

Binge Eating Disorder and the 12-Step Model of Recovery

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Objectives

- To provide education on diagnosing of binge eating disorder
- To review neurological similarities and differences between BED and substance use disorders
- To offer insight about what 12-step recovery programs are and are not
- To discuss tangible ways to help clients benefit from such groups (12-step facilitation)



What is Binge Eating Disorder?

- Binge eating disorder is characterized by periods of repetitive episodes of binge eating, without compensatory behavior, which become addictive or habitual
- Sufferers have distorted self-image, poor self-concept, shame, guilt, social isolation
- Many patients have physical complaints and can have limitations with physical activities
- Also referred to as “emotional eating” or “compulsive overeating”



Patients with Binge Eating Disorder

- Use food as way to handle stress
- Driven to eat more than they need, want or can comfortably consume
- Suffer from shame, stigma, isolation
- Usually tend to be overweight to obese
- Have extremely high prevalence of co-occurring mood, anxiety and addictive disorders



What is Obesity?

- According to the WHO, obesity is a major risk factor for a number of chronic diseases, including diabetes, cardiovascular diseases and cancer.
- Overweight and obesity are dramatically on the rise in low- and middle-income countries, particularly in urban settings.
- **Obesity and BED are not one in the same!!!**



What is Binge Eating Disorder?

Binge Eating Episode:

- Eating a significantly large amount of food (more than most would be able to eat) within a discrete period of time
- Dissociation or “numbing out” during eating
- Eating more rapidly than normal
- Lack of physical hunger prior to eating



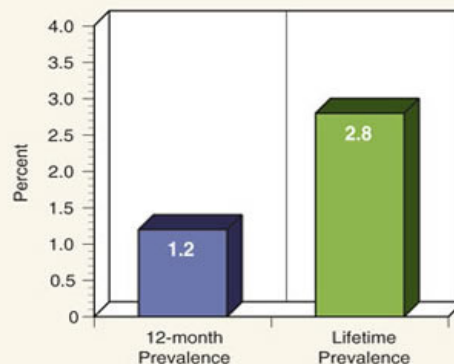
What is Binge Eating Disorder?

- Sense of lack of control over eating
- Eating until feeling uncomfortably full (some individuals may fall asleep or pass out after episode)
- Eating in secret due to shame and embarrassment
- Feeling disgusted, depressed, and/or very guilty after

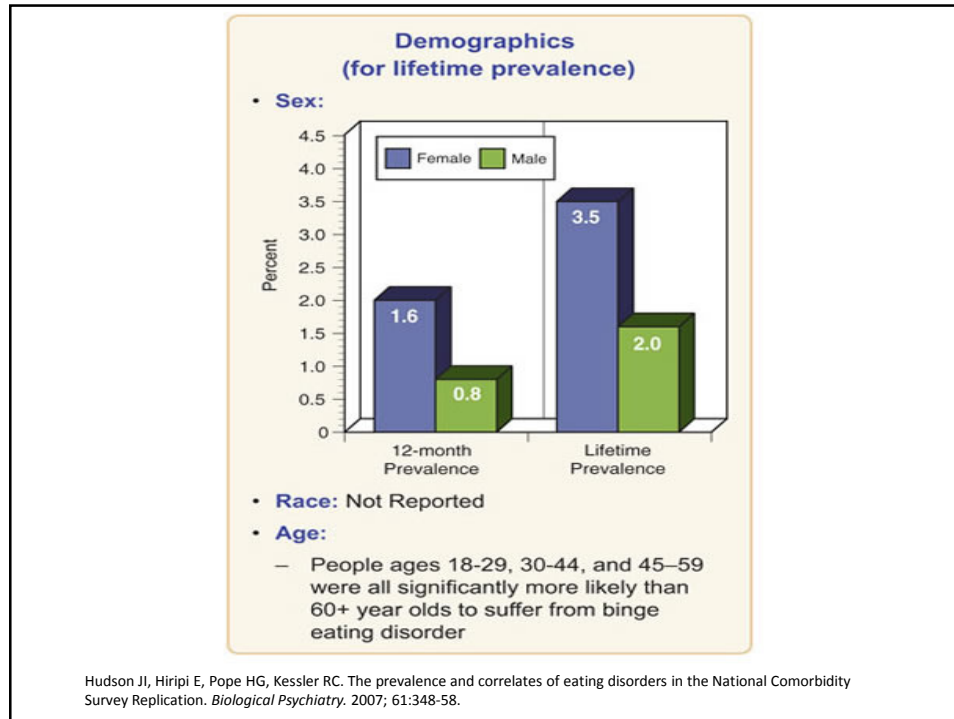


Prevalence

- **12-month Prevalence:** 1.2% of U.S. adult population
- **Severe:** Not Reported
- **Lifetime Prevalence:** 2.8% of U.S. adult population



Hudson JI, Hiripi E, Pope HG, Kessler RC. The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. *Biological Psychiatry*. 2007; 61:348-58.



