Welcome: A Few Things to Note

1. Participants will be muted upon entry and videos turned off

2. For technical assistance, please use the chat feature

3. You will receive an email approximately 1 month requesting feedback/impact on this presentation

4. Visit www.nceedus.org/training to view other training opportunities

NCEED Grant Statement
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Navigating Eating Disorders in the Context of Type 2 Diabetes

Rachel W. Goode, PhD, MPH, LCSW
Assistant Professor
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Aims of Presentation

Understand the definition and types of eating disorders.

Explore eating disorders in the context of type II diabetes.

Examine health outcomes for patients with type II diabetes and eating disorders.

Considerations for working with patients who have type II diabetes and an eating disorder.
Eating Disorders (EDs): An Overview

Eating Disorders Prevalence

- Estimates of lifetime AN, BN, and BED in the U.S. are 0.80%, 0.28%, and 0.85%, respectively (Udo & Grilo, 2018)
- Can affect people of all ages, races, sex, and gender identity

Eating Disorders: Definitions (APA, 2013)

- Anorexia Nervosa
- Bulimia Nervosa
- Binge Eating Disorder
- Avoidant Restrictive Food Intake Disorder (ARFID)
- Other Specified Feeding or Eating Disorder (OSFED)
Intersection of Type 2 Diabetes and Eating Disorders

Comorbidity of diabetes and eating disorders. Does diabetes control reflect disturbed eating behavior?

S Herpertz, C Albus, R Wagener, M Kocnar, R Wagner, A Henning, F Best, H Foerster, B Schulze Schleppinghoff, W Thomas, K Köhle, K Mann, W Senf

Eating disorders (DSM IV, lifetime) in type 2 diabetics

![Pie chart showing distribution of eating disorders in type 2 diabetics](chart.png)

- Bulimia nervosa: n = 6 (18.8%)
- Binge eating disorder not otherwise specified (BEDNOS): n = 7 (21.9%)
- Binge eating disorder (BED): n = 19 (59.4%)

Figure 1—Lifetime distribution of the different types of eating disorders in the type 1 and type 2 diabetes subsamples.

Highly increased risk of type 2 diabetes in patients with binge eating disorder and bulimia nervosa

Anu Raevuori MD, PhD, Jaana Suokas MD, PhD, Jari Haukka PhD, Mika Gissler MD, PhD, Milla Linna MD, Marjut Grainger Student, Jaana Suvisaari MD, PhD

Disordered Eating and T2D

- Disordered Eating Behaviors
  - Binge Eating
  - Compensatory Weight Control Behaviors
  - Night Eating Syndrome

- Eating Behaviors
  - Emotional Eating
  - External or Restrained Eating
Prevalence Estimates

- Recent estimates indicate 8-20% of patients with T2D may struggle with disordered eating (Abbott et al., 2018; Harris et al., 2021)

- Binge-eating disorder is the most common eating disorder in this population (Harris et al., 2021)
  - 40% of T2D patients with an eating disorder have BED.
LETTERS: OBSERVATIONS | DECEMBER 01 2006

Prevalence and Associations of Binge Eating Disorder in a Multiethnic Population With Type 2 Diabetes (FREE)

Luigi F. Meneghini, MD, MBA; Jenny Spadaola, MPH; Hermes Florez, MD, MPH, PHD

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Diabetes Care 2006;29(12):2760

https://doi.org/10.2337/dc06-1364
Study Design

- Sample = 140 patients with T2DM
  - 37% Hispanic
  - 40%, Non-Hispanic, White
  - 19% Black American

- Survey Methodology: Questionnaire on Eating and Weight Patterns, Binge Eating Scale, Beck Depression Inventory
Results

- 40% of sample had disordered eating

- Participants who had binge eating were:
  - Younger (55.8 ± 11.2 vs. 61.3 ± 10.5 years)
  - Had a greater BMI (36 ± 6.6 vs. 33.6 ± 5.8 kg/m)
  - Higher A1C (8.2 ± 2.2 vs. 7.3 ± 1.8)
  - Diastolic blood pressure

- Being younger and having African American ethnicity (OR = 6.02) were associated with increased odds for disordered eating
Challenges with eating behaviors?

- Semi-structured interviews with Black women with type 2 diabetes (n = 35)

- Reported:
  - Lack of control around food
  - Regular eating in the absence of hunger
  - Fullness = becoming physically uncomfortable or sick
  - Reported diabetes-related stigma and shame
Health Risks for Patients with T2D and Disordered Eating Behaviors

- Each individual binge may contribute to insulin sensitivity
- BE frequency positively correlated with poor glucose control
- May not be a significant difference between HbA1c levels between those who binge eat and those who do not
- Elevated risk may be in conjunction with age and BMI
Onset of eating disorder?

Figure 3—Onset of eating disorders (DSM-IV lifetime) in relation to the time when the diabetes was diagnosed.
Eating disorder precedes type 2 diabetes?
Factors Affecting ED and T2D

- Participants may receive messages about "good and bad" foods that may lead guilt and shame around food choices.

