



# **NUTR 496: Leadership Debate**

**Should Parents Have More of an Active  
Role in Their Child's Nutrition?**

Taylor Kollak

A young child with blonde hair is shown from the chest up, holding a large slice of watermelon with both hands. The child is wearing a pink and white checkered shirt. The background is a blurred green, suggesting an outdoor setting. In the bottom right corner, there is a bowl filled with more watermelon slices. A small orange horizontal bar is located in the top left corner of the image.

# Problem Statement

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The understanding of a child's attitude and eating behaviors are important in terms of a child's health. Evidence has indicated early dietary habits developed during childhood continue through adulthood, much of which is influenced by parental control. With a greater attempt to control a child's intake knowing that it has an impact on future eating behaviors, should parents have more of an active role in their child's nutrition?



# History & Background

- Food choices a mother makes during her pregnancy may set the stage for an infant's later acceptance of solid foods.
  - Many flavors of maternal diet are present in amniotic fluid & breast milk
- Familiarity plays a key role in the acquisition of food and flavor preference.



# History & Background cont.

- The first year of life is a period of rapid physical, social and emotional growth – eating patterns also develop
  - Transition from consuming a single food to a variety of foods
- Breastfeeding is the optimal feeding method for first 6 months of life
  - Plays a role in development of child's response to internal hunger and satiety cues
  - May foster development of self-regulatory abilities during feeding
- Infants are born with a preference for sweet and salty taste
  - Infants and young children can learn to accept a greater variety of food and flavors through repeated exposure



# THE STARTLING TRUTH: BABIES' DIETS

Potatoes in the Form of French Fries and Potato Chips are Babies' No. 1 Source of Veggies by Age 2<sup>1</sup>



**<40%** EAT  
VEGETABLES



**#1 SOURCE  
POTATOES**



**9 MONTHS:**  
Mashed Potatoes, French Fries



**21 MONTHS:**  
Potato Chips, French Fries



**1%** EAT LEAFY GREENS



**6-8  
MO.**

**BABY FOOD**  
is Primary Source  
of Fruit, Vegetable,  
Whole Grain  
Consumption

<sup>1</sup> NHANES Analysis of total fruit, vegetable, whole grains, added sugars and sodium in 0-24 months, 2001-2012 conducted by Nutrition Impact, LLC and NutriScience, LLC; lead researchers Victor Fulgoni, III and Sanjiv Agarwal

# THE STARTLING TRUTH: BABIES' DIETS

As They Transition to Table Foods, Many 12-Month-Old Babies Consume Adult Levels of Sodium and Added Sugars<sup>1</sup>

 **1500+  
MG**  
SODIUM DAILY\*

PRIMARY SOURCES



 **5+ TSP**  
ADDED  
SUGAR DAILY\*\*

PRIMARY SOURCES



\*The Institute of Medicine recommends no more than 1,000 mg/day of sodium for children ages 1-3, and 1,500 mg for adults

\*\*The American Heart Association recommends no more than 4 teaspoons of added sugar a day for preschoolers

<sup>1</sup> NHANES Analysis of total fruit, vegetable, whole grains, added sugars and sodium in 0-24 months, 2001-2012 conducted by Nutrition Impact, LLC and NutriScience, LLC; lead researchers Victor Fulgoni, III and Sanjiv Agarwal

# THE STARTLING TRUTH: BABIES' DIETS

Over 40% of 12-Month-Old Babies Regularly eat Cookies, Crackers and Savory Snacks vs. Healthier Fruits and Veggies<sup>1</sup>

>40%  
EAT



Cookies



Brownies

~40%  
EAT



Crackers



Salty Snacks

~30%  
DRINK



Sugar  
Sweetened  
Beverages



Soft Drinks



Children who drink sugar-sweetened beverages during the 1<sup>ST</sup> YEAR are twice as likely to drink them at 6 YEARS OLD.<sup>2</sup>

<sup>1</sup> NHANES Analysis of total fruit, vegetable, whole grains, added sugars and sodium in 0-24 months, 2001-2012 conducted by Nutrition Impact, LLC and NutriScience, LLC; lead researchers Victor Fulgoni, III and Sanjiv Agarwal

<sup>2</sup> Infant Feeding Practices Study II, Pediatrics 2008;122;S25, Grummer-Strawn, et al

# Politics

- The Food and beverage industry has used this knowledge to their advantage to encourage the development of unhealthy food preferences in children of all ages
  - Various marketing and advertising techniques
- Healthy foods are advertised less than 3% compared to counterparts
  - F&B companies spend \$2 billion a year on marketing campaigns directed towards children
  - Unregulated in U.S.