DSM-5: Why Add BED?

- Distinct ED demographic profile: greater likelihood of male cases, older age, and a later age of onset.
- Associated with lower quality of life than obesity
- Greater likelihood of co-occurring medical issues than obesity
- BED has a more positive response to specialty treatments than to generic weight loss treatments

Binge Eating Disorder (DSM-5)

1. Recurrent episodes of binge eating. An episode of binge eating is characterized by both:
 - a. eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than most people would eat in a similar period of time under similar circumstances
 - b. **a sense of lack of control over eating** during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating)

<http://www.dsm5.org/ProposedRevisions/Pages/proposedrevision.aspx?rid=372>



Binge Eating Disorder (DSM-5)

2. The binge-eating episodes are associated with **three (or more)** of the following:
 - a. eating much more rapidly than normal
 - b. eating until feeling uncomfortably full
 - c. eating large amounts of food when not feeling physically hungry
 - d. eating alone because of being embarrassed by how much one is eating
 - e. feeling disgusted with oneself, depressed, or very guilty after overeating



Binge Eating Disorder (DSM-5)

3. Marked distress regarding binge eating is present.
4. The binge eating occurs, on average, at least once a week for three months.
5. The binge eating ***is not associated*** with the recurrent use of inappropriate compensatory behavior (i.e., purging) and does not occur exclusively during the course of bulimia nervosa or anorexia nervosa.



Definition of Addiction

- A *primary, chronic* disease of *brain* reward, motivation, memory and related circuitry.
- Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations.
- Reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors.

<http://www.asam.org/research-treatment/definition-of-addiction>



Definition of Addiction

- Characterized by:
 - inability to consistently abstain,
 - impairment in behavioral control,
 - craving,
 - diminished recognition of significant problems with one's behaviors and interpersonal relationships,
 - and a dysfunctional emotional response.
- Addiction often involves cycles of relapse and remission.
- Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death.



Types of Addiction

- Substance: ingested substance directly causes release of dopamine and opiates in brain's reward center
 - Ex. Alcohol, caffeine, nicotine, illicit/prescription drugs, sucrose solution (rats, Avena et al), food substances in humans (preliminary studies)
- Process: dopamine and endogenous opiates released when engaging in the process
 - Ex. Gambling, sex, exercise, bingeing, purging, starving



Food Addiction

- Conceptualization of eating related behaviors
- Process addictions
- Substance addiction:
 - Food addiction as a subgroup of patients with BN and BED
 - Patients with long hx (dose effect), identifiable trigger foods, personal/family hx of substance abuse, failed multiple trials of standard treatment



Food and Reward

- Dopamine and Opioids:
 - Neuroimaging research--the reward values of both food and substances of abuse are associated with increased level of extracellular dopamine in the nucleus accumbens.
 - PET imaging studies have provided evidence that reduced levels of dopamine receptors are related to both obesity and drug dependence.
 - Both alcohol and high-fat sweets can cause the release of endogenous opioids in the brain.

Volkow ND, Wang GJ, Fowler JS, et al. "Nonhedonic" food motivation in humans involves dopamine in the dorsal striatum and methylphenidate amplifies this effect. *Synapse*. 2002;44:175-180.
 Wang G-J, Volkow ND, Freimuth P, et al. Brain dopamine and obesity. *Lancet*. 2001;357:354-357.
 Drewnowski A, Krahn DD, Demitrack MA, et al. Naloxone, an opiate blocker, reduces the consumption of sweet high-fat foods in obese and lean female binge eaters. *Am J Clin Nutr*. 1995;61:1206-1212.



Shared Risk Factors BED and SUD

- Family hx of substance use disorder
- Unhealthy parental behaviors/low monitoring of children's activities
- Unhealthy peer norms and social pressures
- History of trauma
- Low self-esteem
- Social isolation
- Susceptibility to messages from media

National Center on Addiction and Substance Abuse (CASA) at Columbia University. (2003). *Food for Thought: Substance Abuse and Eating Disorders*. New York, National Center on Addiction and Substance Abuse.

