Obesity and Disordered Eating: A Joint Perspective to Ensure Healthy Children

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The Brain
Depression and sleep disturbance are associated with obesity. Both these conditions pose tremendous risks for other health related illnesses and quality of life.

Liver
Excess body fat can be deposited inside the liver cells, trigger inflammation and damage the liver cells. This is a slow process over time, but it started in childhood can lead to liver failure.

Heart
Fatty plaque build-up in the blood vessels can result in increased blood pressure and overload the heart. Obese children are at higher risk for heart attacks.

Gallbladder
Dysfunctional gallbladders and gallstones are seen more commonly in obese children.

Pancreas
The pancreas produces insulin to control the body’s blood sugar. Consuming too much sugary food and drink can result in high insulin levels and the body becoming resistant to insulin with diabetes developing.

Lungs
Obesity presents an increased risk for asthma and breathing difficulties. With excess abdominal fat it can be difficult to fully expand the lungs.

Digestive System
Obese children with increased abdominal fat experience more problems with abdominal pain, reflux disease and constipation.

Orthopedic / Joint Disease
Obese children put too much pressure on the growth plate of their bones. This can result in misalignment, pain and early arthritis.
• Consume ≥5 servings of fruits and vegetables every day
• Minimize sugar-sweetened beverages
• Decrease television viewing
• Be physically active ≥1 hour each day
• Prepare more meals at home rather than purchasing restaurant food
• Eat at the table as a family at least 5 or 6 times per week
• Consume a healthy breakfast every day
• Involve the whole family in lifestyle changes
• Allow the child to self-regulate his or her meals and avoid overly restrictive feeding behaviors
• Help families tailor behavior recommendations to their cultural values

• Youths with binge eating or purging behavior should be evaluated for eating disorders
Disordered eating

• Includes eating disorders
  • Binge Eating Disorder
  • Bulimia Nervosa

• Sub-threshold eating behaviors
  • Disinhibited eating
  • Eating beyond the point of hunger/in the absence of hunger

• Unhealthy weight control methods
  • Frequent dieting, fasting, supplements, cleanses
  • Over-exercising
Weight-related disorders among adolescents

Obesity 21%

Ogden, Carroll, Kit, Flegal. JAMA, 2014.
Weight-related disorders among adolescents

Eating Disorders 3%

Weight-related disorders among adolescents

Disordered eating 18%

Weight-related disorders among adolescents

- Obesity 14%
- Obesity + Disordered eating 13%
- Disordered eating 12%

# Eating Disorders & Weight Status

<table>
<thead>
<tr>
<th>Weight status</th>
<th>BN 12-month %</th>
<th>BED 12-month %</th>
<th>No ED %</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 18.5 (underweight)</td>
<td>0.5</td>
<td>1.5</td>
<td>2.8</td>
</tr>
<tr>
<td>18.5-24.9 (normal)</td>
<td>26.6</td>
<td>25.0</td>
<td>47.3</td>
</tr>
<tr>
<td>25-29.9 (overweight)</td>
<td>34.9</td>
<td>31.8</td>
<td>34.1</td>
</tr>
<tr>
<td>≥ 30 (obese)</td>
<td>38.1</td>
<td>41.7</td>
<td>15.8</td>
</tr>
</tbody>
</table>

Disordered eating among overweight adolescent girls

- 23.5% reported extreme weight control behaviors only
- 6.4% reported binge eating only
- 10% reported both binge eating and extreme weight control behaviors

Disordered eating among overweight adolescent boys

- 12.3% reported extreme weight control behaviors only
- 3.7% reported binge eating only
- 1.9% reported both binge eating and extreme weight control behaviors

Disordered Eating Among Overweight Girls

- Young overweight girls as young as 5 are at risk for
  - dietary restraint\(^1\)
  - weight concerns\(^1\)
  - eating in the absence of hunger\(^2,3\)
  - food sneaking, hiding, hoarding\(^3\)

Prevalence of Extreme Weight Control Methods among Philadelphia Teens

Lenhart, Bauer, Patterson. PCD, 2013.
Among adolescents with severe obesity

- 17% report binge eating disorder
  - Compared to 9% of adolescents with moderate obesity
- 69% report engaging in some weight control method
  - Compared to 62% of adolescents with moderate obesity
- 13% report engaging in extreme weight control methods
  - Similar prevalence for adolescents with moderate obesity
Why does the co-occurrence of obesity and disordered eating matter?

• Youth are aware of their body size, and many are dissatisfied.
• Youth are *trying* to control their weight, we have not given them the methods and support to be able to do so.