## Politics cont.

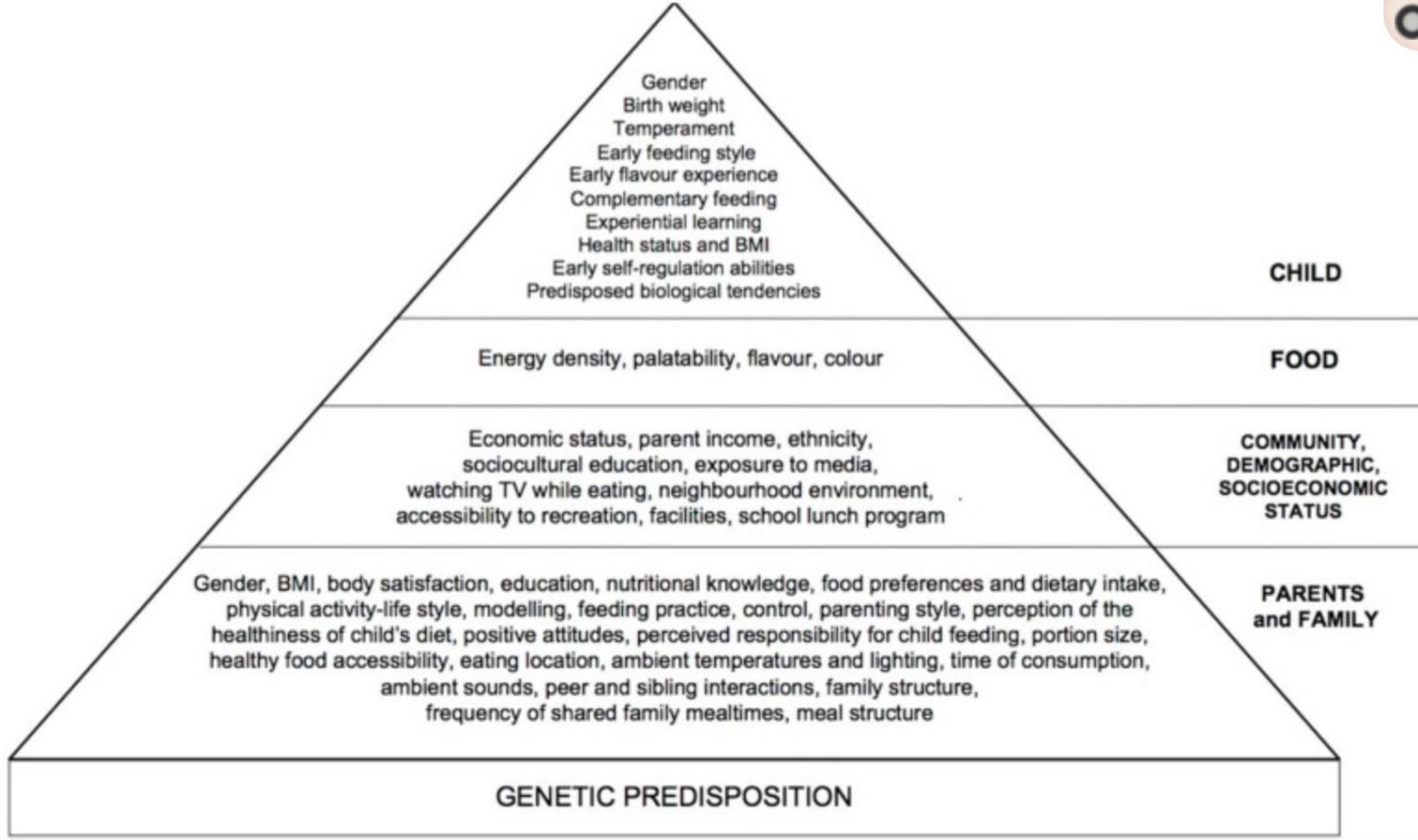
- Feeding styles may influence not only a child's body weight but their relationship with food and how they behave around eating
- Parental feeding styles
  - Authoritarian
  - Permissive
  - Neglectful
  - Authoritative style: 'Love with limits'

Drayer, CNN, L. (2018). Of the four parental “feeding styles,” only one is good for kids’ health, experts say .



# Science

- The family system in a child's life has an active role in establishing and promoting eating behaviors that will persist on through life
- In current analysis, parental food habits and feeding strategies are most dominant determinants of child's behavior with food
  - Parents should be positive role models
    - Family environment
    - Family meals



BMI: Body Mass Index

# Factors affecting Children's Eating Behaviors

Scallion, S., et al. (2018). Factors Influencing Children's Eating Behaviours .



## **Science cont.**

- Parents who are overweight or have trouble controlling their own intake can put their children at risk to become overweight as well
  - Adopt controlling child-feeding practices
    - Restrict children's eating to reduce weight
    - Can lead to emotional eating

# Science cont.

- The family can be considered as a system
  - Family environment
  - Includes psychosocial concepts
- Children's ability of imitating the actions of the others and learning by observation in particular from their parents' and caregivers' could explain the kind of food styles developed
- Intervention studies to identify ways to improve children's eating behaviors are still very limited and strategies are age-related and not evidence-based



# Legal

- "The human right to adequate food needs are to be interpreted for the special case of young children because they are vulnerable, others make the choices for them"
- Widespread concern that mothers might make unwise choices regarding the feeding of their children
  - Society override the mother's choice
  - Find ways to support the mother so that she makes wise choices



