Nutrition and Psychosocial Aspects of Obesity

Pediatric Weight Management

2018 ASPN MULTIDISCIPLINARY SYMPOSIUM

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ASPN Symposium

Objectives:

- Discuss makeup of an interdisciplinary medical weight management clinic
- Express the importance of addressing weight concerns in children and adolescents
- Describe the process of nutrition assessment for overweight and obese children and adolescents
- Offer tools and helpful tips to provide families when addressing lifestyle change and common weight management issues in children and teens
- Share nutrition guidelines for bariatric surgery, a tool in weight management for the severely obese adolescent patient
- Outline key strategies for effective nutrition counseling

Objectives:

- Learn about emotional and behavioral difficulties that are often comorbid with obesity
- Learn empirically-based interventions to improve adherence to medical recommendations for healthy weight
- Learn strategies to screen for and treat mental health difficulties in children and adolescents with obesity

Importance of Addressing Obesity in Children and Teens

Short-term Effects:

- Pre-diabetes, diabetes
- High cholesterol
- High Blood pressure
- Sleep Apnea
- Social and psychological problems

Long-term Effects:

- More likely to be obese as adults
- Heart Disease
- Stroke
- Several types of cancer
- Osteoarthritis

Psychosocial problems in pediatric obesity

- Poor health-related quality of life
  - Impairments in daily functioning similar to those in oncology and significantly more than normal-weight controls
- Inverse relationship between BMI and self-concept, self-worth, body dissatisfaction
- Mixed results in studies regarding obesity and anxiety
- 25% of overweight boys and 41% of overweight girls in the top quartile in a measure of depressive symptoms (Project EAT, Crow et al. 2006)

Psychosocial problems in pediatric obesity

- Studies also show mixed results in rates of depression in obese children compared to normal-weight children
  - Likely due to inconsistent measurement strategies and criteria
- Social functioning of overweight youths more deficient than that of normal-weight controls
  - Higher rates of overt victimization in boys and relational victimization in girls
  - Could explain the overall poor psychosocial outcomes

I.D.E.A.L. Weight Management Clinic

Improving Diet, Energy and Activity for Life (IDEAL)

- Helps children and teens successfully achieve a healthier lifestyle and reduce the risk of complications related to obesity.
- The foundation of the clinic's care is education for the family.
  - They are taught how small changes in behavior can have a positive impact on health
- We serve children and adolescents, ages 2 to 18, classified as obese with a Body Mass Index (BMI) at or above the 95th percentile in DC Metro area.
  - In addition to the following criteria:
    - Elevated fasting cholesterol, triglyceride (TG), insulin resistance, glucose intolerance, or hypertension
    - Unable to lose weight after dietary and activity counseling by their primary care doctor, nutritionist, and/or health educator
    - Elevated liver function tests (LFT)
    - Slipped capital femoral epiphysis (SCFE) or Blount's disease

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I.D.E.A.L. Weight Management Clinic

Improving Diet, Energy and Activity for Life (IDEAL)

- Visits include:
  - Medical management of weight-related health issues by physicians
  - Weight management nutrition counseling by dietitians and health educator
  - Possible visit with psychologist and physical therapist
- Families have access to experts from other divisions at Children's National Health System, including:
  - Cardiology
  - Sleep Medicine
  - Endocrinology
  - Surgery
- Bariatric surgery
  - laparoscopic sleeve gastrectomy
  - referral guidelines
    - BMI >35 with co-morbidities, or a BMI >40 without
    - history of obesity for at least 3 years that includes at least 6 months of documented attempts at diet and medical management of obesity
  - laboratory and diagnostic tests, as well as psychological evaluation
  - pre-operative and post-operative eating patterns

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Role of the RD in Weight Management Recommendations

