A Multidisciplinary Approach to Treating Binge Eating Disorder and Type 2 Diabetes: Psychotherapy and Nutrition Treatment Modalities

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Educational Objectives

1. Identify the association between Binge Eating Disorder and T2DM
2. List 2 reasons why identification of an eating disorder is essential to improving diabetes outcomes
3. Define what Binge Eating Disorder is
4. Identify the causes of eating disorders
5. Identify how to screen for an eating disorder
6. List 3 psychotherapy treatment modalities for treating Binge Eating Disorder
7. Identify 5 key nutrition therapy interventions in treating Binge Eating Disorder
8. Identify pharmacological interventions for treating Binge Eating Disorder

Binge Eating Disorder and T2DM: Strong Association of Dual Diagnosis

- There is a strong association between binge eating disorder and T2DM
- Traditional diabetes self-management focused on calorie counting, food restriction and frequent weighing are contraindicated in eating disorders because these same behaviors are central to eating disorder obsessions
- Moving patients away from the idea that there are good and bad foods is essential, since they're extremely self-critical and often judge themselves as good or bad if they eat foods labeled as such
- Binge eating disorder results in uncontrolled blood glucose following a binge eating episode and the repetitive nature of these episodes can trigger or accelerate the associated medical complications of diabetes
- Clients with eating disorders engage in irrational thoughts, negative self-talk and black and white thinking that result in strong feelings of guilt and shame that can lead to diabetes burnout
- Identification of an eating disorder shifts the treatment modality to evidence based psychotherapy modalities that empower clients to engage in self care behaviors

International Journal of Eating Disorders. 2015 Sep;48(6):555-62

Binge Eating Disorder and T2DM: Psychotherapy and Nutrition Treatment Modalities and AADE7 Outcomes

- Healthy Eating
- Being Active
- Monitoring
- Taking Medications
- Problem Solving
- Reducing Risks
- Healthy Coping

Healthy Eating: Nutrition Therapy Interventions

- Exploration of relationship with food
- Recognition of eating patterns
- Identification of food rules and rituals
- Exploration of hunger and fullness
- Engagement in mindful meal planning

Healthy Eating: Your Relationship with Food

- Does food dominate your thoughts?
- Do you have a love-hate relationship with food?
- Do you deprive yourself of the foods you love, then overeat them in a way that leaves you feeling guilty and ashamed?
- Do you turn to food to cope with your emotions?
- Do you ignore your body's hunger and fullness signals?

Healthy Eating: Recognition of Eating Patterns

Instinctive	Overeater	Restrictive
❑ Manages eating effortlessly ❑ Primary drive to eat is for fuel based on hunger levels ❑ Choices are based on preferences, not rules ❑ Naturally seeks moderation, balance and variety ❑ Eats enough to satisfy hunger	❑ Triggers are physical, environmental or emotional ❑ Choices are based on comforting, convenient or tempting foods ❑ Eating is mindless, fast paced or secretive ❑ Eats to discomfort	❑ Eating is driven by rigid rules ❑ Choices are based on allowed foods ❑ Entails weighing, measuring, counting ❑ Exercise is used for compensation ❑ Requires a great deal of mental and emotional energy

Restrictive Eating: Compensatory Physiological Adaptations

- Slowed metabolism
- Loss of lean muscle mass
- Lower levels of leptin
- Increase in adiposity
- Weight gain

Fothergill, et al 2016. Obesity Biology and Integrated Physiology 24 (8): 1612-9;
Dulloo, et al 2012. Proceedings of the Nutrition Society 71: 379-89.

Restrictive Eating: Consequences of Weight Cycling

- Women with a history of weight cycling gained more weight over time and engaged in more binge eating than their counterparts (Nurses' Health Study 2)

- Weight cycling is associated with weight regain, increased risk of hypertension and diabetes, and elevations in other cardiometabolic traits (Diabetes Care 2014 Oct; 37(10): 2738-2745)

Restrictive Eating: Impact on Psychological Health and Well-Being

- Body dissatisfaction
- Food and body preoccupation
- Food cravings
- Distraction from other personal health goals
- Reduced self-esteem
- Weigh stigmatization and discrimination