# Legal cont.



- Is it child neglect or abuse to overfeed a child to the point where he or she becomes morbidly obese?
- NHANES
  - 2011-2014
  - Obesity prevalence of 17% and extreme obesity of 5.8% among children and adolescents
- Increased medical morbidity, including abnormal glucose and lipid levels, hypertension, sleep apnea, orthopedic problems, depression, and stigmatization

# Religious

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- Many religions include guidance on what is appropriate to eat in order to demonstrate faith
- Data from 2011 census
  - Christian (59.3%)
  - Muslim (4.8%)
  - Hindu (1.5%)
  - Sikh (0.8%)
  - Jewish (0.5%)
- Good practice to ask for patient or their representative about their dietary requirements



## Religious cont.

- Variations in meals for religious reasons
- The USDA and FNS has allowed variations in food components to meet religious needs among Jewish schools, institutions, and sponsors participating in school lunch programs
- Allowable variations in meal components
  - Whole grains
    - Exempt during the religious observance of Jewish Passover
    - Substitute with unenriched matzo to meet grain requirement
  - Fluid milk
    - Must be offered or served at all meals
    - Jewish Dietary Laws allow other meat alternatives to be consumed with fluid milk at the same meal



# Cultural

- The American Academy of Pediatrics states, "Culture influences food preparation, use of ingredients and the consumption frequency of specific foods."
- Culture affects the eating habits of kids
  - Share food preferences like those of their parents
  - Influenced by the availability or affordability of traditional foods and ingredients
  - Kids may choose to not eat traditional foods because that would make them feel different from other kids
  - Nutritional marketing



# Cultural cont.

- The family is an important social context where children learn and adopt eating behaviors
- Parents play the role of health promoters, role models, and educators in the lives of children, influencing their food cognitions and choices
  - Parents' own food consumption behavior and availing certain types of foods
  - Active and restrictive guidance are effective in only certain areas of contexts

Yee, A. Z. H., Lwin, M. O., & Ho, S. S. (2017). The influence of parental practices on child promotive and preventive food consumption behaviors: a systematic review and meta-analysis.



# Cultural cont.

- Context-specific parental practices and child food consumption
  - Restrictive guidance
  - Modeling
  - Parental control of availability
  - Pressure to eat
  - Food as a reward
  - Rewarding food consumption materially
  - Rewarding with praise
  - Accessibility
  - Active guidance



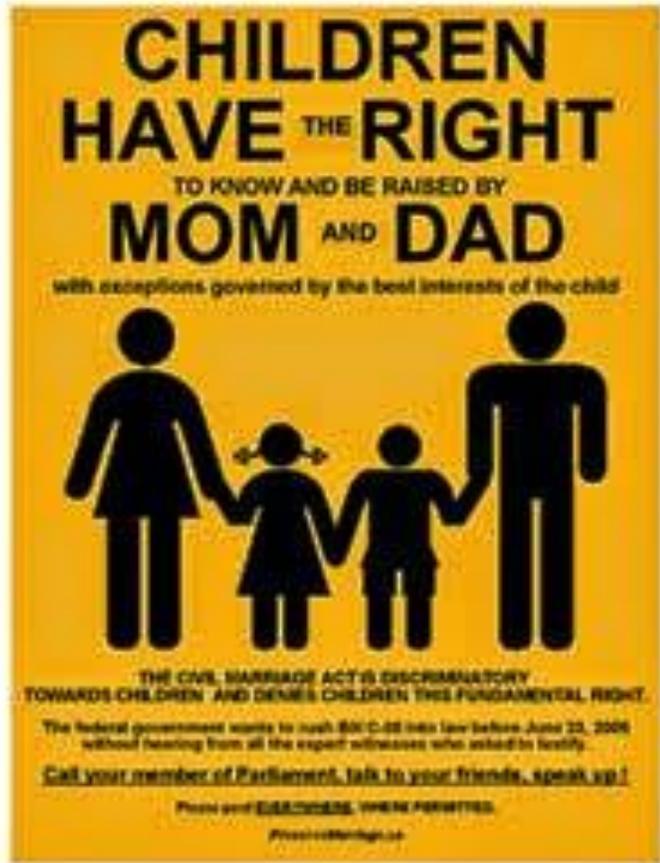


# Ethical

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- Infant nutrition lays the foundation for health throughout life
- Infant feeding research is essential – must be conducted to the highest ethical standards
  - Conducting research using infants
- "Before including a child in research, researchers must establish that there is no reason to believe that such participation is contrary to that child's best interest."

