# Mental Health Considerations in the Treatment of Obesity

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## Objectives

- Understand the psychosocial burden of obesity
- Appreciate the role of psychosocial factors in determining appropriateness for weight loss treatment
- Understand the psychosocial changes that occur with weight loss

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## The Psychosocial Burden of Obesity

- Mood
- Anxiety
- Quality of Life
- Self-Esteem
- Body Image
- Sexuality
- Disordered Eating
- Substance Use/Abuse
- Physical functioning
- Sleep disturbance
- Cognitive impairment
- Bias and Stigmatization

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## Mood and Obesity

- Increased depressive symptoms/mood disorders among persons who seek weight loss treatment
- Depressive symptoms often correlated with BMI
- Concerns about social isolation/social support
- Concerns about suicidality

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## Quality of Life and Obesity

- Persons with obesity report greater impairments in health and weight-related quality of life compared to persons without obesity
- Persons with obesity also report higher levels of body image dissatisfaction
- BMI is correlated with quality of life, body image dissatisfaction, and sexual functioning
- Impairments in quality of life/body image dissatisfaction likely motivates pursuit of weight loss

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## Cognitive Impairment and Obesity

- A growing literature has demonstrated that persons with extreme obesity show deficits in some areas of cognitive functioning (Gunstad et al., 2014; Spitznagel et al., 2015)
- The mechanisms for these deficits (inflammation, sleep apnea, depression) are unknown
- Encouragingly, these deficits improve with the weight loss seen with bariatric surgery (e.g., Gunstad et al., 2015)

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## Obesity, Sexual Functioning, and Sex Hormones

- Individuals with obesity often report untoward changes in sexual functioning and decreased sexual satisfaction (Bond et al, 2009; Dallal et al., 2008; Kolotkin et al., 2006; Moore et al., 2013)
- More than half (51%) of women who presented for bariatric surgery reported sexual dysfunction, which was accompanied by significant psychosocial distress (Sarwer et al., 2013)
- Excess body weight also is associated with abnormal levels of female sex hormones (Bernasconi et al., 1996; Gosman et al., 2006; Leenen et al., 1994; Lukanova et al., 2004; Pasquali et al., 2007; Sarwer et al., 2013; Strain et al., 2006)

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## Bias and Stigmatization

- Persons with obesity (and extreme obesity in particular) experience bias and stigma in a wide rage of social situations
- Degree of obesity impacts hiring decisions as well as salary determinations
- Weight-related stigma is also present in health care
- The experience of weight-related stigma is associated with maladaptive psychosocial and perhaps physical consequences

(Obesity Action Coalition, 2016)

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## Clinical Research Versus Clinical Practice

- Persons with formal psychopathology or who report significant psychosocial distress are typically excluded clinical research studies and randomized controlled trials of weight loss interventions.
- Most obesity medicine providers treat a wider range of patients in daily practice.
- Much of what we know about mental health issues and obesity treatment comes from the bariatric surgery literature.

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## Preoperative Psychosocial Status of Bariatric Surgery Patients

- Patients report lower quality of life and greater body image dissatisfaction (e.g. Fabricatore et al., Obesity Surgery 2005:15:304-309; Kolotkin et al., Obesity Surgery 2003:13:371-377; Sarwer et al., Surgery for Obesity and Related Diseases.)
- Less than 70% of surgery patients married at the time of surgery, approximately two thirds report problems with sexual behavior (e.g. Bond et al., Surgery for Obesity and Related Diseases 2009;5:698-704.Kolotkin et al., Surgery for Obesity and Related Diseases 2008;4:651-659. Sarwer et al., Surgery for Obesity and Related Diseases.)
- Patients experience weight-related prejudice and discrimination in social, educational, occupational, and healthcare settings (e.g., Friedman et al., Obesity 2008;16(S2):S69-S74; Sarwer et al., Obesity 2008;16(S2):S75-S79)

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## Psychiatric Status and History of Bariatric Surgery Candidates

- 21-56% of bariatric surgery patients suffer from an Axis I disorder when they present for surgery
- 37-73% have a history of a lifetime diagnosis
  - Mood disorders are the most common diagnoses, seen in 6-32% of patients
  - Anxiety disorders have been found in as many as 24% of patients
  - History of substance abuse found in up to 33%; 2% present with active substance abuse

(e.g. Rosenberg et al., 2006; Kalarchian et al., 2007; Mauri et al., 2008; Muhlhans et al., 2009; Jones-Cornielle et al., 2011; Mitchell et al., 2012)

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## Psychiatric Treatment among Bariatric Surgery Candidates

- 16%-38.9% of bariatric surgery patients report current mental health treatment
- 50% of patients had a history of mental health treatment
- The most common form of treatment is psychiatric medications (often prescribed by primary care physicians)

(e.g., Friedman et al., 2007; Sarwer et al., 2004, Larsen et al., 2003; Clark et al., 2003, Lang et al., 2002, Glinski et al., 2001)

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For these reasons, psychosocial status and functioning should be assessed by treatment providers (regardless of discipline) prior to weight loss treatment (and regardless of type of treatment)
(Kushner & Sarwer, 2012; Sarwer & Dilks, 2015)

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## Health Belief Model

- This model states that whether a person practices a particular health behavior can be understood by knowing two factors: whether the person perceives a personal health threat and whether the person believes that a particular health practice will be effective in reducing that threat.
- The perception of a personal health threat is itself influenced by at least three factors: general health values, which include concern about health; specific beliefs about personal vulnerability to a particular disorder; and beliefs about the consequences of the disorder, such as whether they are serious.