- Deprivation, shame, and failure (to follow eating plan) preceding binge eating?

- May distrust their body and body cues

- May feel pressure to lose weight that can lead to dieting behaviors, which may increase risk of binge eating
The Endless Binge & Restrict Cycle

Feelings: guilt, remorse, fear of weight gain
Actions: get "in control" by dieting or restricting

Binge/Overeat

Feelings: being "good", anxiety about following plan properly
Actions: physical or emotional needs lead to inability to restrict

Diet/Restrict

{you}
### Health Outcomes for Patients with Type II Diabetes and EDs

#### Populations with ED diagnoses
- BED is associated with higher rates of acquiring a diabetes diagnosis later in life
- One in every three patients with ED diagnoses had developed Type 2 diabetes after 16 years of ED treatment, according to a cohort study (Raevuori et al., 2015)
- A sample study showed that BED was found in 12.2% of individuals who were younger patients of T2D, higher weights/BMI, spent less time with T2D, and had higher depressive symptoms (Nicolau et al., 2015)

#### Disordered eating behaviors
- Associated with a poorer quality of life for people with Type 2 diabetes (Cerrelli et al., 2005)

#### Perceived stress
- Positively correlated with ED behaviors among T2D patients
- Stress is an important factor when eating disorder behaviors increase

#### Positive experiences with treatment
- Improved self-care
- Better understanding of treatment goals and plans
Binge Eating Disorder (BED) and Type II Diabetes

01 Understanding BED

02 BED as a Risk Factor for Type II Diabetes

03 HONOR Study
- Goal
- Anticipated Outcomes
Binge Eating: Definition

- Eating, in a discrete period of time (for example, within any two-hour period), an amount of food that is definitely larger than most people would eat in a similar period of time under similar circumstances.

- A sense of **lack of control** over eating during the episode (for example, a feeling that one cannot stop eating or control what or how much one is eating).
DSM-5 Criteria for Binge Eating Disorder

- Recurrent and Persistent Episodes of Binge Eating
- Binge eating associated with **three** or more of the following:
  - Eating much more rapidly than normal
  - Eating until feeling uncomfortably full
  - Eating large amounts of food when not feeling physically hungry
  - Eating alone because of being embarrassed by how much one is eating
  - Feeling disgusted with oneself, depressed, or very guilty after overeating
- Marked distress regarding binge eating
- Absence of regular compensatory behaviors (e.g., purging)
Identifying EDs in this patient population

ED and T2D Screening
- Brief screening, extensive screening, and diagnostic test
- Collected data: height and weight, BMI, blood samples (blood count, coagulation, fasting glucose, HbA1c) (Nicolau et al., 2015)

Total Prevalence of EDs
- Range from 5.4% - 7% among Type 1 Diabetes
- Range from 6.5% - 9% among Type 2 Diabetes (Herpetz et al. 1998)
Screening Tools for Binge Eating Disorder
Guidance for T2D Clinicians
Screening Challenges (Chevinsky et al., 2020)

- Fewer than 50% of persons with BED receive treatment.

- BED has limited medical recognition among medical providers
  - < 50% report using DSM criteria to diagnose BED
  - 27% do not recognize BED as a discrete eating disorder
  - > 40% never assess binge eating

- Patients are reluctant to disclose symptoms because of feelings of guilt and/or fear of judgement.
A guide to using the Binge Eating Disorder Screener-7 (BEDS-7)\(^1\)

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.\(^2\)

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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 SKIP THE REMAINING QUESTIONS. THEO DO NOT APPLY TO YOU.

2. **Do you feel very distressed about your episodes of excessive overeating?**
   - Yes
   - No

3. **Within the past 3 months…**
   - **Never or Rarely**
   - Sometimes
   - Often
   - Always

   **DURING YOUR EPISODES OF EXCESSIVE OVERTENING, HOW OFTEN DIDS 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 OVERTENING, HOW OFTEN DID YOU CONTINUE EATING EVEN THOUGH YOU WERE NOT HUNGRY?**

5. **DURING YOUR EPISODES OF EXCESSIVE OVERTENING, HOW OFTEN WERE YOU EMBARRASSED BY HOW MUCH YOU ATE?**

6. **DURING YOUR EPISODES OF EXCESSIVE OVERTENING, HOW OFTEN DID YOU FEEL DISGUSTED WITH YOURSELF OR GUILTY AFTERWARDS?**

7. **DURING THE LAST 3 MONTHS, HOW OFTEN DID YOU MAKE YOURSELF VOMIT AS A MEANS TO CONTROL YOUR WEIGHT OR SHAPE?**

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S12368 04/16
SCOFF Tool

- **S** – Do you make yourself Sick because you feel uncomfortably full?
- **C** – Do you worry you have lost Control over how much you eat?
- **O** – Have you recently lost more than One stone (~15 pounds) in a three-month period?
- **F** – Do you believe yourself to be Fat when others say you are too thin?
- **F** – Would you say Food dominates your life?

