What is BED?

- A psychological disorder in the DSM-V
- One of the eating disorders, along with anorexia and bulimia.
- Often a chronic condition
- It is not a "subtype" of obesity (affects people who aren't obese as well)

DSM-5 Criteria

A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:

1. Eating, in a discrete period of time (e.g., 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
2. A sense of lack of control over eating during the episode

APA, 2013

DSM-5 Criteria

B. The binge-eating episodes are associated with three (or more) of the following:

1. eating much more rapidly than normal
2. eating until feeling uncomfortably full
3. eating large amounts of food when not feeling physically hungry
4. eating alone because of feeling embarrassed by how much one is eating
5. feeling disgusted with oneself, depressed, or very guilty afterwards

DSM-5 Criteria

C. Marked distress regarding binge eating.

D. The binge eating occurs, on average, at least once a week for 3 months.

E. Absence of inappropriate compensatory behavior (for example, purging) and does not occur exclusively during the course Anorexia Nervosa, Bulimia Nervosa, or Avoidant/Restrictive Food Intake Disorder.

Story of a binge eater

"Every night that I go to bed feeling full, I make promises to myself that I'm going to "do good" on the diet tomorrow and lose weight. I go to bed disgusted with myself for being such a pig.

I probably think about food 99% of the day. I even dream about it. When I wake up, I think about what I'm going to eat first. When I'm eating, I'm thinking about what I'm going to eat next.

And the worst part is that this affects the type of mom I am. I honestly LOOK FORWARD to my kids going to bed (naptime and bedtime) so that I can binge. I even rush them into napping and the second they lie down, I rush to the kitchen to grab food to binge on in front of the TV. I even find myself getting mad at my kids if they don't fall asleep right away or if they wake up early, because it ends my binge."

"I've also been hiding food lately. If I think I hear my husband wake up while I'm eating, then I'll hurry up and hide the food. I'll hide wrappers in the bottom of the trash so that he doesn't see it.

I wish I could be satisfied with just a small amount of something, but I get this urge to fill my mouth, chew really fast and swallow over and over again. And as much as my stomach hurts afterwards, I crave that full feeling in my stomach. When I even think about restricting food, I get very anxious. Another thing I do is plan out binges in my head. I'll think about what I'm going to eat and then I just have to wait for the appropriate time (usually when the kids are asleep). Once I've decided when I'm going to binge and on what, I get anxious--wanting to just do it now. It's like I can't do it fast enough.

During the binge itself, I just keep thinking, "Okay, what else can I eat?" and I eat until I'm so full I can't stand it. Afterwards, I get pissed at myself for doing it, and make promises to myself not to do it again. Then later, I think "Well, I already binged once today, I might as well do it again". I know what I'm doing could have serious consequences for me and my family, and I want to fix this. I just don't know how."

- Katie, writer of runsforcookies.com blog.

Prevalence of BED

Lifetime prevalence in women = 3.63%
Lifetime prevalence in men = 2.01%

About 60% of people with BED are female, 40% are male.

Among adults with obesity, ~10% have BED

In clinical weight loss settings, prevalence is 33% (Pagoto et al 2007)

BED Comorbidities

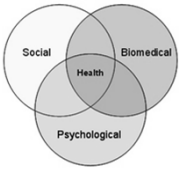
65% are obese

75% have another Axis I disorder (Ulfvebrand et al 2015)
- 33% major depressive disorder
- 26% generalized anxiety disorder
- 20% social anxiety disorder
- 17% of women and 25% of men have ADHD (Brewerton & Duncan, 2016)
- 9% substance use disorder

BED and the brain (Kessler et al 2016)

- Corticostriatal circuitry alterations in BED similar to those observed in **substance abuse**
- Changes in dopaminergic and opioidergic systems are associated with binge-eating
- Heritability 30-80%
- Overall, BED may be related to maladaptation of the corticostriatal circuitry regulating motivation and impulse control similar to that found in other **impulsive/compulsive disorders.**

Associated with BED



- Higher weight
- Earlier onset of overweight
- Earlier onset of dieting
- More frequent dieting
- Psychopathology
- Significant weight and shape concerns
- Exposure to body shaming
- Greater perfectionism and negative self-evaluation
- Dysregulation in other areas of life

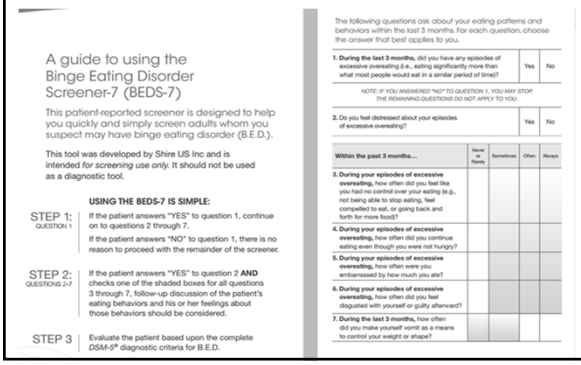
Does BED = "food addiction"?

