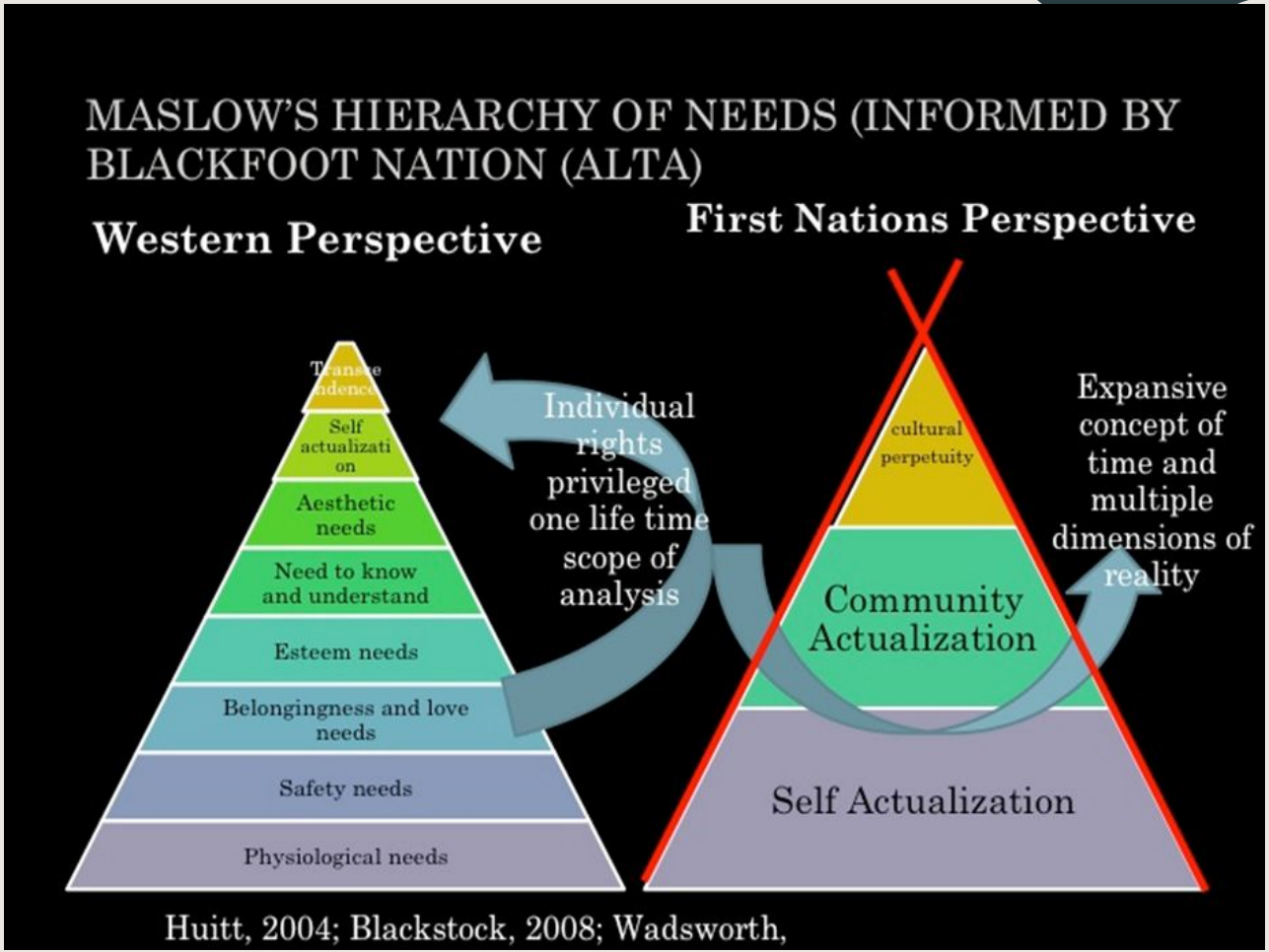
1

# HIERARCHY OF FOOD NEEDS




https://barbarabray.net/2019/03/10/maslows-hierarchy-of-needs-and-blackfoot-nation-beliefs/

# Satter Division of Responsibility (sDOR)

## PARENT / CAREGIVER

Provides structure

- What
- When
- Where

Variety of flavors / textures

Mealtime expectations

## CHILD

Eat

How much

What foods they enjoy

Satter EM. Eating Competence: definition and evidence for the Satter Eating Competence Model. *J Nutr Educ Behav.* 2007;39:S142-S153.

# Hierarchy of Food Needs

**Enough food**
- ★ The need to satisfy hunger leads to selecting food items that are filling and sustaining (energy density)

