Pediatric Obesity

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Objectives

- Describe the prevalence and risk factors for childhood obesity
- Discuss clinical practice guidelines for the assessment, treatment, and prevention of pediatric obesity
- Explain practical strategies to assist families in pediatric weight management









Obesity Prevalence

- Highest among Hispanic and non Hispanic black children
- Overweight or obese children are 5x as likely to become overweight or obese as adults
- Children with obese parents are 10-12x more likely to develop obesity
- Average American is 24 lbs heavier in 2018 than in 1960

It's all in the Family

- Parental Obesity
 - $\circ~$ ONE obese parent = child has 50% chance of being obese
 - BOTH parents obese = child has 80% chance of obesity
 Weight gain in early childhood (3-5yo) is significantly greater
 - among children with overweight or obese parents • Children exhibit lower levels of physical activity, greater proference for high fat foods and lower proference for he
 - preference for high fat foods and lower preference for healthier foods
- Important to counsel the ENTIRE family on healthy lifestyle changes

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Definitions Obesity BMI Weight Status body mass index (BMI) =/> 95th percentile of the CDC sex-specific Category < 5th percentile Underweight BMI-for-age growth 5th to < 85th percentile Healthy Weight charts 85th to < 95th percentile Overweight =/> 95th percentile Obesity BMI = weight (kg) 99th percentile or Severe obesity height (m)² higher









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Goals: 2020 Dietary Guidelines for Americans

"The goal for children and adolescents with overweight or obesity is to reduce the rate of weight gain while allowing normal growth and development. This can primarily be done by emphasizing nutrient-dense food and beverage choices, minimizing calories from sources that do not contribute to a healthy dietary pattern, and encouraging regular physical activity"

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Prevalence of Food Insecurity

US children facing food insecurity rose during the pandemic • 10 million (2019) \rightarrow 12 million (2020)

Most at risk:

- Families w/ children, esp. single-parent families Black and Latino households
- College students and Seniors
- Rural communities
- Lower Income

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Food Deserts & Swamps

Food desert:

An urban area that lacks affordable or good quality food

Food swamp:

Areas with a high-density of establishments selling high-calorie fast food and junk food, relative to healthier food options



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COVID-19 impact • Increase in food insecurity among Black, Indigenous, and People of Color (BIPOC), households with children, and those with job disruptions • Among households with children: 41.7% to 56% during 2020 Highest % change was 62.1% in Massachusetts https://doi.org/10.1093/cdn/nzab138 22







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 Word Anstery

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 Procecupation

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Impacts of Food Insecurity on Childhood Health

- · Physical health
- · Risk of overweight
- Nutritional adequacy
- · Mental health
- · Cognitive development
- Development of social relationships

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Impact of Food Insecurity on Risk of Overweight

- Studies are inconsistent but do show that food insecurity and obesity can co-exist and disproportionately threatens certain populations at highest risk for obesity
- Higher prevalence of obesity among adolescents from food insecure households
 Other factors (Black, Hispanic, male, households with a monthly income ≤185% of the poverty line) also associated with increased odds.¹
- Low-income Hispanic mother-infant pairs: prenatal food insecurity associated with less vegetable and more juice intake.²

Fleming, M. A., et al. (2021)
 Gross, R.S., et al. (2018)

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Impact of Food Insecurity on Nutritional Adequacy

Food insecurity heightens risk of inadequate caloric and micronutrient needs:

- In utero \rightarrow affects prenatal growth, development and outcomes
- Infants & toddlers with Fe-def anemia (140% higher in food insecure homes) \to affects cognitive & psychomotor development
- Adolescents \rightarrow inadequate iron, vitamin A, Magnesium, Calcium

Impact of Food Insecurity on Cognitive Development

- Higher level of education = stronger predictor of health status
- Higher risk of impairments in:
 - Language
 Motor skills
 - Social/emotional development
 - Self help
 - Attention
 - Academic performance

Melchior, M., et al (2012)

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AAP Recommendations

Promoting Food Security for All Children:
Screen and identify children at risk for food insecurity;

Intervene and connect families to needed community resources;

Advocate with other key partners and stakeholders for policies

children and their families can be nourished, active, and healthy

that support access to adequate and healthy food so that all







Tips for Success



4 ways toward addressing food insecurity for patients and families:

- 1. Educate and train staff on food insecurity and resources
- 2. Adopt universal screening
- 3. Incorporate efforts into institutional culture and workflow
- 4. Practice empathetic, sensitive, and culturally effective conversations

Common concerns about food insecurity screening Reality Fear

Easy to learn 2 or 3!

Time-consuming Interrupts workflow Embarrassing Don't know resources

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Behavioral Risk Factors for Obesity

- Media
- Emotional, psychological •
- Sleep
- Physical Activity
- Limited time
- Environment
- Portion sizes
- Knowledge on Nutrition, Food preparation and Lifestyle choices

















The Basics of Nutrition Labels

Step 3: Percent Daily Values (%DV)

- %DV are for the ENTIRE DAY
- Average levels of nutrients for a person eating 2,000 cal/day 5% DV of fat = 5% of total fat that a person consuming 2,000 cal/day should eat
- Low = 5% of less
- eg: saturated fat, trans fat, cholesterol, sodium High = 20% of more
 - eg: vitamins, minerals, fiber

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Types of Health Claims

- Nutrient Content Claims •
- Authorized Health Claims
- **Qualified Health Claims**
- Structure/Function Claims



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Do food claims impact purchasing behaviors?

- Health related claims on food packages DO affect purchasing behaviors
- In a recent study, foods that had a health-related claim were 75% more likely to be chosen than an identical product without a healthrelated claim

Do calories on menus change behavior?

- Patient Protection Act of 2010
 - Mandates that calories be added to menu items for chain restaurants with 20 or more locations
 - FDA began mandating the display of menu calories in 2018
 - Research shows calories displayed on menus generally do not change behavior in children, adolescents, or adults.

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Family Goals (5-2-1-0)

Per AAP a guide for families

- 5 fruits and vegetables a day
- 2 hours or less of screen time (TV, computer, video games) per day
- 1 hour of physical activity a day
- 0 limit sugar-sweetened drinks

Family Physician Role

- Identify children at risk of developing obesity •
- Ask about food intake, activity, what has been tried, barriers, home and school environment
- Begin to counsel once patient begins cross several BMI percentiles Screen routinely for food insecurity
- Reiterate messages of behavioral interventions Advocate resources: WIC, SNAP, Food Banks, "double dollars" at farmers markets
- Take a family centered approach
- Motivation! Encouragement! Support! Refer to Registered Dietitian for more in-depth support

https://publications.aap.org/pediatrics/article/136/1/e275/29301/The-Role-of-the-Ped