# Ethical cont.



- Ethical concerns for family-based interventions
  - Parents' rights and responsibilities to protect their children
  - Perceptions of obesity of child abuse or neglect
  - Parents' role as decision makers on their child's behalf because of the child's limited capacity to comprehend the risks of benefits of treatment
- Interventions that focus on improving overall family health are an ethical and effective way to decrease childhood obesity



# Economic

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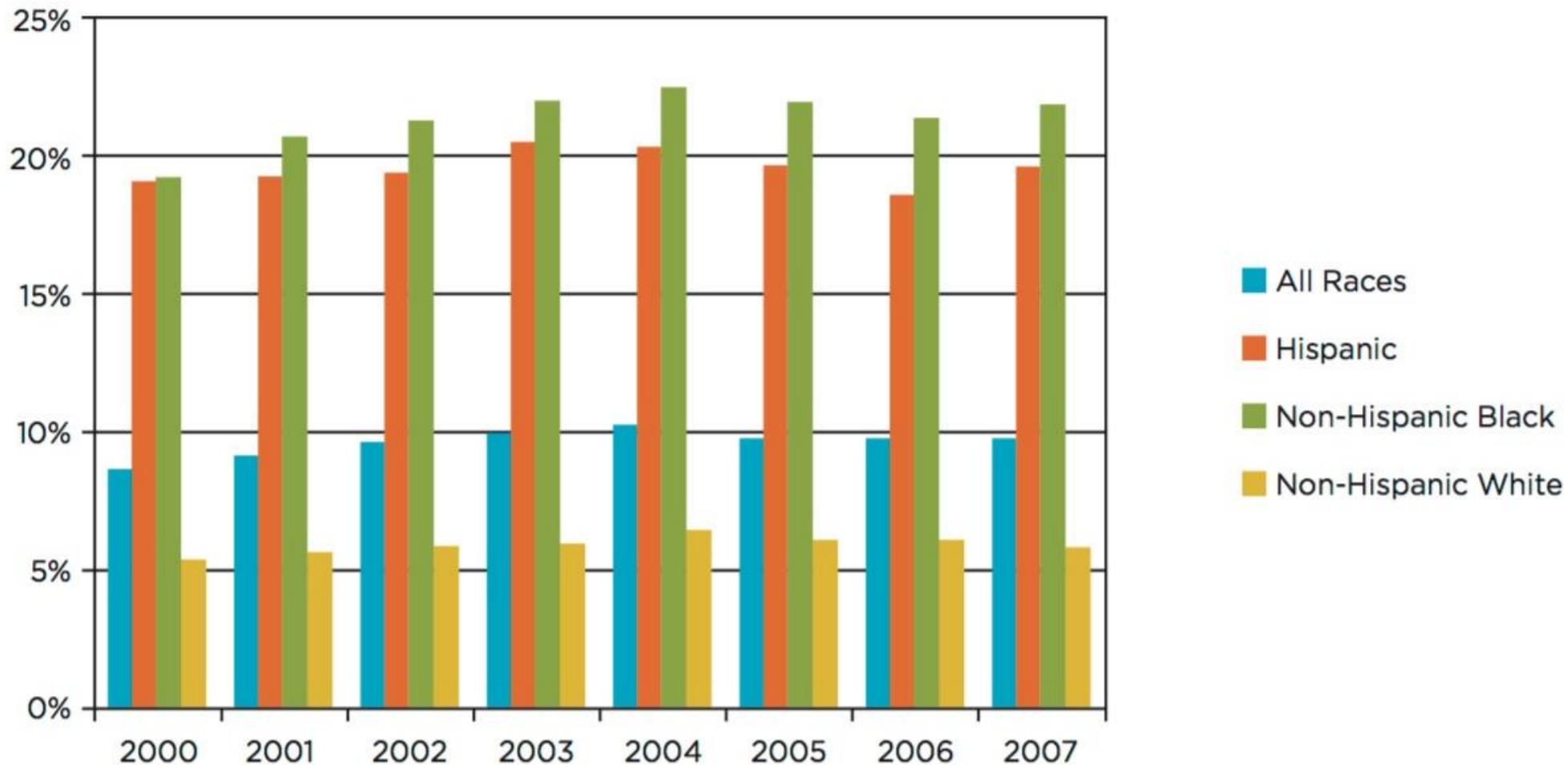
- An estimated 200 million children under age five years in low- and middle-income countries are unlikely to reach their developmental potential because of inadequate health, nutritional, and other investments in early life
- Clear link between food and health maintenance and disease development
  - Individual purchases of food products are made by consumers using their own money

# Economic cont.

- Child food insecurity
  - "Limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways."
  - Related to both under-nutrition and over-nutrition
  - Hungry children are sick more often and suffer growth and developmental impairments that precludes them reaching their full potential