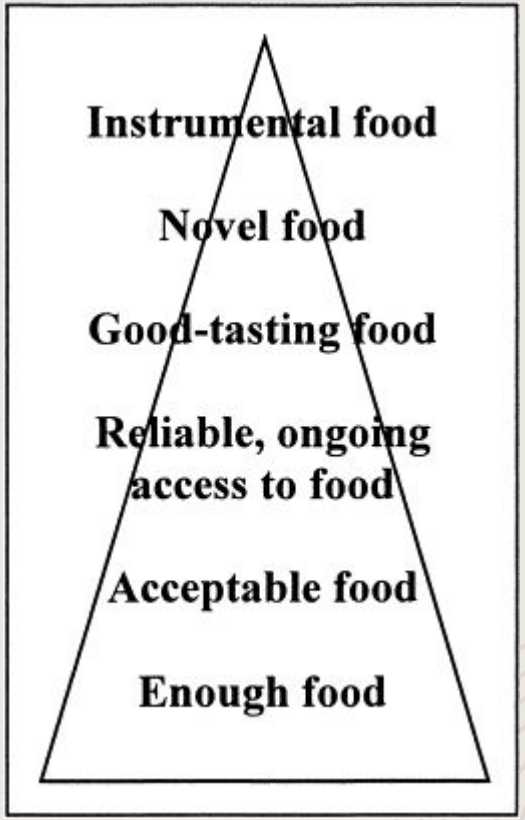
**Acceptable Food**
- ★ Free from hunger, food access may not be socially acceptable

**Reliable, ongoing access to food**
- ★ Can plan for subsequent meals, budget food purchases, accumulate a food stash

**Good-tasting food**
- ★ Food preferences are overridden by need for nourishment

**Novel food**
- ★ Wasting unappealing food is less risky

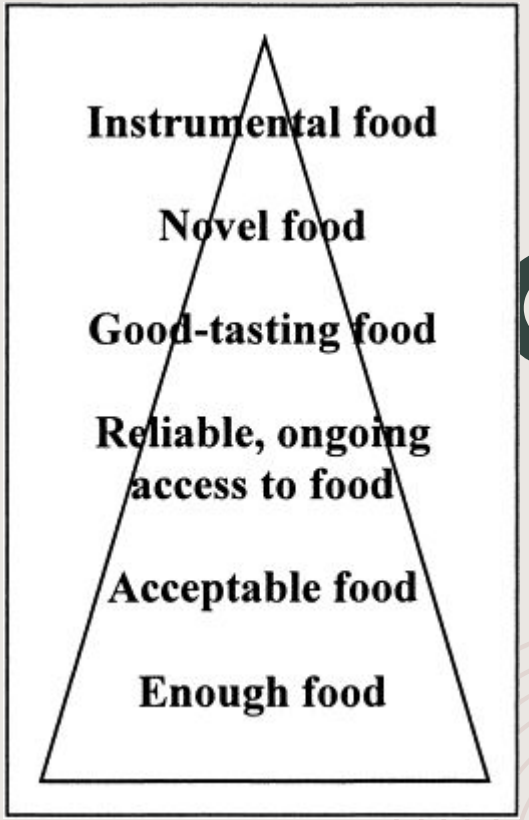
**Instrumental food**
- ★ Can consider choosing food to achieve a desired physical, cognitive, or spiritual outcome




Satter EM. Hierarchy of Food Needs. *J Nutr Educ Behav.* 2007;39:S187-S188.

# 1› Where do health care recommendations focus?

(Type in Chat)



# Bright Futures Parent Handout
## 2 Year Visit

**Here are some suggestions from Bright Futures experts that may be of value to your family.**

ASSESSMENT OF LANGUAGE DEVELOPMENT

### Your Talking Child

- Talk about and describe pictures in books and the things you see and hear together.
- Parent-child play, where the child leads, is the best way to help toddlers learn to talk.
- Read to your child every day.
- Your child may love hearing the same story over and over.
- Ask your child to point to things as you read.
- Stop a story to let your child make an animal sound or finish a part of the story.
- Use correct language; be a good model for your child.
- Talk slowly and remember that it may take a while for your child to respond.

TELEVISION VIEWING

### Your Child and TV

- It is better for toddlers to play than watch TV.
- Limit TV to 1–2 hours or less each day.
- Watch TV together and discuss what you see and think.
- Be careful about the programs and advertising your young child sees.
- Do other activities with your child such as reading, playing games, and singing.
- Be active together as a family. Make sure your child is active at home, at child care, and with sitters.

SAFETY

### Safety

- Be sure your child's car safety seat is correctly installed in the back seat of all vehicles.
- There should be no more than a finger's width of space between your child's collarbone and the harness strap.
- Everyone should wear a seat belt in the car. Do not start the vehicle until everyone is buckled up.
- Never leave your child alone in your home or yard, especially near cars, without a mature adult in charge.
- When backing out of the garage or driving in the driveway, have another adult hold your child a safe distance away so he is not run over.
- Keep your child away from moving machines, lawn mowers, streets, moving garage doors, and driveways.
- Have your child wear a good-fitting helmet on bikes and trikes.
- Never have a gun in the home. If you must have a gun, store it unloaded and locked with the ammunition locked separately from the gun.

TOILET TRAINING

### Toilet Training

- Signs of being ready for toilet training
  - Dry for 2 hours
  - Knows if she is wet or dry
  - Can pull pants down and up
  - Wants to learn
  - Can tell you if she is going to have a bowel movement
- Plan for toilet breaks often. Children use the toilet as many as 10 times each day.
- Help your child wash her hands after toileting and diaper changes and before meals.
- Clean potty chairs after every use.
- Teach your child to cough or sneeze into her shoulder. Use a tissue to wipe her nose.
- Take the child to choose underwear when she feels ready to do so.

TEMPERAMENT AND BEHAVIOR

### How Your Child Behaves

- Praise your child for behaving well.
- It is normal for your child to protest being away from you or meeting new people.
- Listen to your child and treat him with respect. Expect others to as well.
- Play with your child each day, joining in things the child likes to do.
- Hug and hold your child often.
- Give your child choices between 2 good things in snacks, books, or toys.
- Help your child express his feelings and name them.
- Help your child play with other children, but do not expect sharing.
- Never make fun of the child's fears or allow others to scare your child.
- Watch how your child responds to new people or situations.