Staged Approach to Treatment				
Treatment Stage		Location	Patients	Recommendations
	Prevention	Primary Care	All patients	• Breastfeeding, family meals, physical activity, limited screen time, yearly BMI monitoring
Stage 1	Prevention Plus	Primary care	BMI 85 - 94%ile	• 5 fruits and vegetables/day • < 2 hours screen time, • 1 hour or more of physical activity • Reduce/eliminate sugary drinks • Family-based change (3 meals/d, family meals, limit dining out)
Stage 2	Structured Weight Management	Office-based RD/RN/MD trained in motivational interviewing / behavioral counseling	Stage 1 not effective, BMI 95 - 98%ile	Develop plan together with pt / family • More structured eating schedule • Balanced macronutrient diet • Reduced screen time • Increased activity • Self-monitoring

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Role of the RD in Weight Management Recommendations

Staged Approach to Treatment				
Treatment Stage		Location	Patients	Action
Stage 3	Comprehensive Multidisciplinary Intervention	Pediatric Weight Management Center (I.D.E.A.L.)	3 - 6 months of structured weight management not effective	• Structured behavioral program (food monitoring, goal setting) • Home environment improvements
Stage 4	Tertiary Care Intervention	Tertiary Care	BMI ≥ 99 %ile, with comorbidities / lack of success with other stages	• Continued lifestyle counseling • Consideration of more aggressive therapies, such as meal replacements, pharmacotherapy, and bariatric surgery

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Nutrition Assessment: BMI

- BMI: [weight (kg) ÷ height (cm) ÷ height (cm)] x 10,000
- Plot BMI on CDC BMI growth chart for children > age 2
- BMI Percentile Calculator: http://nccd.cdc.gov/dnpabmi/Calculator.aspx
- Weight category diagnoses using BMI percentile
  - 85-94%ile Overweight
  - ≥ 95th %ile Obesity
  - ≥ 99th %ile Severe Obesity
- Recognize limitations of BMI

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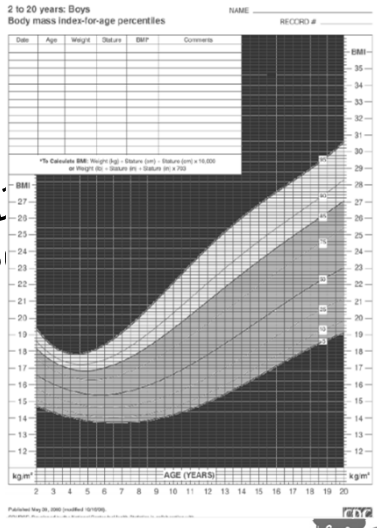
Nutrition Assessment: BMI

- Use neutral terms:
  - elevated BMI, unhealthy weight, excess weight, increased risk for diabetes and heart disease
- Use visual explanation with BMI location on growth chart
- Avoid negative terms:
  - Excess fat, unhealthy BMI, obesity, unhealthy body weight, large size, weight problem, fatness, heaviness,
- Keep the focus on healthy habits rather than the numbers



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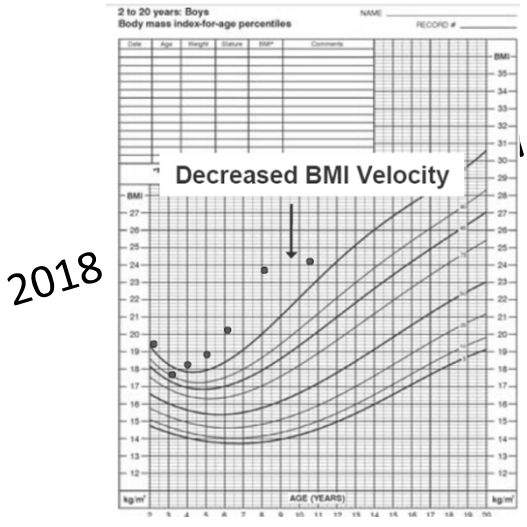
Nutrition Assessment: BMI