**Figure 1: Proportion of U.S. Families with Incomes Below Poverty by Race/Ethnicity, 1999-2007\***



\* Includes households with and without children

Food Insecurity Rates

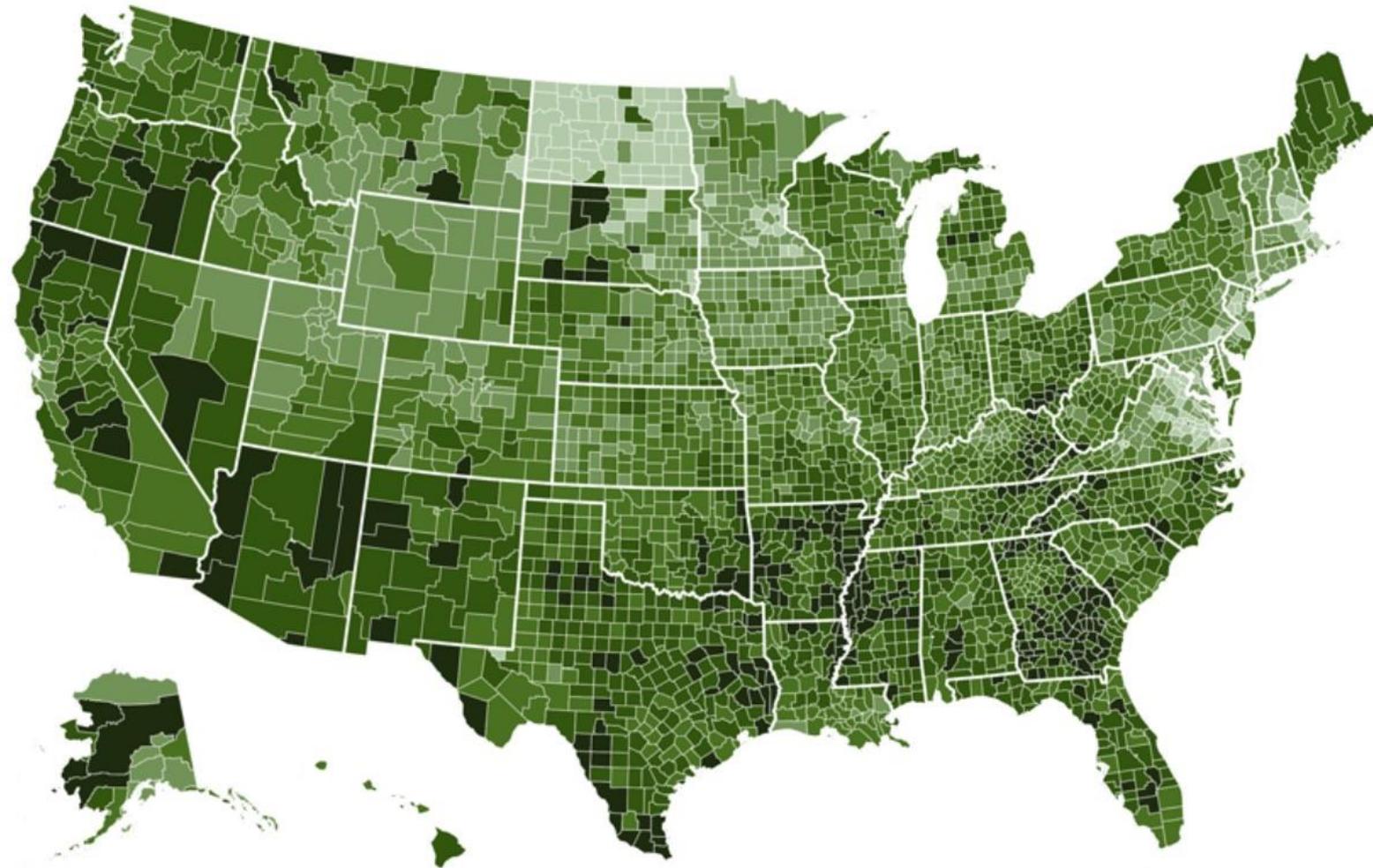
4-14%

15-19%

20-24%

25-29%

30% +



Source: Feeding America



## Economic cont.

- Household production theory
  - Each family is a production unit that uses inputs to produce things the household needs and wants for its collective satisfaction, utility or well-being
  - Can define how and if parents are strict with what their children eat
- Food insecurity can add to the short or absence of inputs that are essential to the optimal formation of human capital in children
  - Impairments in adequate food and nutrients
  - Higher illness in household

# Organizations Contributing to Child Nutrition

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The National Association for the Education of Young Children (NAEYC)

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United States Department of Agriculture (USDA)

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Global Child Nutrition Foundation (GCNF)

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American Academy of Pediatrics (AAP)

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American Academy of Nutrition and Dietetics (AND)

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Feeding America Organization

# Organizations cont.

## The National Association for the Education of Young Children (NAEYC)

[www.naeyc.org](http://www.naeyc.org)

- Large non-profit organization in the United States that represents early childhood education teachers, center directors, trainers, college educators, as well as families of young children
- Vision: all young children thrive and learn in a society dedicated to ensuring they reach their full potential
- Provide research-based resources for families – from child-development to reading and writing



## United States Department of Agriculture (USDA)

[www.fns.usda.gov](http://www.fns.usda.gov)

- U.S. federal executive department responsible for developing and executing federal laws related to farming, forestry, rural economic development, and food
- Child Nutrition Programs
  - National School Lunch Program
  - School Breakfast Program
  - Special Milk Program
  - Child and Adult Care Food Program
  - Summer Food Service Program
  - Team Nutrition
  - Community Food Systems