### What to Expect at Your Child's 2½ Year Visit

#### We will talk about

- Your talking child
- Getting ready for preschool
- Family activities
- Home and car safety
- Getting along with other children

Poison Help: 1-800-222-1222

Child safety seat inspection:
1-866-SEATCHECK; seatcheck.org

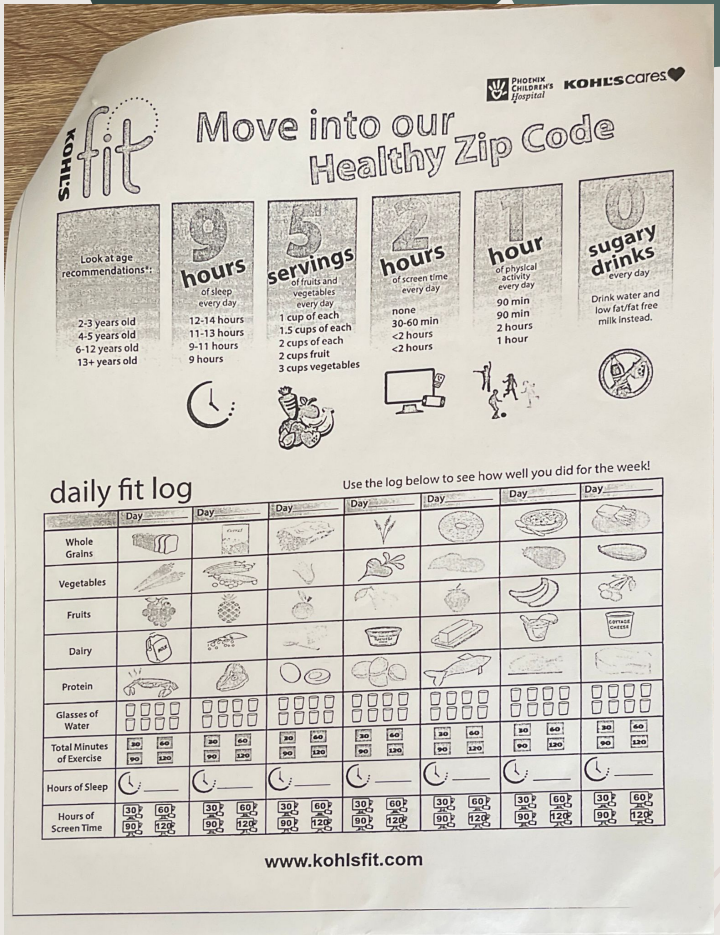
Bright Futures

American Academy of Pediatrics

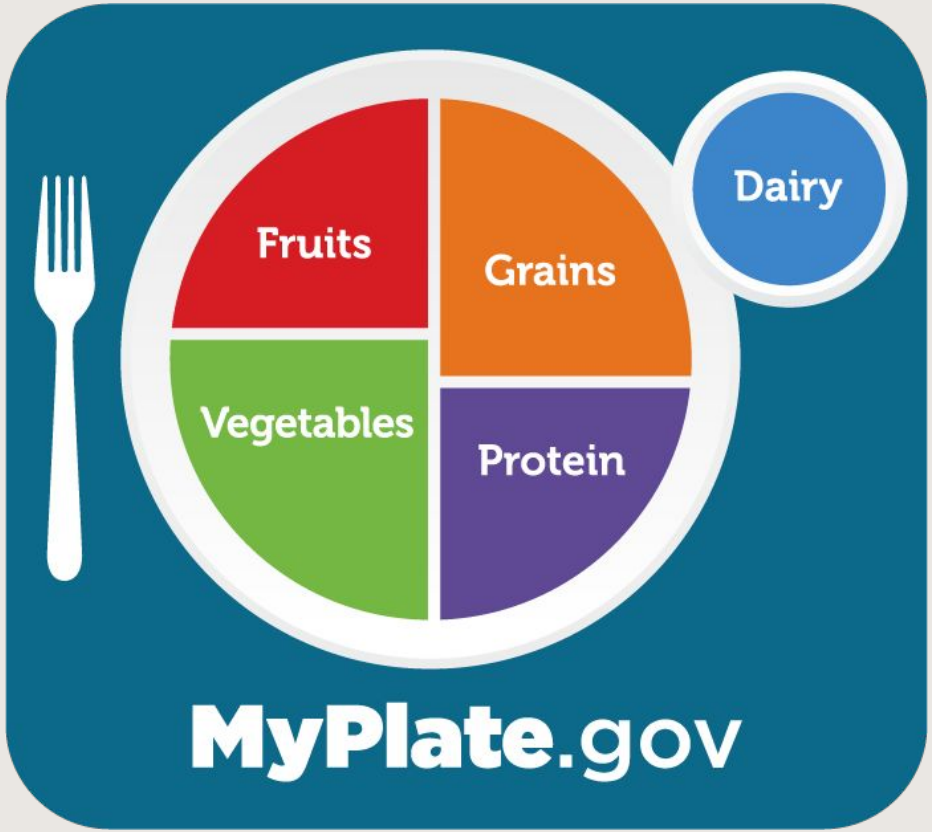
DEDICATED TO THE HEALTH OF ALL CHILDREN™