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Nutrition Assessment: BMI

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Weight Loss Targets from Expert Committee Recommendations				
	BMI 85-94%ile No Risks	BMI 85-94%ile With Risks	BMI 95-98%ile	BMI ≥ 99%ile
Age 2-5 years	Maintain weight velocity	Decrease weight velocity or weight maintenance	Weight maintenance	Gradual weight loss of up to 1 pound a month if BMI is very high (>21 or 22 kg/m2)
Age 6-11 years	Maintain weight velocity	Decrease weight velocity or weight maintenance	Weight maintenance or gradual loss (0.5 kg / mo)	Weight loss (0.5-1 kg / wk)*
Age 12-18 years	Maintain weight velocity. After linear growth complete, maintain weight	Decrease weight velocity or weight maintenance	Weight loss (0.5-1 kg / wk)*	Weight loss (0.5-1 kg / wk)*
* Excessive weight loss should be evaluated for high risk behaviors.				

Nutrition Assessment: Screening

- Parental obesity and family medical history
- Weight-related medical problems
- Laboratory assessment, blood pressure
- Disordered thoughts or behaviors around weight / eating
  - Monitor for signs throughout discussion
    - Extreme weight loss goals
    - Excessive food restriction
    - Loss of control around food
    - Black-and-white thinking about foods
    - Compensatory behaviors after eating

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Nutrition Counseling: Setting the Stage for Success

- Key messages for parents / caregivers:
  - Act, rather than talk
    - Be a good role model for healthy behaviors!
    - Begin to make family-wide lifestyle changes by creating a healthier environment:
      - Serve regular, balanced family meals and snacks.
      - Turn off the TV's, computers, tablets, etc.
      - Spend fun, active time together.
      - Make it easy for child to make healthy shifts.
  - Be a united front
    - Make sure that parents and any other important relatives are on the same page.

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Family-based Treatment

- Family involvement in treatment significant predictor of short term and long term success
  - Parental modeling, caregiver food choices and eating habits, perception of health status
  - Motivation, readiness, expectations
- Several family factors important predictors
  - Parenting stress, parenting style, parent-child relationship
  - Parental psychopathology
  - Socio-economic and cultural factors
- EMPOWER, Helping HAND

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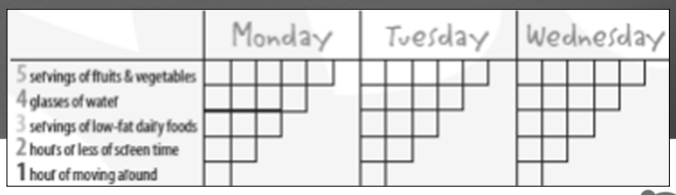
Nutrition Counseling: Possible Target Behaviors

- Meal pattern
- Dining out
- Sugar-sweetened beverages, juices
- Fruits and Vegetables
- Portion sizes
- Physical activity
- Screen time



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Possible Target Behaviors: Meal Pattern

- Teach kids to fuel their engine
- Talk about the difference between meals and snacks
- 3 meals per day: breakfast, lunch and dinner
  - Healthy meals start with more fruits and vegetables and smaller portions of protein and grain
  - Make milk a beverage with your meal or add fat-free or low-fat dairy products
- 1-2 healthy snacks per day
  - Include at least two food groups
- 3-4 hour spacing between meals and snacks

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Working with Different Age Groups

- Young Children
  - Promote the development of language, cognition, and self-help behaviors
  - crafts, pictures, games, visuals
- Middle school age
  - Technology
  - Relate to athletics and pop culture
- High school age
  - Motivational interviewing
  - Empower them; provide the tools

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Motivational Interviewing

- Patient centered, non-judgmental, and empathic
- Reduce ambivalence and increase readiness to change
- Elicit adolescent–determined reasons for change
- Directly related to adherence to recommendations and participation in other forms of treatment

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Nutrition Counseling: Motivational Interviewing Elicit – Provide – Elicit

- Empathize/Elicit
  - "Your child's height and weight may put him/her at increased risk for developing diabetes and heart disease at a very early age."
  - "What do make of this?"
  - "Would you be interested in talking more about ways to reduce your child's risk?"
- Provide
  - "Some different ways to reduce your child's risk are…"
  - "Do any of these seem like something your family could work on or do you have other ideas?"
- Elicit
  - "Where does that leave you?"
  - "What might you need to be successful?"