# Organizations cont.

## Global Child Nutrition Foundation (GCNF)

[www.gcnf.org](http://www.gcnf.org)

- Created in 2006 with the mission of expanding opportunities for the world's children to receive adequate nutrition for learning and achieving their potential
- Dedicated to helping countries develop and operate successful, sustainable, school feeding programs

## American Academy of Pediatrics (AAP)

[www.aap.org](http://www.aap.org)

- American professional association of pediatricians
- Over 67,000 pediatricians
- Support strong, science-based nutrition programs to help promote children's lifelong health and combat food insecurity



# Organizations cont.

## American Academy of Nutrition and Dietetics (AND)

[www.eatright.org](http://www.eatright.org)

- United States' largest organization of food and nutrition professionals, and represents over 100,000 credentialed practitioners such as registered dietitian nutritionists
- Child Nutrition Reauthorization
- For Kids - [eatright.org](http://eatright.org)
- Kids Eat Right - AND Foundation

## Feeding America Organization

[www.feedingamerica.org](http://www.feedingamerica.org)

- US-based nonprofit organization that is a nationwide network of more than 200 food banks that feed more than 46 million people through food pantries, soup kitchens, shelters, and other community-based agencies
- Work with farmers, manufacturers, and retailers to provide nourishing food to individuals and families in need



# Pros & Cons

## Pros

- Increases parents and children's nutritional knowledge and education
- Help to fight food insecurity
  - Major impact on low-income families
- Provide and/or fund research-based studies regarding child development

## Cons

- Some organizations have too much governmental control
- Some organizations are biased towards different aspects of their practice
  - Sponsors and funders

# Policies in place

## Child Nutrition Act of 1966

- This act was created as a result of the "years of cumulative successful experience under the National School Lunch Program to help meet the nutritional needs of children."

## Healthy, Hunger-Free Kids Act of 2010

- USDA gave the opportunity to make real reforms to the school lunch and breakfast programs by improving the critical nutrition and hunger safety net for millions of children.