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## The Health Belief Model and Obesity Treatment
(Kushner & Sarwer, 2012; Sarwer et al., 2015)

- Many individuals do not recognize the health threat of the comorbidities associated with obesity.
- Others have a history of failed weight loss attempts and may be reluctant to try new approaches.
- Some struggle to change eating and activity behaviors in the face of the "toxic environment."
- Treatment providers also may struggle to see the value of specific treatment approaches (pharmacotherapy, bariatric surgery).

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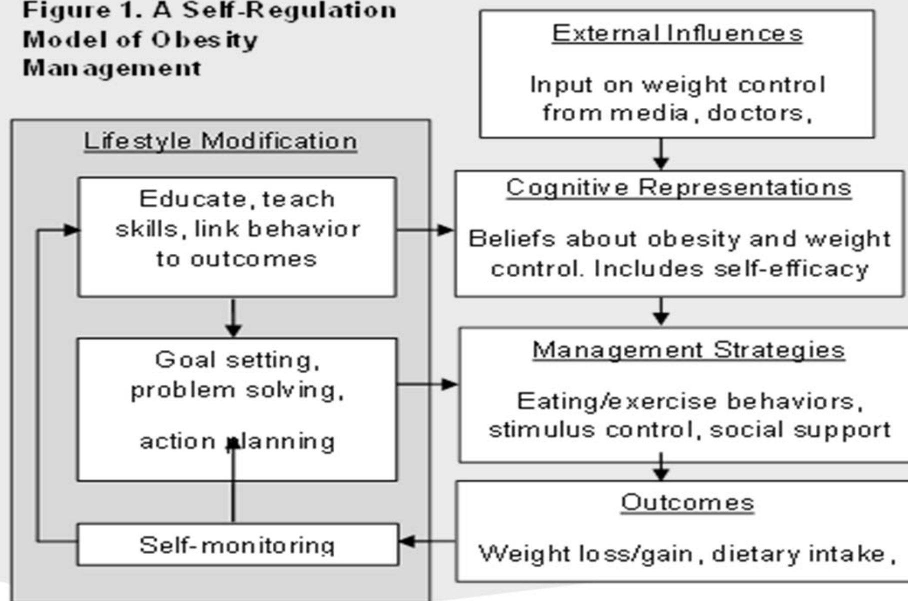
## A Self-Regulation Model of Obesity Management

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## AACE/TOS/ASMBS (2013), ASMBS (2016), and IFSO (2016) Perioperative Guidelines Recommend Psychosocial Evaluation

### Bariatric Surgery Candidates

- A psychosocial-behavioral evaluation, which assesses environmental, familial, and behavioral factors, should be considered for all patients before bariatric surgery.
- Any patient considered for bariatric surgery with a known or suspected psychiatric illness should undergo a formal mental health evaluation before performance of the surgical procedure.
- All patients should undergo evaluation of their ability to incorporate nutritional and behavioral changes before and after bariatric surgery.

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## Goals of the Psychosocial Evaluation

- To assess psychiatric status and history as potential contraindications to weight loss treatment  (e.g. psychosis, severe major depression, substance abuse).
- To identify negative environmental influences that may have contributed to the development of obesity.
- To evaluate maladaptive psychosocial factors and behaviors that may be associated with a poor treatment outcome.

(ASMBS, 2016; IFSO, 2016; Wadden & Sarwer, 2006)

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## Elements of the Psychological Evaluation

- Medical record review
- Clinical interview to assess psychosocial and behavioral history
- Additional psychometric measures/symptom inventories
- Personality testing (?)
- Intelligence testing (?)

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## Hypothesized Psychosocial/Behavioral Predictors of Poor Postoperative Outcomes

- Presence of **any** psychiatric diagnosis
- History of substance abuse
- History of sexual abuse
- History of disordered eating

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## The Relationship Between Preoperative Psychosocial Status and Postoperative Weight Loss

- Psychosocial distress related to extreme obesity may motivate desire for surgery and be a positive predictor of outcome.
- Distressed based on a true psychiatric illness may be an impediment to successful weight loss treatment.
- A growing number of studies have found that patients with pre-existing psychopathology experience smaller weight losses postoperatively (i.e., Devlin et al., 2016; deZwaan et al, 2011; Kalarchian, 2013).

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## Does a History of Substance Abuse Impact Postoperative Outcomes?

- Two studies have demonstrated larger weight losses among persons with a history of substance abuse as compared to those without a history of substance abuse (Clark et al., 2003; Heinberg & Ashton, 2010)
- Persons who are successful at controlling their addiction history may be using the same behavioral self-management skills to promote success after bariatric surgery.