Table 1.
YFAS symptoms based on DSM-IV criteria for substance dependence.

(1) Substance taken in larger amount and for longer period than intended
(2) Persistent desire or repeated unsuccessful attempt to quit
(3) Much time/activity to obtain, use, recover
(4) Important social, occupational, or recreational activities given up or reduced
(5) Use continues despite knowledge of adverse consequences (e.g. failure to fulfill role obligation, use when physically hazardous)
(6) Tolerance (marked increase in amount; marked decrease in effect)
(7) Characteristic withdrawal symptoms; substance taken to relieve withdrawal

In 502 adults with overweight or obesity, 8.5% met BED criteria, 16.6%met FA criteria, 10.1% met both BED + FA criteria, and 64.8% met neither (Ivezaj et al 2016).

Assessing BED in primary care setting (Herman et al 2016)



A guide to using the Binge Eating Disorder Screener-7 (BEDS-7)

This patient-reported screener is designed to help you quickly and simply screen adults whom you suspect may have binge eating disorder (B.E.D.).

This tool was developed by Shire US Inc and is intended *for screening use only.* It should not be used as a diagnostic tool.

USING THE BEDS-7 IS SIMPLE:

STEP 1: QUESTION 1 — If the patient answers "YES" to question 1, continue on to questions 2 through 7. If the patient answers "NO" to question 1, there is no reason to proceed with the remainder of the screener.

STEP 2: QUESTIONS 2-7 — If the patient answers "YES" to question 2 **AND** checks one of the shaded boxes for all questions 3 through 7, follow-up discussion of the patient's eating behaviors and his or her feelings about those behaviors should be considered.

STEP 3 — Evaluate the patient based upon the complete *DSM-5*® diagnostic criteria for B.E.D.

The following questions ask about your eating patterns and behaviors within the last 3 months. For each question, choose the answer that best applies to you.

1. **During the last 3 months,** did you have any episodes of excessive overeating (i.e., eating significantly more than what most people would eat in a similar period of time)? — Yes / No

NOTE: IF YOU ANSWERED "NO" TO QUESTION 1, YOU MAY STOP. THE REMAINING QUESTIONS DO NOT APPLY TO YOU.

2. Do you feel distressed about your episodes of excessive overeating? — Yes / No

Within the past 3 months…	Never or Rarely	Sometimes	Often	Always
3. **During your episodes of excessive overeating,** how often did you feel like you had no control over your eating (e.g., not being able to stop eating, feel compelled to eat, or going back and forth for more food)?				
4. **During your episodes of excessive overeating,** how often did you continue eating even though you were not hungry?				
5. **During your episodes of excessive overeating,** how often were you embarrassed by how much you ate?				
6. **During your episodes of excessive overeating,** how often did you feel disgusted with yourself or guilty afterward?				
7. **During the last 3 months,** how often did you make yourself vomit as a means to control your weight or shape?				

TREATMENT OPTIONS FOR THE PATIENT WITH BED

Weight loss in the BED patient

Percent of Patients Reaching 7% Weight Loss Goal	
Original Diabetes Prevention Program	49%
REAL WORLD ---UMass Weight Center (N=118)	
All patients	31%
BED	16%
MDD	16%
MDD + BED	14%
ADHD	20%
ADHD + BED	0%
None of these	44%

Pagoto, Kantor, Bodenlos, Gitkind, & Ma, 2008 *Health Psychol.*

Treatments for BED

Cognitive Behavioral Therapy for BED
- Best established psychotherapy treatment
- Grade of A in review of treatments *(NICE guidelines, 2005; strong empirical support from well-conducted, randomized trials)*
- Self-help option (less effective than therapist led versions)

Behavioral Weight Loss Therapy

Interpersonal Therapy

Mindfulness Based Therapies

Pharmacological Treatment

Combined Pharmacological and Behavioral Treatment

Surgical approaches

Current state of the evidence for psychotherapies (AHRQ)

- Meta-analysis provided strong evidence that therapist-led CBT reduced binge-eating frequency and increased binge-eating abstinence.‡
- Moderate-level evidence demonstrates that BWL decreased body mass index (BMI) more than CBT at the end of treatment.
- BWL was not clearly associated with improvement in binge-eating behaviors.
- Evidence is insufficient to determine effectiveness of other psychological interventions; however, studies of IPT and DBT have been promising.