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Similarities BED and SUD

- Loss of control
- Inability to stop
- Withdrawal symptoms including HA, irritability, restlessness, insomnia, depressed mood, SI
- Need for increased amounts of the substance or behavior
- Negative impact on social, occupational or recreational activities (diseases of isolation)

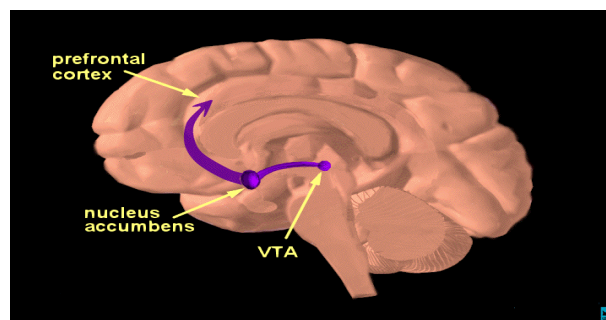
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Differences from Substance Abuse

- Definition of abstinence requires a high level of clinical sophistication—we all need to eat
- Individualized and flexible definition of abstinence from ED behaviors
- Individualized boundaries around food behaviors, food types, meal plans
- Body image distortions more extreme
- More of an impact of media/culture of development of BED (weight stigma is pervasive)
- Greater female to male prevalence ratio



Brain Circuitry: the Reward Pathway



- Major structures: the ventral tegmental area (VTA), the nucleus accumbens and the prefrontal cortex.
- The VTA is connected to both the nucleus accumbens and the prefrontal cortex, sending information to these structures via its DA-releasing neurons.
- Pathway activated by a “rewarding” stimulus.



Sucrose-Dependent Rats

- N. M. Avena and B. G. Hoebel: A diet promoting sugar dependency causes behavioral cross-sensitization to a low dose of amphetamine. *Neuroscience, Volume 122, Issue 1, 20 November 2003, Pages 17-20.*
- Implication:
 - A diet comprised of alternating deprivation and access to a sugar solution and chow produces bingeing on sugar that leads to a long lasting state of increased sensitivity to amphetamine, possibly due to a lasting alteration in the dopamine system.



Sugar Addiction

- Hoebel's research on sugar addiction has found:
 - Rats denied sugar for a prolonged period after learning to binge worked harder to get it when it was reintroduced to them.
 - Consumed more sugar than they had before-- suggesting craving and relapse behavior.



www.princeton.edu/main/news/archive/S22/88/56G31/index.xml?section=topstoriesTo

Sugar Addiction

- Hoebel's continued research has found:
 - Drank more alcohol than normal after sugar supply was cut off, showing bingeing behavior had forged changes in brain reward function.
 - After receiving dose of amphetamine (normally no effect) became significantly hyperactive.
 - Increased sensitivity considered to be a long-lasting brain effect that is a part of addiction.

www.princeton.edu/main/news/archive/S22/88/56G31/index.xml?section=topstoriesTo



Yale Food Addiction Scale

- Developed to identify those exhibiting signs of addiction toward food high in fat and/or sugar
- Based on DSM-IV TR substance dependence criteria
- Adequate internal reliability
- Good convergent validity with other measures of eating problems

Ashley N. Gearhardt *, William R. Corbin, Kelly D. Brownell. Preliminary validation of the Yale Food Addiction Scale. *Appetite* 52 (2009) 430–436.



Sample Questions YFAS

IN THE PAST 12 MONTHS:

- 1) I find that when I start eating certain foods, I end up eating much more than I had planned.
 - Never/ Once a month or less/ 2-4X's a month/ 2-3X's per week/ 4 or more X's per week
- 2) Not eating certain types of food or cutting down on certain types of food is something I worry about.
 - Never/ Once a month or less/ 2-4X's a month/ 2-3X's per week/ 4 or more X's per week

Ashley N. Gearhardt *, William R. Corbin, Kelly D. Brownell. Preliminary validation of the Yale Food Addiction Scale. *Appetite* 52 (2009) 430-436.



Sample Questions YFAS

- 3) I spend a lot of time feeling sluggish or lethargic from overeating.
 - Never/ Once a month or less/ 2-4X's a month/ 2-3X's per week/ 4 or more X's per week
- 4) There have been times when I consumed certain foods so often or in such large quantities that I spent time dealing with negative feelings from overeating instead of working, spending time with my family or friends, or engaging in other important activities or recreational activities I enjoy.
 - Never/ Once a month or less/ 2-4X's a month/ 2-3X's per week/ 4 or more X's per week

Ashley N. Gearhardt *, William R. Corbin, Kelly D. Brownell. Preliminary validation of the Yale Food Addiction Scale. *Appetite* 52 (2009) 430-436.