• Quality of life
• Progression of disordered eating to eating disorders
• Interferes with effective obesity treatment
• Leads to weight GAIN
## Dieting and Weight Change

<table>
<thead>
<tr>
<th></th>
<th>Fully adjusted model (β, ΔBMI z score)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Females</strong></td>
<td></td>
</tr>
<tr>
<td>Never dieters</td>
<td>Ref</td>
</tr>
<tr>
<td>Infrequent dieters</td>
<td>0.042 (0.039-0.045)</td>
</tr>
<tr>
<td>Frequent dieters</td>
<td>0.057 (0.052-0.063)</td>
</tr>
<tr>
<td><strong>Males</strong></td>
<td></td>
</tr>
<tr>
<td>Never dieters</td>
<td>Ref</td>
</tr>
<tr>
<td>Infrequent dieters</td>
<td>0.072 (0.067-0.078)</td>
</tr>
<tr>
<td>Frequent dieters</td>
<td>0.071 (0.060-0.082)</td>
</tr>
</tbody>
</table>

Adjusted for age, age², height, height change over the past year, Tanner stage of physical development, activity, inactivity, energy intake, and binge eating.

Field A E et al. Pediatrics 2003;112:900-906
<table>
<thead>
<tr>
<th>Body satisfaction</th>
<th>$\beta$ (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-0.10 (-0.19, -0.02)</td>
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</tbody>
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Fully adjusted model adjusted for age, BMI, TV viewing, and maternal overweight/obesity

Non-maleficence

• Fundamental ethical principle
• “First, Do No Harm”
• Favors doing nothing over the risk of causing more harm than good

• Clinicians, researchers, and policymakers alike should consider the possible harm that any intervention might do
Strategies For Talking About Weight

1. Acknowledge previous experiences
2. Ask about preferred terminology
3. Encourage family participation
4. Use motivational interviewing
5. Focus on behaviors

Acknowledge Previous Experiences

• Recognize that families struggling with obesity may have heightened sensitivity to weight-based language because of previous experiences of the child/teen (or parent) being teased or bullied

  • ~60% of adolescents with obesity report being teased or bullied by peers about their weight
Ask About Preferred Terminology

• Start the conversation with a supportive, nonjudgmental way question
  • “Could we talk about your weight today?”
  • “Some people don’t want to talk about their weight at all, whereas some people don’t mind at all. How do you feel about this?”
  • “Why don't you tell me how you are feeling about your weight?”
  • “How is this weight for you?”
Parental Preference for Weight Terms

Most Desirable/Least stigmatizing
• Weight
• Unhealthy weight
• High BMI
• Weight problem

Least Desirable/Most Stigmatizing
• Chubby
• Obese
• Extremely obese
• Fat

Puhl, Peterson, Luedicke; Pediatrics, 2011
Parental Reaction to Stigmatizing Language

• 50% of parents would request the provider to use more sensitive language when discussing weight with their child
• 37% would feel upset and embarrassed
• 36% would put their child on a strict diet
• 35% would seek a new provider
• 24% would avoid future medical appointments

Puhl, Peterson, Luedicke; Pediatrics, 2011
Encourage Family Participation

• Avoid language that places blame on parents
  • When parents feel blamed, they are less equipped to help their children
  • Parents are often not unaware of their child’s weight status
  • Parents have likely tried to modify their own and their child’s weight, with little success
  • Communicate to parents that they are an important part of the solution
Encourage Family Participation

• Address parental criticism
  
  • Parental frustration about their child’s excess weight or lack of weight loss can translate into criticism
  
  • Discuss with parents the harm that can result from teasing, criticism, or negative comments about weight
    
    • ~40% of adolescents with obesity report being teased about their weight by their family
Motivational Interviewing: Starting the Conversation

• How would you like your health, eating patterns, and/or lifestyle behaviors to be different?

• How do you feel about changing your eating or exercise behaviors?

• How is your current weight affecting your life right now?
Motivational Interviewing: Readiness to Change

• [On a scale from 1-10] How ready do you feel to change your eating patterns and/or lifestyle behaviors?

• Some people talk about part of them wanting to change their eating patterns, and part of them not really wanting to change. Is this true for you?
Motivational Interviewing: Importance of Change

• What are the most important things to you? What impact does your weight have on that?

• Tell me how things would be different for you if you were at a healthier weight.

• What do you think would happen if your weight doesn’t change?

• What are the good things about eating healthier?

• What concerns do you have about eating healthier?
Motivational Interviewing: Building Confidence

• What are some practical things that you need to do to achieve this goal?

• What would make you more confident about making these changes?

• How can I help you succeed?
Focus on Behaviors

• Explain the importance of setting realistic behavioral goals and monitoring progress

• Give adolescents and their parents examples of appropriate behavioral goals to set
Focus on Behaviors

• Emphasize to adolescents and parents the importance of focusing on healthy behaviors, rather than weight

• Focusing only on weight may lead to feelings of shame in the adolescent and frustration for the parents
What Behaviors?

**Encourage**
- Unprocessed or minimally processed foods
  - Fruits & vegetables
  - Protein foods
  - Whole grains
- Family meals
  - MyPlate
- Water as primary fluid
- Body satisfaction

**Discourage**
- Processed foods
- Meal skipping
- Grazing, large snacks
- Sugary drinks
- Media exposure/screen time
- Dieting
- Extreme or fad weight control methods
Thank you.

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