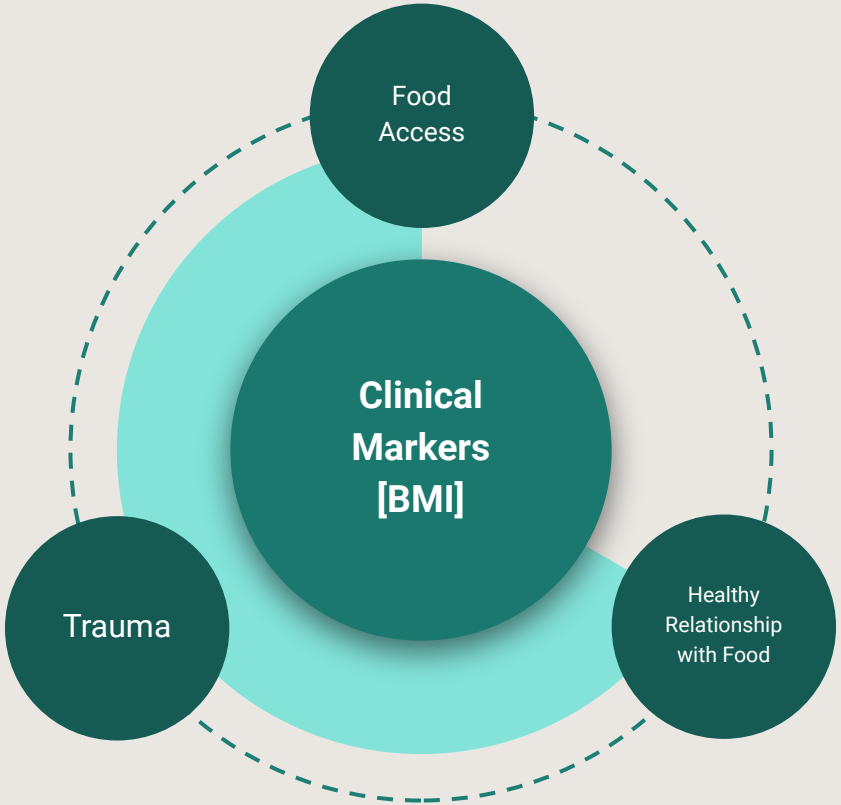






# 2› How did we get here?


Fruits
Grains
Dairy
Vegetables
Protein
MyPlate.gov


Food Access
Clinical Markers [BMI]
Trauma
Healthy Relationship with Food

# Infant and Early Child Appetite Traits and Child Weight and Obesity Risk in Low-Income Hispanic Families

Sarvenaz Vandyousefi, PhD, MS, RD; Rachel S. Gross, MD, MS; Michelle W. Katzow, MD, MS; Marc A. Scott, PhD; Mary Jo Messito, MD

**ARTICLE INFORMATION**

**Article history:**
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Appetite traits
BEBQ
CEBQ
Childhood obesity
Hispanic


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**ABSTRACT**

**Background** Child appetite traits (ATs) are associated with later child weight and obesity risk. Less research has focused on ATs in low-income Hispanic children or included longitudinal associations with infant weight.

**Objective** To determine stability of ATs during infancy and childhood and their relationship with subsequent weight and obesity risk at age 3 years among low-income Hispanic children.

**Design** A secondary longitudinal analysis of data from the Starting Early Program randomized controlled obesity prevention trial.

**Participants/setting** Three hundred twenty-two low-income, Hispanic mother–child pairs enrolled between 2012 and 2014 in a public hospital in New York City.

**Main outcome measures** ATs, including Slowness in Eating, Satiety Responsiveness, Food Responsiveness, and Enjoyment of Food were assessed using the Baby and Child Eating Behavior Questionnaires at ages 3 months, 2 years, and 3 years. Main outcome measures were child standardized weight-for-age *z* score (WFAz) and obesity risk (WFA≥95th percentile) at age 3 years.

**Statistical analyses performed** AT stability was assessed using correlations and multilevel modeling. Linear and logistic regression analyses examined associations between ATs and child WFAz and obesity risk at age 3 years.

**Results** There was limited stability for all ATs measured over time. During infancy, Slowness in Eating was associated with lower 3-year WFAz (B = −0.18, 95% CI −0.33 to −0.04; $P = 0.01$). At age 2 years, Slowness in Eating and Satiety Responsiveness were associated with lower WFAz (B = −0.29, 95% CI −0.47 to −0.12; $P < 0.01$; B = −0.36, 95% CI −0.55 to −0.17; $P < 0.01$) and obesity risk (adjusted odds ratio 0.49, 95% CI 0.28 to 0.85; adjusted odds ratio 0.61, 95% CI 0.38 to 0.99) at 3 years. Increased Slowness in Eating and Satiety Responsiveness over time were associated with lower 3-year WFAz (B = −0.74, 95% CI −1.18 to −0.2 [Slowness in Eating]; B = −1.19, 95% CI −1.87 to −0.52 [Satiety Responsiveness], both *P* values = 0.001). Higher Enjoyment of Food over time was associated with higher 3-year WFAz (B = 0.62, 95% CI 0.24 to 1.01; $P = 0.002$).

**Conclusions** Infants with lower Slowness in Eating and Satiety Responsiveness may have higher levels of obesity risk and need more tailored approaches to nutrition counseling and obesity prevention.