Human Studies: Food Addiction

- Yale Study—hypothesis: elevated “food addiction” scores are associated with similar patterns of neural activation as substance dependence
- N=48 healthy young women ranging from lean to obese

Gearhardt, AN, et. al. 2011. Neural correlates of Food Addiction. Arch Gen Psychiatry. 321-329



Human Studies: Food Addiction

- Measurement: relation between elevated food addiction scores and fMRI activation in response to receipt and anticipated receipt of chocolate milkshake.
- Used the Yale Food Addiction Scale
 - 25 item measure (Likert Scale)
 - Assesses signs of substance-dependence symptoms in eating behavior: Tolerance, Withdrawal, Loss of control

Gearhardt, AN, et. al. 2011. Neural correlates of Food Addiction. Arch Gen Psychiatry. 321-329



Findings

- Food Addiction Scores (N=39) correlated with greater activation in the:
 - Anterior cingulate cortex
 - Medial orbito-frontal cortex
 - Amygdala



Gearhardt, AN, et. al. 2011. Neural correlates of Food Addiction. Arch Gen Psychiatry. 321-329

Findings

- Participants with higher (n=15) vs. lower (n=11) scores showed:
 - Greater activation in brain reward centers in response to anticipated receipt of food.
 - Less activation in lateral orbitofrontal cortex to receipt of food (less inhibitory activation).



Gearhardt, AN, et. al. 2011. Neural correlates of Food Addiction. Arch Gen Psychiatry. 321-329

Medial Orbitofrontal Cortex

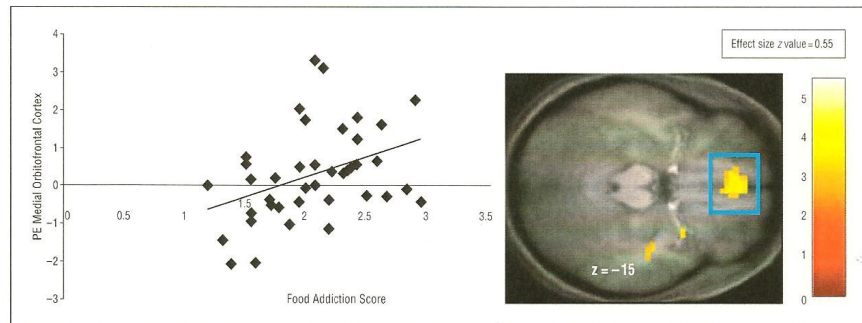


Figure 3. Activation in a region of the medial orbitofrontal cortex (Talairach coordinates x, y, z: 3, 42, -15; $z=3.47$; false discovery rate-corrected $P=.004$) during milkshake cues vs tasteless solution cues as a function of Yale Food Addiction Scale scores, with the graph of parameter estimates (PE) from that peak.

Gearhardt, AN, et. al. 2011. Neural correlates of Food Addiction. Arch Gen Psychiatry. 321-329

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Treatment Implications

- **ASSESSMENT** is critical!
- Definition of abstinence requires high level of clinical sophistication—we all need to eat
- Individualized and flexible definition of abstinence from ED behaviors
- Individualized boundaries around food behaviors, food types, meal plans

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Treatment

- Ongoing medical care
- Education
- Nutrition therapy: HAES, mindfulness and intuitive eating
- DBT
- 12 step facilitation
- Healthy movement plan
- Critical to identify/treat co-occurring disorders
- Expressive/somatic therapies
- Trauma therapy



Special Considerations

- Groups of mixed eating disorders
- Furniture
- Facilities/staff (size diversity)
- Medical equipment: bariatric scale, bariatric blood pressure cuff, etc.



Evidence-Based Treatment

- Randomized controlled trials supporting:
 - CBT
 - DBT
 - Mindfulness-Based Eating Awareness Training (MB-EAT)
 - Motivational interviewing (MI)

12 Step Myths

- Members are told they will never be fully recovered
 - The message of recovery is that full and happy living is possible, and that a food addiction is not something that goes away but must always be addressed
- Members are forced to stay in a position of powerlessness
 - Admitting powerlessness over having a disease opens people up to the power of outside help and new strategies for recovery
- Members are discouraged from having therapists, doctors, and other sources of support, or pharmacologic treatment
 - Many people in the 12-step program utilize outside clinicians, whereas the program itself has no official opinion on outside issues
- It's a cult
 - It is a program that utilizes group support and long-term group membership as part of the process of change; Members can leave at any time.

