Promoting Growth and Change Amongst Complex Patients

Obesity and Self Care

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Objectives

• To review the obesity epidemic:
  – Prevalence
  – Consequences
  – Causes

• To summarize high risk subgroups, comorbidities and other factors that complicate treatment

• To discuss some practical approaches to promoting self care in patients
**What is Obesity?**

<table>
<thead>
<tr>
<th>BMI (kg/m²)</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;18.5</td>
<td>Underweight</td>
</tr>
<tr>
<td>18.5-24.9</td>
<td>Normal Range</td>
</tr>
<tr>
<td>25-29.9</td>
<td>Overweight</td>
</tr>
<tr>
<td>30-34.9</td>
<td>Mild obesity (class I)</td>
</tr>
<tr>
<td>35-39.9</td>
<td>Moderate obesity (class II)</td>
</tr>
<tr>
<td>≥40</td>
<td>Morbid/severe/extreme obesity (class III)</td>
</tr>
</tbody>
</table>
Prevalence of obesity among adults aged 20 and over by sex and age: United States, 2009–2010

Ogden et al., 2012
Obesity affects some groups more than others: Race/Ethnicity/SES

- A-A have the highest age-adjusted rates of obesity (48.1%) followed by Hispanics (42.5%), non-Hispanic whites (34.5%), and non-Hispanic Asians (11.7%).
- Generally, there are no significant differences in obesity prevalence in men related to income and education; however, among women, higher educated and higher income women are less likely to be obese.

CDC; JAMA: Ogden et al., 2014
Prevalence of Overweight and Obesity

- In 2009-2012, 65% of adult females and 73% of adult males were overweight or obese.
- In 2009-2012, nearly one in three youth ages 2 to 19 years were overweight or obese.
Obesity: Medical and Financial Consequences

- **Medical Comorbidities**
  - Coronary heart disease
  - Type 2 diabetes
  - Cancers (endometrial, breast, and colon)
  - Hypertension
  - Dyslipidemia
  - Stroke
  - Liver and Gallbladder disease
  - Sleep apnea and respiratory problems
  - Gynecological problems (abnormal menses, infertility)
  - Pain conditions: Osteoarthritis, Rheumatoid arthritis, Fibromyalgia, Lower back pain/Lumbar spinal stenosis, Gout, Migraines, Carpal tunnel syndrome

- **Medical Expenditures**
  - $147 billion in 2008 (Finkelstein et al., 2009)
  - Medical costs for people who are obese were $1,429 higher than those of normal weight (CDC)
General Well-being Consequences: Quality of Life

- QOL (e.g., physical function, role function, social function, psychological well-being, bodily pain, vitality, etc.) is generally reduced in obese vs non-obese adults.

- Research on the separate domains is mixed; however, when mental health and physical health-related QOL were examined in a meta-analysis, compared to normal weight:
  - Those with higher BMI had significantly reduced physical QOL with a clear dose-response relationship across all categories.
  - Mental QOL was also significantly reduced among class III obese, (not class I & II) and was significantly increased among OW.

Ul-Hag et al., 2013
Social Consequences: Weight Stigma

• Individuals with obesity are often stigmatized:
  “frequently stereotyped as lazy, unmotivated, lacking in self-discipline, less competent, non-compliant, sloppy, physically unattractive, undesirable and regarded as being personally responsible for their weight”

• More prevalent in women and those with a higher BMI
  – 19.2% for individuals with BMI = 30–35 kg m\(^2\) and 41.8% for individuals with BMI > 35 kg m\(^2\)

• Occurs in several life domains (employment/school, health care and interpersonal relationships); no firm conclusions about particularly vulnerable life domains.

  Puhl & Heuer, 2009; Sikorski et al., 2011; Spahlholz et al. 2015
Social Consequences: Weight Stigma in Health Care

- 2/3 of family physicians report that their obese patients lack self-control; ~40% report that their obese patients are lazy
- ~25% of nurses report being “repulsed” by obese persons
- More experienced PCPs report greater bias toward obese people than less experienced PCPs
- Obese patients are generally satisfied with their care for general health issues, however, they are significantly less satisfied with the care they receive for their obesity:
  - 1/2 report that their physicians do not recommend common methods for weight loss
  - 75% report that they look to their physicians a “slight amount” or “not at all” for help with weight

Khandalaval et al., 2014; Puhl & Brownell, 2001; Wadden et al., 2009)
Causes of Obesity
Overall Adherence to National Dietary Guidelines

Analyses of What We Eat in America, NHANES data from 1999-2000 through 2009-2010.
Overall Adherence to National Physical Activity Guidelines

Analyses of the National Health Interview Survey, 2008 and 2013.
Life Events: Pregnancy

• Excessive weight gain (EWG) in pregnancy is associated with:
  – Gestational diabetes, preeclampsia, larger babies, cesarean delivery
  – Postpartum weight retention
  – Becoming overweight after delivery

• Women at highest risk for EWG are normal and overweight women, although 20% of obese women exceed their recommended weight gain
### Life Events: History of Adversity, Maltreatment, Trauma

<table>
<thead>
<tr>
<th>Type of Abuse</th>
<th>Scher et al. (2004)</th>
<th>Salwen et al. (2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Abuse</td>
<td>12.1%</td>
<td>36.9%</td>
</tr>
<tr>
<td>Emotional Neglect</td>
<td>5.1%</td>
<td>39%</td>
</tr>
<tr>
<td>Physical Abuse</td>
<td>18.9%</td>
<td>18.7%</td>
</tr>
<tr>
<td>Physical Neglect</td>
<td>17.9%</td>
<td>26.7%</td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>5.0%</td>
<td>15.5%</td>
</tr>
</tbody>
</table>
What about obesity and mental health?