J Acad Nutr Diet. 2021;121(11):2210-2220.

OBESITY REMAINS A SERIOUS PUBLIC HEALTH problem in the United States, with significant disparities in obesity rates among low-income and racial/ethnic minority groups.[1] The development of adult adiposity and obesity has been well documented to start *in utero* and during the early stages of life.[2] The majority of research aiming to identify the critical early antecedents of child obesity have primarily focused on parent feeding behaviors. These parenting behaviors have included controlling feeding styles, formula feeding, and the provision of sugary drinks and processed foods.[3-6] Although parenting behaviors represent important targets of intervention to prevent obesity, the transactional nature of parent–child relationships and feeding interactions[7] highlights the need to also consider infant characteristics. These characteristics, which include infant temperament and appetite or eating style, can alter parenting behaviors and contribute to the development of child obesity. Whereas most studies of infant characteristics related to obesity have focused on difficult or negative infant temperaments,[8-11] an emerging body of evidence revealed associations between child appetite traits (ATs) and child growth, weight, and later obesity.[5,12-16]

The behavioral susceptibility theory hypothesizes that genetic susceptibility to the environment explains variation in human body weight, with differences in appetite implicated as a potential mediating mechanism.[17] The Child Eating Behavior

# 2

# TRAUMA & EATING BEHAVIORS

# TRAUMA AND FOOD INSECURITY

- Hoarding
- Stealing
- Overeating
- Shame
- Anxieties Around Food
- New Food Refusals

# Trauma, Emotional Impact, & Food

**Dysregulation of serotonin and dopamine**

- Risk for psychological conditions
- Decreased feeling of well-being

**Highly palatable foods = increase in dopamine**

- High carbohydrate / sugar foods


De Bellis MD, Zisk A. The Biological Effects of Childhood Trauma. *Child Adolesc Psychiatr Clin N Am.* 2014; 23(2): 185-222

Thornley S, Russell B, Kydd R. Carbohydrate Reward and Psychosis: An Explanation For Neuroleptic Induced Weight Gain and Path to Improved Mental Health? *Curr Neuropharmacol.* 2011; 9(2): 370-375

# Be Mindful of Scarcity Mindset

**Goal is attachment, safety, trust - not specific weight or intake**

★ No punishment or pressure around food

Offer choice and input as developmentally appropriate

★ Family style meals, serving self without punishment

★ “You don’t have to eat if you don’t want to.”

Offer safe foods - novel food with safe foods

★ New foods can cause anxiety

★ Overwhelm

# Building Safety

## Enough Food

- ★ “There is always enough food here.”
- ★ Showing stocked fridge/pantry

**Good tasting, familiar food and autonomy**

- ★ “Would you like X or Y”

**No pressure, shame, punishment**

**Coping strategies**

- ★ Structured meals and snacks - consistent
- ★ In some cases: food bags/backpacks/drawer
- ★ Visible lunch schedule, meal plans, stocked shelves
  - ○

# 6 GUIDING PRINCIPLES TO A TRAUMA-INFORMED APPROACH

The CDC's Office of Public Health Preparedness and Response (OPHPR), in collaboration with SAMHSA's National Center for Trauma-Informed Care (NCTIC), developed and led a new training for OPHPR employees about the role of trauma-informed care during public health emergencies. The training aimed to increase responder awareness of the impact that trauma can have in the communities where they work. Participants learned SAMHSA'S six principles that guide a trauma-informed approach, including:

1. SAFETY
2. TRUSTWORTHINESS & TRANSPARENCY
3. PEER SUPPORT
4. COLLABORATION & MUTUALITY
5. EMPOWERMENT VOICE & CHOICE
6. CULTURAL, HISTORICAL, & GENDER ISSUES

Adopting a trauma-informed approach is not accomplished through any single particular technique or checklist. It requires constant attention, caring awareness, sensitivity, and possibly a cultural change at an organizational level. On-going internal organizational assessment and quality improvement, as well as engagement with community stakeholders, will help to imbed this approach which can be augmented with organizational development and practice improvement. The training provided by OPHPR and NCTIC was the first step for CDC to view emergency preparedness and response through a trauma-informed lens.


Clinical Markers
Healthy Relationships with Food

# 3

# TRAUMA-INFORMED NUTRITION MESSAGES

# What do we say?

(...and how are we going to say it?)

# Effective health-related messages are audience-focused, practical, and positive.

The Language of Health: An Editorial Style Guide to Effectively Communicate to the Public

## Audience focused

Focus on the audience

Meet people where they are

Enhance cultural appropriateness

## Practical

Provide actionable behaviors

Include only need to know information

Make messages clear

## Positive

Use respectful, considerate messages

Provide messages of optimism and hope

Collaborate, don't dictate

# Messaging Considerations

# Effective Messaging Strategies

**There are multiple dimensions of health** including physical, emotional, social, intellectual, spiritual, occupational, and environmental well-being. Focusing only on one aspect of health as the entirety of health can overlook overall health needs. **Incorporating terms like “wellness” or “well-being” allows people to see health from a broader, holistic view**.