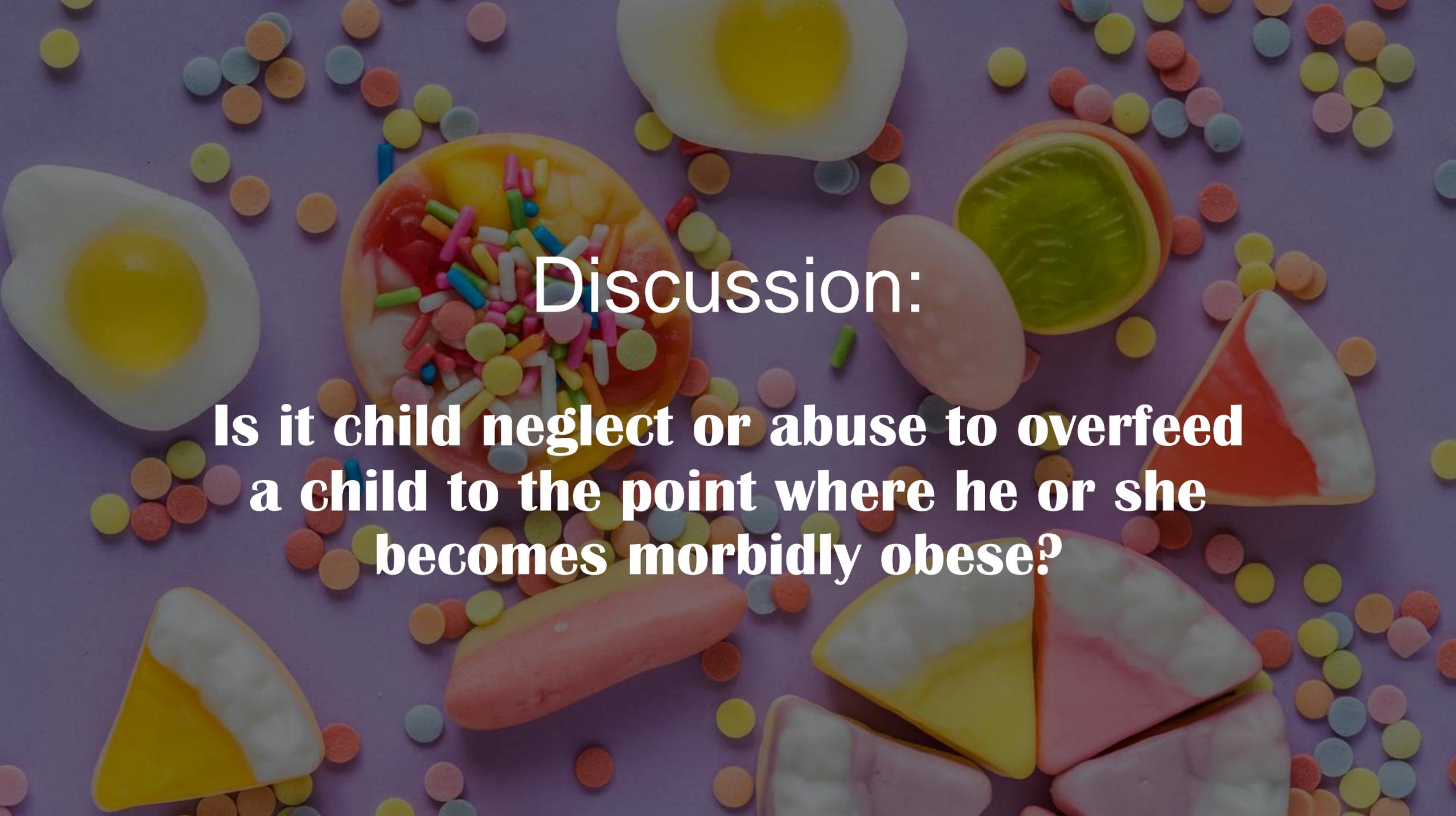
2004

1966

2010

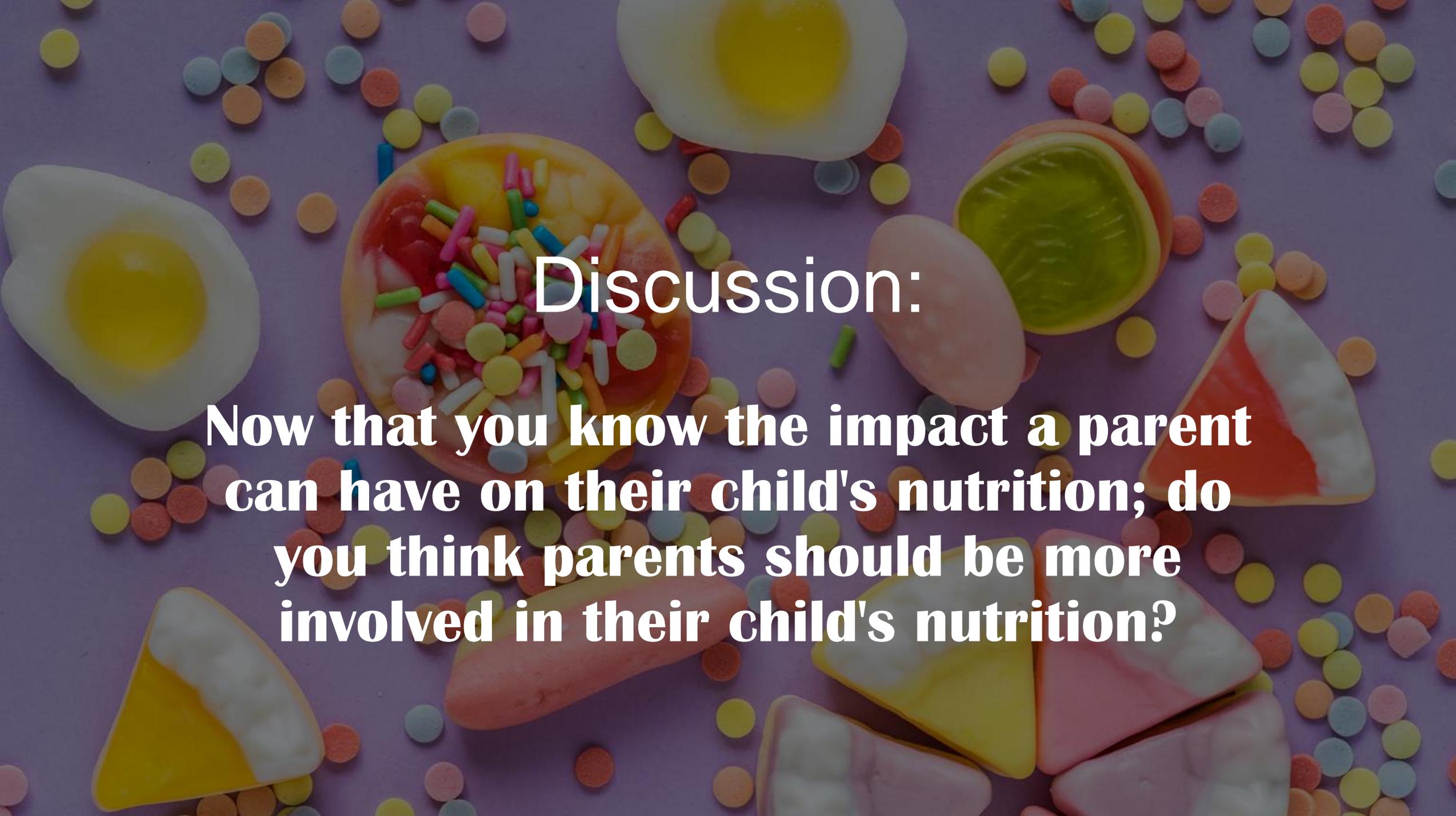
## Child Nutrition & WIC Reauthorization Act of 2004

- The Child Nutrition and WIC Reauthorization Act authorizes all of the federal school meal and child nutrition programs, which provide funding to ensure that low-income children have access to healthy and nutritious foods.