12 Step Myths

- It's a religious program
 - Members are free to develop their own understanding of a Higher Power or God; members can belong to any outside organized religion or none at all
- It doesn't work for eating disorders because people can't abstain from food/eating
 - 12-step model for EDs encourages each person to define what food behaviors or foods constitutes abstinence from her/his disease; abstaining from her/his "addictive foods" or "addictive eating behaviors"
- The diet prescribed is restrictive and limiting
 - Many meetings ask members to define their own abstinence
- OA members aren't supposed to eat sugar or white flour
 - Each person develops her own definition of abstinence (usually with the help of an ED professional)



Meal Plan (Examples)

- Three moderate meals and nothing in between
- Three pre-determined, measured meals plus a snack
- Three meals and three snacks per day
- Abstaining from products with high amounts of refined sugar
- Abstaining from purging of any sort
- Not only is abstinence individualized but over time abstinence tends to change



Overeaters Anonymous

- Community support – through meetings, phone contact, fellowship
- Sponsor calls –to practice accountability, honesty, commitment, and receiving support
- Structure – through meetings, tools, and step work the program provides structure
- Low to no cost – most meetings suggest a donation of \$2
- A path for personal spiritual development



Similarities to ED Therapy

- Education about common patterns in ED's and the change process (accomplished by shared recovery stories at meetings)
- Regular support for change – with sponsor calls and meeting attendance providing reminders for change at a greater frequency than standard therapy sessions
- Emphasis on honest interpersonal connections vs. isolation with the disorder
- Many alternative tools given to address food related impulses: writing, phone calls, meetings, changing environment, prayer, etc. (honest social interaction as a more adaptive alternative to ED behaviors)



Similarities: Step-Work and ED Therapy

- Encouragement to take personal responsibility
- Encouragement to examine one's own relationship with self, others, spirituality
- Sharing past life experiences in the presence of non-judgment and caring sponsor
- Rehearsal of change principles (in step work)
- Encouragement of daily reflection and action to support continued recovery
- Not all meetings/sponsors and not all clinicians are created equally...



Signs of An Unhealthy Meeting:

- People in meetings talk about problems without talking about using steps/tools to seek solutions
- Focus on weight and meal plan specifics
- Nobody in the meeting seems to be hopeful or getting better
- Meal plan requirements
- Meetings that are poorly run: start late, don't end on time, people talk over one another, etc.
- Competition for authority between therapist and sponsor
 - OA does not take the place of therapeutic team
 - It is not a sponsor's job to give advice on outside help



Referring Clients to OA

- Website with list of meetings in the area
 - <http://www.oa.org/>
- Personal connection always a plus
- Encourage clients to try at least 3-6 meetings before deciding if it is right for them
- Educate clients on what an unhealthy meeting looks like
- Encourage clients to talk to people at meetings they feel they can relate to
- Encourage clients to “take what they like and leave the rest”
- Go to open meetings yourself to understand what they offer!



Defining Abstinence

Abstinence means waking up every day and dedicating myself to recovery– to taking care of my body, mind, and soul.

For my body, abstinence is eating nutritious foods to fuel my body in a healthy way.

For my mind, abstinence means actively censoring my thoughts and effectively using my coping skills to manage stress and relieve anxiety.

For my soul, abstinence means truly being happy. It means that I make decisions that are consistent with my morals and values and take full responsibility for my own choices.

--former TK resident



Questions?

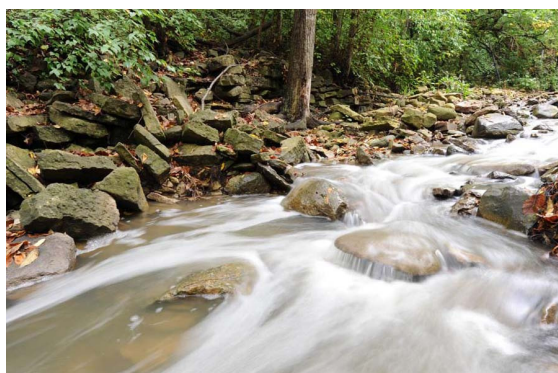


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