# Effective Messaging Strategies

**There are social determinants of health:** The environment in which we live, learn, work, play, and worship can affect our health status. **Even when someone has the desire to practice certain lifestyle behaviors, their social and living environments can either make it difficult, or impossible, to achieve their goals.**

# Strike a balance

**Personal responsibility as one of many influences**
Everyone should be able to make the choices that allow them to live a long, healthy life regardless of their income, education, or ethnic background

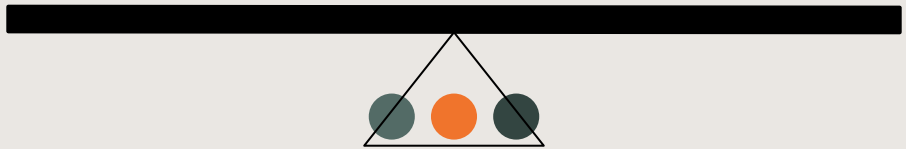
**Individuals are solely responsible**
Make the healthy choice the easy choice

**Groups (in general) are affected**
Not everyone has the same opportunities to be as healthy as others

**Focusing on one social determinant only**
Low-income individuals are not able to live a long, healthy life due to poverty

Individual responsibility

Multiple factors that influence health/SDOH



# What would you identify as a benefit to eating nourishing (healthy) foods?

# Benefits


Pleasure
Taste
Sharing a meal
Learning a skill
Trying something new
Connect to culture

# Promoting Healthy Eating in Adults: An Evaluation of Pleasure-Oriented versus Health-Oriented Messages

Caroline Vaillancourt,[1,2] Alexandra Bédard,[1] Ariane Bélanger-Gravel,[3,5] Véronique Provencher,[1,2] Catherine Bégin,[4] Sophie Desroches,[1,2] and Simone Lemieux[1,2]

[1]Institute of Nutrition and Functional Foods; [2]School of Nutrition; [3]Department of Information and Communication; [4]School of Psychology, Laval University, QC, Canada; and [5]Quebec Heart and Lung Institute, QC, Canada

1. Adults aged 18-65y
2. Randomized to read “health” or “pleasure” leaflet
3. Participants answered questionnaires after reviewing leaflet
4. Pleasure leaflet increased positive attitude toward food

Supplemental Figure 1. The Pleasure leaflet Online Supporting Material


Supplemental Figure 2. The Health leaflet Online Supporting Material

**ORIGINAL ARTICLE**

# Fighting obesity or obese persons? Public perceptions of obesity-related health messages

R Puhl, JL Peterson and J Luedicke

*Physical Activity*

'Move everyday!'
'LOST: Love handles. Last seen before taking stairs instead of escalator.'
'Park farther from your destination and walk.'

*Portion sizes*

'Skip seconds... Lose your gut.'
'Enjoy your food, but eat less.'

*Stigmatizing*

'Childhood obesity is child abuse.'
'Too much screen time, too much kid.'
'Keep obesity away from your child.'
'Being fat takes the fun out of being a kid.'

'Fat kids become fat adults.'
'Chubby kids may not outlive their parents.'

*Multiple topics*

'Eat well. Move more. Live longer.'
'Learn the facts, eat healthy, get active, take action.'
'Unhealthy eating and drinking and not enough physical activity can seriously affect your health.'

# Results?

1. Messages coded as stigmatizing received a  notably lower percentage of participants indicating intent to comply
2. Most favorable messages had themes of:
    a. F/V consumption
    b. Messages with multiple health behaviors
    c. Messages that instill confidence and personal empowerment

# 4

# APPLICATION

# Satter Division of Responsibility (sDOR)

## PARENT / CAREGIVER

Provides structure

- What
- When
- Where

Variety of flavors / textures

Mealtime expectations

## CHILD

Eat

How much

What foods they enjoy

Satter EM. Eating Competence: definition and evidence for the Satter Eating Competence Model. *J Nutr Educ Behav.* 2007;39:S142-S153.

# Satter Division of Responsibility (sDOR)

## ecSatter- and fdSatter-based nutrition education for parents

- Parent-focused. Materials and programs address the parent's role in feeding.
- Manages fat, salt, and sugar by emphasizing variety.
- Teaches and supports parents in doing their tasks with feeding.
- Prioritizes enjoyable family meals and sit-down snacks.

## Approaches to Nutrition Education that are inconsistent with ecSatter and/or fdSatter

- Categorizing foods as **good or bad (or even better or worse)**.
- Directly or indirectly motivating children to avoid or choose certain foods by use of words such as **"benefits, "healthy," "low-fat," "low-sugar**," and **"moderation."**
- Setting up good-food, bad-food dichotomies.
- Teaching calorie prescriptions for food intake and activity and/or giving lessons about cognitively balancing calories in and calories out.

Lohse B, Cunningham-Sabo L. Eating Competence of Hispanic parents is associated with attitudes and behaviors that may mediate fruit and vegetable-related behaviors of 4th grade youth. *J Nutr.* 2012;142:1903-1909.

# Stoplight approach

What works? Why are we drawn to this?
What are potential areas of concern?

Photo credit

# Always, Sometimes, Never

## Adults

Adults can make food choices based on nutrition.

This includes frequency.

## Children

Not their job to decide what is served.