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## Physical Abuse, Sexual Abuse, and Family Dysfunction

- 10-30% of bariatric surgery patients report a history of physical and/or sexual abuse
- Up to 50% report a history of family dysfunction (substance abuse, incarceration, neglect)

(e.g., Friedman et al., 2007; Sarwer et al., 2004, Larsen et al., 2003; Clark et al., 2003, Lang et al., 2002)

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## Does a History of Sexual Abuse Impact Postoperative Outcomes?

- 10-30% of bariatric surgery patients report a history of physical and/or sexual abuse
- Up to 50% report a history of family dysfunction (substance abuse, incarceration, neglect)
- The relationship of these experiences to postoperative outcomes (weight loss and psychosocial adjustment) is unclear

(e.g., Friedman et al., 2007; Sarwer et al., 2004, Larsen et al., 2003; Clark et al., 2003, Lang et al., 2002)

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## Disordered Eating and Obesity

- Overeating/Disinhibition contributes to obesity
- Higher rates of Binge Eating Disorder and Night Eating Syndrome among persons who seek weight loss treatment
- Few patients with Bulimia Nervosa
- **OBESITY IS NOT AN EATING DISORDER**

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## Binge Eating Disorder

- Recurrent binge eating, characterized by both:
  - Eating, in a discrete amount of time (e.g., within a 2-hour time period), an amount of food that is definitely larger than most people would eat during a similar period of time in similar circumstances
  - A sense of lack of control during the episodes, for example, a feeling that one can't stop eating or control what or how much one is eating
- Marked distress about binge eating (3/5):
  - Eating more rapidly than usual
  - Eating until uncomfortably full
  - Eating in absence of hunger
  - Eating alone because embarrassed about eating
  - Feeling disgusted, depressed, or guilty afterwards

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# Examples of "Objectively Large"

- The consumption of two full meals (each $\geq$ 2 courses)
- The consumption of three main courses
- Examples:
  - 4 (4") bagels
  - 6 cups cereal
  - 4 (3") brownies or slices of cake or pie
  - 3 dinner plates of Chinese food
  - 4 hot dogs with buns
  - > 1 pint of ice cream
  - 6 slices of pizza
  - 3 cups trail mix
  - 3 fast food sandwiches

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Fairburn & Cooper, 2000 – EDE appendix

# Binge Eating Disorder & Bariatric Surgery

- Early studies suggest that up to 50% of surgery candidates had binge eating disorder (BED)
  (Adami et al., 1995; Hsu et al., 1997; Kalarchian et al., 1998; Kalarchian et al., 2000; Powers et al., 1999)
- More recent studies suggest that the disorder may be far less common, perhaps affecting 5-20% of patients; less than 5% have NES.
  (Allison et al., 2006; de Zwaan et al., 2003; Hsu et al., 2002; Mitchell et al., 2014)
- The presence of preoperative BED has been associated with smaller postoperative weight losses or weight regain within the first 2 postoperative years….in many, but not all, studies.
  (Chao et al., 2016; Hsu et al., 1996; Kalarchian et al., 2002; Wadden et al 2010)

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## Psychiatric Contraindications to Obesity Treatment

- Severe, uncontrolled psychopathology (depression, schizophrenia)
- Active substance abuse
- Lack of knowledge or understanding of the behavioral and dietary changes necessary for an optimal outcome

AACE/TOS/ASMBS Guidelines for Clinical Practice for the Perioperative Nutritional, Metabolic, and Nonsurgical Support of the Bariatric Surgery Patient (2013)

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## Summary of the Psychological Evaluation of the Patient with Obesity

- Obesity is associated with a significant psychosocial burden
- Evaluation of psychosocial functioning is an important part of developing an effective treatment plan
- Evaluations may help identify patients at risk for suboptimal weight loss and psychological issues

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## Case Example

- 24 year old, Hispanic-American female interested seeking weight loss
- 5’2”, 228.8 lbs., BMI = 42 $kg/m^2$
- Completed education for LPN 9 months ago, has yet to take licensing exam
- Unemployed, has lived with boyfriend for last 2 years
- No obesity-related health problems, family history of type II diabetes and sleep apnea
- First overweight at age 8

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## Case Example Weight and Dieting History

- Reported gaining 80 lbs. in past 2 years
- Previous weight loss attempts include:
  - Self-directed diets
  - Commercial programs (Weight Watchers)
- Current eating habits are quite poor, relies heavily on high fat, take out food
- Drinks 8-10 alcoholic drinks per week
- Binge eats on ice cream several times per week when emotionally upset
- Currently inactive

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## Case Example Psychosocial History

- Denied history of psychiatric treatment past or present
- BDI-II = 19 (moderate symptoms of depression)
- Mood is “good,” affect restricted
- Denied other symptoms of depression
- Displayed little insight into factors that may have contributed to 80 lb. weight gain over past 2 years



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## Question

- Based on all of the information presented here, is this woman a good candidate for weight loss treatment?



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