Mindfulness Based Therapies

Include dialectical behavior therapy, acceptance and commitment therapy, and MBSR

Strategies must directly address eating (as opposed to just mindfulness meditation training)

Similar effect sizes as CBT for BED, no effect on weight loss (Godfrey et al 2015)

Implications

These therapies can reduce binge eating but are less effective for weight loss

Behavioral weight loss treatment produces some weight loss, but less impact on binge eating and high failure rate.

Pharmacological treatment

- Lisdexamfetamine (stimulant typically used for ADHD) is FDA approved for the treatment of binge eating.
- Systematic review of 4 studies revealed significant effects of 50 mg and 70 mg dose on binge eating episodes and weight loss (up to 4.9 kg in 8 weeks) (Fornaro et al 2016)
- Another recent trial revealed no effect relative to placebo on binge eating but weight and triglyceride reduction (Guerdvikova et al 2016)
- Side effects (insomnia, pulmonary hypertension) and abuse potential should be considered. No long term studies yet.

Pharmacological treatments

- Three other classes of medications are also used in the treatment of binge eating disorder: antidepressants (SSRIs), anticonvulsants, and anti-obesity medications.
- Trials of antidepressants, anticonvulsants, and anti-obesity medications suggest that these medications are superior to placebo in reducing binge eating.

Pharmacological treatments

- Other medications are not considered the treatment of choice because psychotherapeutic approaches, such as CBT, are more effective and these medications also do not increase the effectiveness of psychotherapy (AHRQ 2016)
- Some patients may benefit from anticonvulsant and anti-obesity medications for weight loss.

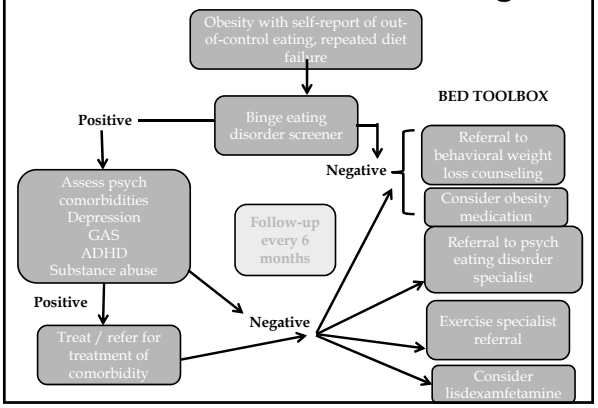
Surgical approaches

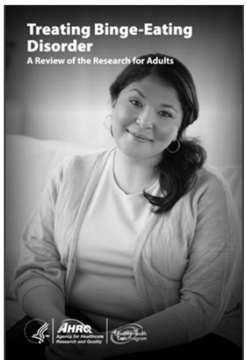
- A recent meta-analysis showed that approximately 13-21% of bariatric patients have BED. (Dawes et al 2016)
- Evidence is mixed as to whether surgery recipients with BED have similar weight-loss outcomes as non-BED, and some evidence for re-emergence of behaviors characteristic of BED.

Exercise?

- "Increased regular physical activity is associated with a small and measurable, improvement in neuropsychological tests of executive functions, specifically inhibitory control." Jackson et al 2016 review on exercise and cognitive function.
- One trial showed CBT plus exercise improved binge eating and weight loss outcomes relative to CBT alone (Pendleton et al 2002)
- Small trial showed yoga resulted in reduced binge eating and weight at 12 weeks (McIver et al 2008)

Treatment Decision Making





https://www.effectivehealthcare.ahrq.gov/ehc/products/563/2213/binge-eating-160517.pdf

Other clinical considerations

- Equating eating problems with failure to take "personal responsibility" is counterproductive
- Helping the patient to understand that BED is a neurobiological disorder that can be treated may help reduce shame, embarrassment
- Repeated treatment failure can lead clinician to feel frustrated, but important to remain patient
  - Strengthen team
  - Expand tool set
  - Engage family members
  - Online support communities can help

Conclusions

- BED is an eating disorder associated with obesity
- Only 10% of people with obesity have BED
- High rate of other psychological disorders among people with BED
- Negative affect, impulse control are key features
- Ideal treatment will depend on comorbidities and patient preferences, but multidisciplinary team approach is recommended