• Individuals with serious mental illness (SMI) have an extremely high prevalence of obesity
  • Nearly twice that of the overall population

Allison et al., 2009; Dickerson et al., 2006
Obesity and Mental Health

• Those with SMI have increased weight-related conditions
• Mortality rates are 2-3 times higher in SMI as compared to the overall population

Bresee et al., 2010; Carney et al., 2006; Himelhoch et al., 2004
Causes of Obesity in SMI?

• Less active than the general population
• Dietary behaviors in comparison to general population:
  – Higher fat intake
  – Less fruits and vegetables
  – Higher overall caloric intake
• Medication side effects
• Psychological factors/comorbidities

Amani, 2007; Compton et al., 2006; Daumit et al. 2004; Jerome et al., 2009; McCreadie, 2003; Strassnig et al., 2003
Behavioral Considerations: Binge Eating Disorder

- Recurring episodes of eating **significantly more food** in a discrete period of time than most people would eat under similar circumstances, with episodes marked by **feelings of loss of control over eating**

- Accompanied by 3 or more:
  - Eating much more rapidly than normal,
  - Eating until feeling uncomfortably full,
  - Eating large amounts when not hungry,
  - Eating alone because of embarrassment about one’s eating behavior,
  - Feeling disgusted with oneself, depressed, or guilty after the episode.

APA, DSM-5, 2013
Behavioral Considerations: BED

- Occurs, on average, at least once a week over three months
- No compensatory behavior and does not occur exclusively during the course of AN or BN
- Prevalence:
  - 2.5% adults
  - 8-12% obese
  - 12-30% obese seeking treatment
  - 2:3 ratio male/female
- Psychiatric and medical comorbidity is high

APA, DSM-5, 2013
Sleep Duration is linked to obesity

Sleep Duration by BMI

Adjusted body mass index

Average nightly sleep (hours)

Taheri, 2004
• Multiple prospective studies have found that poor sleep, particularly short sleep, leads to later weight gain (Magee & Hale, 2012)
  – this effect is independent of OSA
• Over 6 years, short sleepers had a 27% increased risk for obesity & long sleepers had a 21% increased risk (Chaput, Despres, Bouchard, & Tremblay (2011))
Experimental studies: Sleep deprivation, feeding hormones & hunger

- Sleep deprivation induces alterations in appetite regulation and increases in caloric intake, snacking, and preferences for energy-dense foods
  - Sleep restriction (4 hours) vs 10 hours in bed:
    - 18% lower leptin,
    - 28% higher ghrelin,
    - 24% increase in self-reported hunger
    - 23% increase in appetite
      - Increase in appetite was greatest for calorie dense foods (sweet=33%, salty=45%, and starchy=33%)

Hart et al., 2013; Hogenkamp et al., 2013; Spiegel, Tasali, Penev, & Van Cauter, 2004
Experimental sleep data

- **Sleep restriction** (5 nights of 4 hours sleep, 4:00-8:00 am vs. 10 hours 10pm-8am)
  - Significant weight gain/increase in BMI (.97 kg)
  - Increase of ~553 kcal/night (midnight to 4)
  - Greater percentage of calories from fat (during late night hours vs. daytime and evening hours)

Spaeth AM; Dingess DF; Goel, 2013
Obesity: A complex condition
What makes obesity even more complicated to treat:

- **Weight Regain is common**
- Patients gain ~ 1/3 of their lost weight in the year following treatment
- Nearly half return to their original weight within 5 yrs
- 1:6 adults accomplish ≥ 1 yr of maintaining ≥ 10% of IBW
Clinically Meaningful Weight Loss

• Losing 5-10% of initial weight reduces CVD risk factors, prevents or delays T2DM and improves a number of medical consequences.
• Larger weight losses produce greater improvements in cardiometabolic risk factors; however, even a sustained weight loss as small as 3% can be clinically relevant.
• Weight loss maintenance interventions can decrease the chance of weight regain.
Obesity Treatment Pyramid

- Surgery
- Pharmacotherapy
- Lifestyle Modification
- Diet
- Physical Activity

BMI
Short-Term Outcomes

• Lifestyle modification programs typically produce 7 to 10% reduction in initial weight in 6 months

• Generally sustained at one year with ongoing, regular maintenance therapy
## Approaches to Lifestyle Modification

### Dietary
- **Calorie Deficit**
  - ~1200-2000 kcal/d
- **Dietary Approaches:**
  - Low-fat
  - Low-carbohydrate
  - Mediterranean
  - Low-glycemic load
  - Portion-controlled diets

### Physical Activity
- > 180 m/wk MVPA for weight loss
- Must also include caloric restriction
- Associated with a number of health improvements, independent of weight loss
- Can be performed in short bouts
- Increasing other lifestyle activities is also effective
  - > 2000 steps for weight loss; > 6000 to avoid regain
- Critical for long-term weight loss maintenance
  - ~ 60 m/d MVPA
What can you do?
Obesity and Self Care

Reminder: Take Care of Myself

Self-care means taking the time to listen to what your body and mind are telling you they need.

Katie Reed @mothersheathing
SELF CARE MAP

- Sugar
- Eating out
- Low-fat, lean-protein
- Fruits and Vegetables
SELF CARE MAP

- Communicate
- Activity
- Rest
- Exercise
SELF CARE MAP

- **Monitor**
  - Pay attention

- **Accountability**
  - Self efficacy
    - SMART goals
  - Support

- **Problem solve**
THANK YOU

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