Source: http://www2.aap.org/obesity/pdf/COANImplementationGuide62607FINAL.pdf

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Motivational Interviewing

- Sample Questions:
  - If you could change three things about yourself (inside or out), what would they be?
  - What are the things you like best about yourself?
  - Readiness to change
    - How do you feel about changing your eating or exercise habits?
  - Importance of change
    - What are the good things about eating healthier? What are some of the less good things about eating healthier?
  - Building confidence
    - How confident do you feel about these changes? What would make you feel more confident?
  - Barriers
    - What might stand in your way?

Nutrition Counseling

- Assess confidence in family's ability to achieve goals
- Discuss strategies to increase likelihood of success
- Modify goals as necessary

Circle your feeling about this plan.
Zero is "I don't think so" and ten is "Absolutely can do!"

0 1 2 3 4 5 6 7 8 9 10

YES I CAN !

Signature_____

Behavior Modification

- Typically focus on modifying dietary intake and increasing physical activities
- Behavioral contract/reward system
  - Antecedents and consequences of behaviors
  - Identify a target behavior and set rewards for achieving it
- Includes monitoring, goal setting, stimulus control, and parenting strategies
- Most empirical support in short- and long-term efficacy
- May also include cognitive restructuring of maladaptive thoughts and building skills for problems-solving

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Sleeve Gastrectomy: Nutrition Guidelines

Pre-Operative Diet (before surgery)			
Diet	**Time Period**	**Calories Per Day**	**Protein (g) Per Day**
Liquid Diet with Protein Supplements/Shakes **Start Date: _____**	**2 Weeks Prior to Surgery**	**1,000**	**50-60**

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Sleeve Gastrectomy: Nutrition Guidelines

Post-Operative Diet (after surgery)				
Diet	Start Date (Approximate)	*Duration (Approximate)	Protein (g) Per Day	Fluid (fl. oz.) Per Day
Stage 1: Clear Liquids Start Date:_____	1 day after surgery	Duration of time in hospital	N/A	24-48 (4-8 oz/ hr)
Stage 2: Full Liquids Start Date:_____	3-4 days after surgery	3 weeks	50-60	32-48 first 1-2 weeks (6-8 oz/ hr) 64-90 thereafter
Stage 3: Pureed Start Date:_____	4 weeks after surgery	2 weeks or more (dependent on diet tolerance)	60	64-90
Stage 4: Soft Start Date:_____	5-6 weeks after surgery	2 weeks or more (dependent on diet tolerance)	60	64-90
Gradually Introduce More Food Choices Start Date:_____	As tolerated	As tolerated	60	64-90
Healthy Lifestyle	As tolerated	For life!	At least 60	64-90

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Pre-bariatric Surgery Psychological Evaluation

- Assess treatment-readiness
  - Knowledge of necessity, pre-surgery requirements, treatment procedure, post-treatment recovery and long term requirements
  - Cognitive abilities
- Assess adherence history and potential barriers to adherence
- Treatment expectations and goals
- Motivation
- Comorbid psychological disorders- screening and treatment recommendations
- Empirically validated measures

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Screening and Treatment of Psychosocial problems

- Psychosocial screening and assessment
  - Behavior Assessment Scale for Children
  - Child Behavior Checklist, Youth Self Report
  - PHQ-9, SCARED, CDI, DBDRS, Vanderbilt ADHD Rating Scale
  - PedsQL
  - Cognitive abilities (WASI-II)
  - Medical Adherence Measures, AMBS/PMBS
  - Parenting Stress Index
  - Family Environment Scale

Screening and Treatment of Psychosocial problems

- Treating comorbid psychological disorders
  - Cognitive Behavioral Therapy
    - Behavioral Activation
    - Exposure-based therapies
  - Dialectical Behavior Therapy
    - Mindfulness
    - Emotion regulation
  - Acceptance and Commitment Therapy
  - Parent Management Training
  - Sleep hygiene
  - Referrals and recommendations

Thank You!

Questions?

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