Bacon, L., and L. Aphramor 2011. Nutrition Journal 10: 9; Tomiyama et al. 2016. International Journal of Obesity 40: 883-86; Tykla et al. 2014. Journal of Obesity, article ID 983495; Mann, T. 2015. Secrets From the Eating Lab. New York: Harper Collins

Healthy Eating: Identification of Food Rules and Rituals

Current Food Rules	Past Family Rules and Rituals
❑ Do you count calories, carbohydrates, proteins or points, etc.? ❑ Do calories determine how much you eat? ❑ Do you have rules about what timing of meals? ❑ Do you have rules about snacking? ❑ Are there any foods you avoid? ❑ Do you think that sweets should be avoided? ❑ Do you weigh or measure food? ❑ Do you compare what you eat to what other people are eating?	❑ Were you expected to clean your plate? ❑ Were there any rules about snacking? ❑ Were there any rules about eating sweets or desserts? ❑ Were there any rules about forbidden foods? ❑ Did you sneak foods? ❑ Were you put on a diet? ❑ Did your parents monitor your weight? ❑ Did your parents have different rules for you than others in the family? ❑ Did your parents diet frequently?

Healthy Eating: What Triggers Hunger?

- Physical symptoms and sensations:
  Thirst, fatigue, pain
- Environmental:
  Sensory cues, places, time of day
- Emotional:
  Boredom, loneliness, stress, anxiety, depression, anger
- Appetite Hormones:
  Ghrelin
- Diabetes-Related:
  Hypoglycemia, Hyperglycemia

Healthy Eating: Where Do You Feel Hunger?

- Stomach:
  Rumbling, gurgling, gnawing, empty
- Throat and Esophagus:
  Dull ache, gnawing
- Head:
  Light-headed, headache, difficulty focusing and concentration
- Mood:
  Irritable and cranky
- Energy:
  Waning, sleepy, lethargic

Healthy Eating: Where do you experience fullness?

- Stomach:

  Ranges from slight distention to heaviness and bloating

- Head:

  Desire to eat is diminished, fewer thoughts about food and eating

- Mood:

  Shift to pleasant and relaxed

- Energy:

  Energized or drowsy

Healthy Eating: Barriers to Experiencing Fullness

- Distracted Eating: Decreased satisfaction and feeling of fullness (Mitchell 2006; Robinson et al. 2013)

  Practice Activity: Self-Assessment of Distracted Eating, Setting Boundaries, Creating a Pleasant Eating Environment

- Clean Plate Club

  Triggers: Parental rules, primal hunger, eating too fast, fear of deprivation

  Practice Activity: Meal timing, practice leaving food on the plate, practice with over and under portioning

Healthy Eating: Factors that Influence Fullness

- Initial Hunger level
- Permission to eat without dieting mentality
- Timing
- Amount of food
- Social influence
- Type of food
- Appetite hormones GLP-1, PYY and Leptin

Healthy Eating: Digestion and Metabolism

- Definition of digestion, absorption and metabolism
- Identification of the GI Tract
- Function of the GI Tract in digestion and absorption
- Description of how an eating disorder impacts the GI Tract
- Definition of gut health and what contributes to it
- Identification of chewing and pacing's impact on digestion

Hunger and Fullness Scale

On either end, a 5 represents extreme hunger or fullness
Zero indicates a more neutral place, likely between meals/snacks

5 – Uncomfortable, painfully full
4 – Quite full, some discomfort, a few bites past satisfaction, food seems less delicious
3 – Satisfied, comfortably full, good time to stop eating
2 –Eating, enjoying food, but not yet satisfied, close to finishing
1 – Starting to eat, need to keep eating

0 – Not hungry, not full – NEUTRAL (in between meals/snacks)

1 – Starting to get hungry, can wait for desire to develop more fully or have snack
2 – Hungry and the urge to eat food is strong, body sending signals to eat – stomach growling
3 – Preoccupied with hunger, stronger physical signals
4 – Very hungry/famished – too hungry and will eat anything and/or want to eat everything
5 – Starving and weak with hunger - may not feel anything, but headache, irritability, lightheadedness

K. Nielsen 2007

Healthy Eating: Mindful Meal Planning

- All Foods Can Fit
- Balance, Variety and Moderation
- Healthy Eating versus Restrictive Dieting
- Diabetes Plate Method

Being Active: Gentle Exercise

- Invigorating rather than exhausting or depleting
- Sustainable rather than fleeting
- Pleasurable rather than painful
- Enhances the ability to tune into your body's physical sensations

Practice Activity: Identify short and long term benefits, connect values to physical activity, identify barriers

Glucose Monitoring: Shifting from Fearful to Fearless

Why do clients avoid testing?