A collection of colorful pills and candies scattered on a purple background. In the center, there is a small yellow bowl filled with a mix of various colored pills (red, green, blue, white, orange, pink). Surrounding the bowl are several large, colorful pills and candies, including two white pills with yellow centers, a green pill with a textured surface, and several triangular and rectangular pills in various colors (red, white, yellow, pink, orange). The overall scene is a dense arrangement of pharmaceutical products.

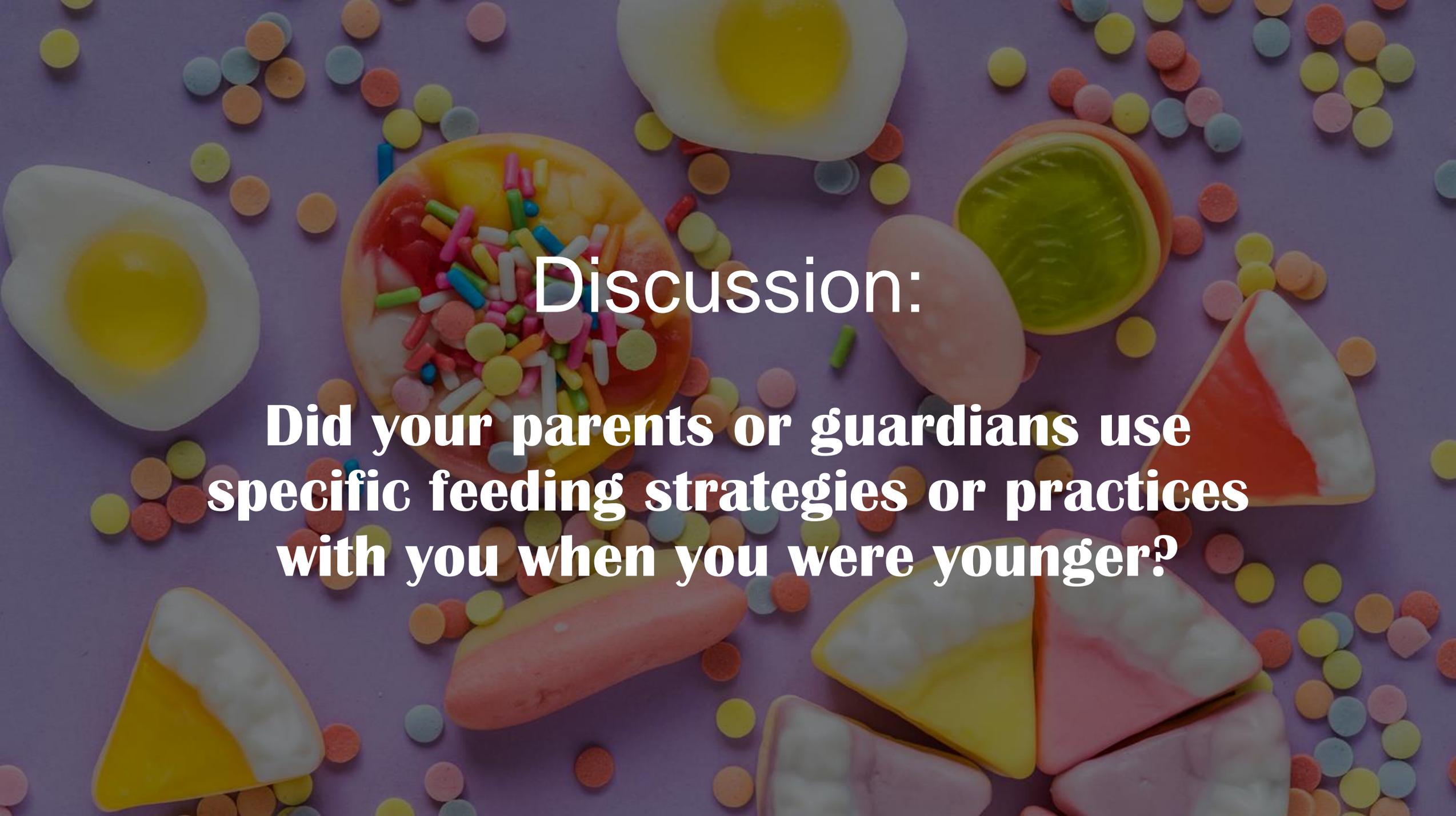
Discussion:

**Is it child neglect or abuse to overfeed a child to the point where he or she becomes morbidly obese?**

The background of the slide is a purple surface covered with numerous colorful, pill-shaped objects. These objects are designed to look like various food items: some are round like pills, some are shaped like eggs, some like slices of bread or pizza, and others like vegetables. The colors include yellow, orange, blue, green, pink, and white. The overall theme is the visual metaphor of food as medicine or pills.

## Discussion:

**Now that you know the impact a parent can have on their child's nutrition; do you think parents should be more involved in their child's nutrition?**



## Discussion:

**Did your parents or guardians use specific feeding strategies or practices with you when you were younger?**

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