Need to learn to manage all foods.

| You Say | Child Hears |
| --- | --- |
| Sugar is not good for you. | Do not eat sugar. It will harm me. |
| Be active for a healthy weight. | Being active is not fun on it’s own. |
| Learn about “always, sometimes, never” foods or “Go, Slow, Whoa” approaches. | I should like always foods best. |
| Carrots are good for your eyes. | If I don’t eat carrots, I will go blind. |

| Phrases that hinder | Phrases that help |
| --- | --- |
| Sugary foods are a sometimes treat. | Cookies taste sweet and give us energy. |
| It’s important to serve fruits and vegetables at every meal. | Offer a variety of foods that provide the energy and nourishment for littles to grow and play. |
| Broccoli is so good for you. | It’s ok if you’re still learning to like broccoli. |
| A healthy diet helps lower the risk of chronic disease later in life. | What is your favorite food to make (or eat) together? |

# Recap

## Audience focused

Health may or may not be a motivator for adults

Young children are motivated by taste

## Practical

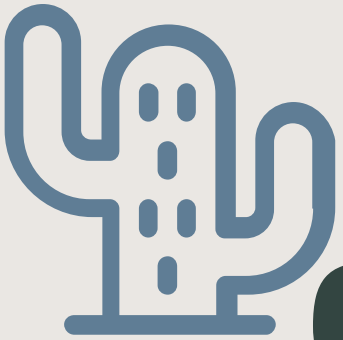
Promote sharing meals when/if possible

Messages about “variety” include convenience items and highly palatable foods

## Positive

All bodies are good bodies

Eating for pleasure valid and acknowledged



# Questions

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noelle.veilleux@adhs.gov

# Thanks!

# Key Points
# Effective messaging strategies for health and weight

# Effective messaging strategies

## Health

Pg. 3

- There are social determinants of health
- Health disparities exist
- **Health is weight neutral**

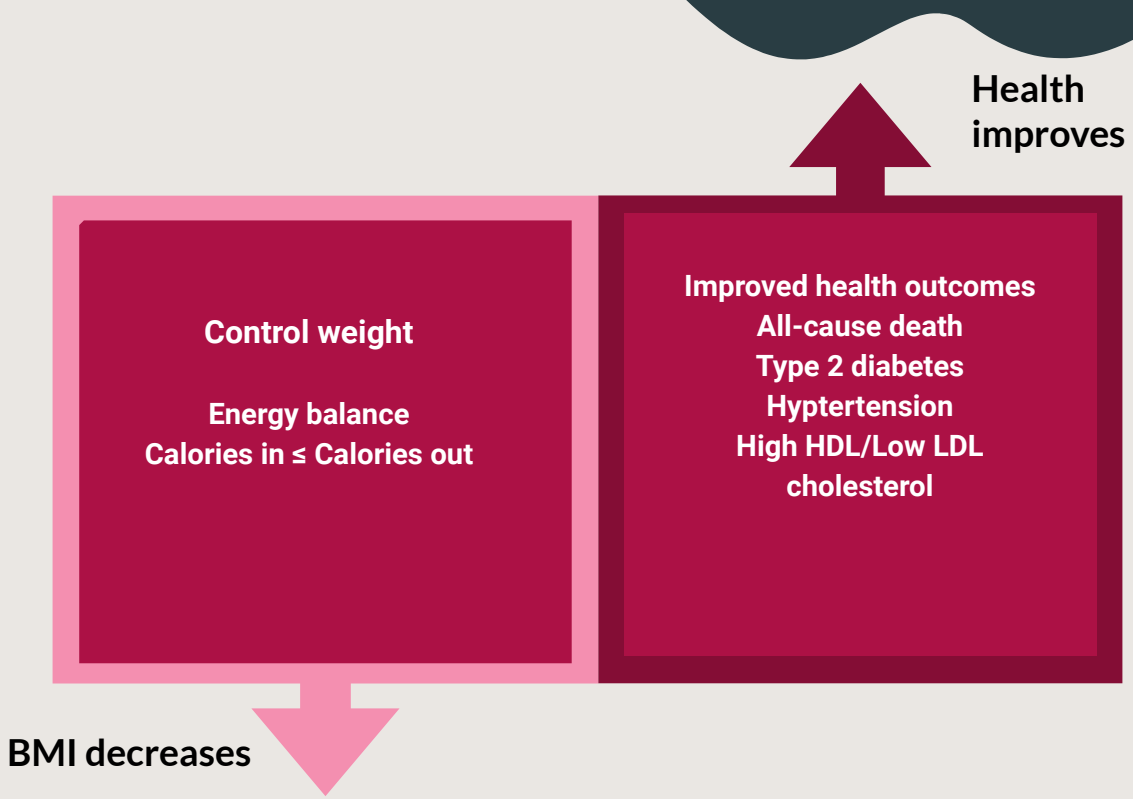
## Weight and Body Size

Pg. 15

- Focus on lifestyle behaviors
- There are many factors that affect body weight, shape, and size
- **Health is weight neutral**

# Health is weight neutral

This is counter to the standard (weight-centric) approach



# An Evidence-Based Rationale for Adopting Weight-Inclusive Health Policy


“These policies rest upon the assumptions: (1) that higher body weight equals poorer health, (2) that long-term weight loss is widely achievable, and (3) that weight loss results in consistent improvements in physical health. Our review of the literature suggests that these three assumptions underlying the current weight focused approach are not supported empirically. Complicating this further are the misguided assumptions (4) that weight stigma (i.e., pervasive social devaluation and denigration of higher weight individuals) promotes weight loss and (5) recognizing that one is “overweight” is necessary to spur health-promoting behaviors.”