- Fear of judgement
- Feelings of guilt and shame

Become aware, gather information, be nonjudgmental, be curious, notice patterns

Shift education to fact finding using awareness and curiosity!

Practice Activity: Test in pairs, rate pre and postprandial hunger and fullness, record physical activity and food intake

Binge Eating Disorder: Pharmacologic Interventions

- Lisdexaphetamine (Vyvanse) FDA approved in 2015
  - 50-80 mg once daily reduces binge episodes and urges
  - Contraindicated for history of gastric bypass surgery

- Other medications used off label
  - Fluoxetine, citalopram, bupropion, etc. (second generation anti-depressants, SGAs)
  - Topiramate

Conclusion: Vyvanse and SGAs effectively reduce binge eating episodes and frequency, Topiramate less effective

Agency for Healthcare Research and Quality Systemic Review, Management and Outcomes of Binge Eating Disorder 2014, www.effectivehealthcare.ahrq.gov

Case Study: TP Initial RD Assessment 11/2016

- Male 57 years old
- Height 72 inches
- Weight 262.4 lb, BMI 34.6, Usual weight 255-260 lb
- Diagnosis: Binge Eating Disorder
- PMH: T2DM 1997, hyperlipidemia, hypertension, dysmetabolic syndrome, homocystinemia, LAD Stent, CKD Stage 1, spondylosis cervical and lumbar, major depressive disorder
- Medications: Metformin XR 500 mg 4 tabs HS, acarbose 100 mg BID, pioglitazone 45 mg, bydureon 2 mg, atorvastatin 80 mg, losartan 100 mg, folic acid 1 mg, bupropion 150 mg, buspirone 10 mg, atenolol 25 mg, aspirin 325 mg, amitriptyline 25 mg, alprazolam 0.25 mg, duloxetine 60 mg, gabapentin 300 mg twice daily, Vitamin D3 1,000 IU TID
- Labs: 11/2016 A1c 7.1%, FBG 107-160 (average 133), pre-lunch 90-148, pre-dinner 81-127, HS 110-169

Case Study: TP Initial RD Assessment 11/2016

Typical food intake

Breakfast: 64 ounces water

Lunch: Nothing

Snack 3-5 PM: Crackers, raw vegetables

Dinner: Chicken, broccoli, cauliflower, ranch dressing

Snack: Compulsively eats until bedtime

One can soda daily

Physical Activity

ADL's

Case Study: Nutrition Therapy Interventions

Exploration of relationship with food: Letter to Food

"I use you to make myself feel good for a short time, but in the long run, the way I use you is killing me. That little kid that needed the tasty candy and endless food, must mature into the man who wants to live a more healthy life, whose happiness isn't predicated on how much food I can eat in an effort to fill a hole that can't be filled with food. My body and mind must reunite in order to live a better, smarter life."

Case Study: Nutrition Therapy Interventions

Recognition of Eating Patterns: Binge, Restrict, Repeat

Identification of food rules and rituals: Restricting until 3-5 pm, night eating, grazes on vegetables, drinks water to decrease hunger

Exploration of hunger and fullness: Where and how do you feel hunger and fullness? Do you feel the symptoms of hypoglycemia during the day?

Engagement in mindful meal planning: Plan breakfast and lunch balancing carbs with protein

Case Study: Outcomes

- Weight: 1/2017 250.4 lb, 4/2017 258.8 lb
- A1c: 3/2017 6.9%
- SMBG: FBG 129-162 (average 145), post-lunch 120-146, pre-dinner 92-112
- Diet Recall: Increased eating frequency to 3 meals
- Relationship with food: “I am more aware of my uses for food, ie physical versus emotional eating and how food impacts my energy.”
- Physical activity: Active 3 days a week (stationary bike)

Your relationship with food is an important lifelong relationship that deserves to be nurtured, and when necessary healed.

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