# Assumption: higher body weight = poorer health

- Meta-analysis of 2.88 million people found hazard ratios for all-cause mortality lowest in BMI category 25-29.9 kg/m$^2$.
- Highest in BMI category < 18.5 kg/m$^2$

Association of All-Cause Mortality With Overweight and Obesity Using Standard Body Mass Index Categories

A Systematic Review and Meta-analysis

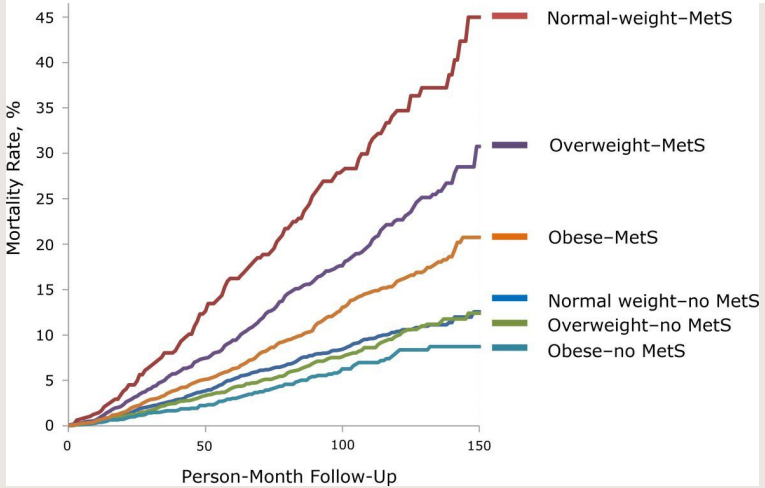
Dr Katherine M. Flegal, PhD, Dr Brian K. Kit, MD, Dr Heather Orpana, PhD, and Dr Barry I. Graubard, PhD

PREVENTING CHRONIC DISEASE
PUBLIC HEALTH RESEARCH, PRACTICE, AND POLICY
Volume 17, E36 MAY 2020

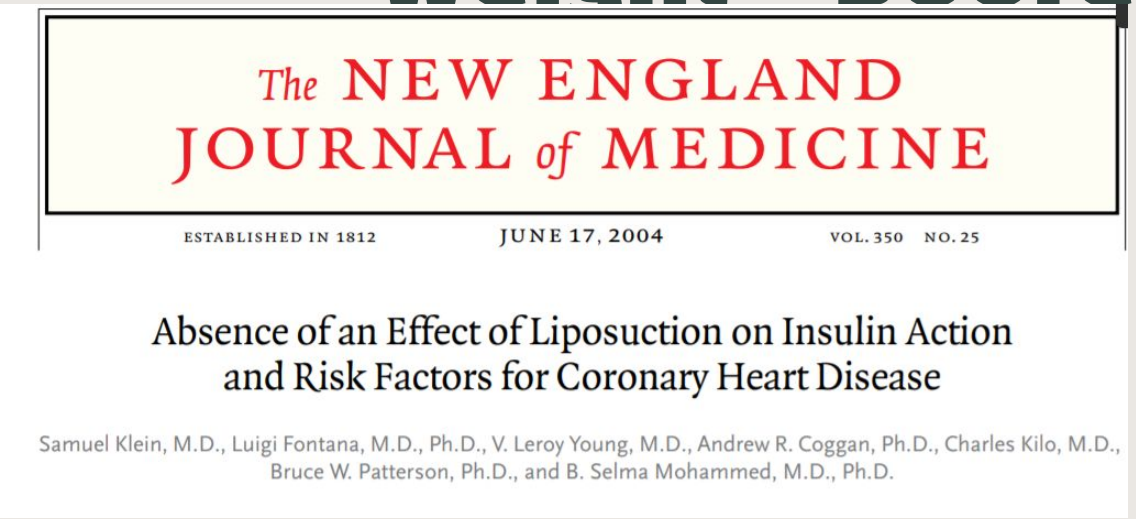
ORIGINAL RESEARCH

The Influence of Metabolic Syndrome in Predicting Mortality Risk Among US Adults: Importance of Metabolic Syndrome Even in Adults With Normal Weight

Ting Huai Shi, BA[1]; Binhuan Wang, PhD[1,2]; Sundar Natarajan, MD, MSc[1,2]



# Assumption: higher body weight = poorer health



The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 JUNE 17, 2004 VOL. 350 NO. 25

Absence of an Effect of Liposuction on Insulin Action and Risk Factors for Coronary Heart Disease

Samuel Klein, M.D., Luigi Fontana, M.D., Ph.D., V. Leroy Young, M.D., Andrew R. Coggan, Ph.D., Charles Kilo, M.D., Bruce W. Patterson, Ph.D., and B. Selma Mohammed, M.D., Ph.D.

1. High volume liposuction on higher wt patients
2. Normal glucose tolerance or T2 DM
3. 28-44% ↓ abdominal fat tissue
4. No changes in outcome variables

# Is it reduction in fat or changes in health behaviors?

# An Evidence-Based Rationale for Adopting Weight-Inclusive Health Policy


“These policies rest upon the assumptions: (1) that higher body weight equals poorer health, (2) that long-term weight loss is widely achievable, and (3) that weight loss results in consistent improvements in physical health. Our review of the literature suggests that these three assumptions underlying the current weight focused approach are not supported empirically. Complicating this further are the misguided assumptions (4) that weight stigma (i.e., pervasive social devaluation and denigration of higher weight individuals) promotes weight loss and (5) recognizing that one is “overweight” is necessary to spur health-promoting behaviors.”