Access it here: [https://www.psychtools.info/scoff/](https://www.psychtools.info/scoff/)

Answering "yes" to two or more questions warrants further assessments
SBIRT Screening Tool

Eating Disorder Screener Tool
Questions for the Patient

Do you make yourself throw up because you feel uncomfortably full?

- Yes
- No

Do you worry you have lost control over how much you eat?

- Yes
- No

Have you recently lost more than 15 pounds in a 3-month period?

- Yes
- No

Do you think you are fat even though others say you are too thin?

- Yes
- No

Would you say that food dominates your life?

- Yes
- No

https://www.nceedus.org/sbirt-for-eating-disorders/
Improving Appetite Self-Regulation in African American Adults with Type 2 Diabetes (HONOR) Study: Preliminary Results

• **Who:** Black adults who binge eat with type 2 diabetes (T2DM) (n = 10-15) and diabetes self-management education providers (n = 10)

• **Method:** Qualitative, Semi-structured Interviews

• **When:** October 2021–June 2023

• **Funder:** American Diabetes Association (ADA)
### SAMPLE PARTICIPANTS (N=14)

**Sociodemographic Characteristics of Participants**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Mean + SD (n=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, years</td>
<td>57.29 (14.35)</td>
</tr>
<tr>
<td>School Level</td>
<td></td>
</tr>
<tr>
<td>Some College, No degree</td>
<td>2 (14.29)</td>
</tr>
<tr>
<td>Associate’s Level (2-year college)</td>
<td>2 (14.29)</td>
</tr>
<tr>
<td>Bachelor’s Level (4-year college)</td>
<td>2 (14.29)</td>
</tr>
<tr>
<td>Master’s Level</td>
<td>6 (42.86)</td>
</tr>
<tr>
<td>Doctoral Level</td>
<td>1 (7.14)</td>
</tr>
<tr>
<td>Years diagnosed with Type 2 Diabetes (T2DM)</td>
<td>3.36 (1.28)</td>
</tr>
<tr>
<td>Episodes of out-of-control eating in the past month</td>
<td>2.43 (0.94)</td>
</tr>
</tbody>
</table>
THEMES

Cognitive management impacts eating behaviors

Type 2 Diabetes (T2D) diagnosis creates restricted self-management practices

Coping mechanism for binge eating and T2D management

Limited access and resources for binge eating/T2D treatment
Type 2 Diabetes (T2D) diagnosis creates restricted self-management practices

- Self-management of T2D through food logging/glucose monitoring
- T2D diagnosis leads to perception that restriction of cards/sugar is needed

Limited access and resources for binge eating/T2D treatment

- Insurance as barrier to T2D/ED treatment
- Need for individualization of care

Cognitive management impacts eating behaviors

- Eating to manage positive/negative emotions
- Morality/guilt surrounding food

Coping mechanism for binge eating and T2D management

- Exercise as T2D/binge eating self-management
- Therapy desired to manage eating behaviors and T2D
“I have anxiety and depression and they go up and down. So as I go down, I gonna eat till those things go up. Um, it just helps me feel good temporarily, then there's the guilt, um, and then I'm back on track again.”
A Provider’s own words...
(What do you think gets in the way of clients accessing diabetes Self-management education?)

“Cost, cost, not just like of the education itself, but cost of missing work, cost of childcare, cost of transportation. Um, I mean, these are real, real barriers. Um, many in my previous position, like we had folks who were referred, who had, um, you know, who had Medicare, but Medicare will cover diabetes education. They won't cover prediabetes education. And so, you know, a lot of folks couldn't come, um, for education. Um, I think also if you had a not great relationship with the healthcare system, um, you are less likely to engage…”
A Participant’s own words…

“I'm really scared to eat anything now… Yeah. Cause I know what's gonna happen afterwards and I lose control. You know, my sugars will get all whacked out and stuff, and then all day I'm trying to get it under control and when I get it under control, I'm just tired. It's just like a job.”
Treating EDs in The Context of Type II Diabetes

FIGURE: Proposed pathway to helpful treatment from primary care providers (PCPs) and subsequent improvements in treatment experiences.
7 A's Model: Eating Problems

- **ARRANGE** follow-up care
  - **Arrange**
  - **Assist** with developing an achievable action plan
  - **Advises** about eating problems
  - **Assess** for eating problems

- **Be AWARE** that people with diabetes may experience eating problems
  - **Aware**
  - **Ask** about eating problems
  - **Assign** to another health professional

- **ASSIST**
Be AWARE

- Risk factors of Disordered Eating Behaviors
  - Beliefs about food being "good" or "bad"
  - Preoccupation with body size
  - Unexplained weight loss or gain
  - Suboptimal diabetes self-management (e.g., less frequent or no glucose monitoring)
  - Suboptimal diabetes outcomes (e.g., unexplained or high A1C)
ASK

- OPTION 1: Open-Ended Questions
  - "Individuals with diabetes are often concerned about their weight or shape. How do you feel about your weight or body shape?"

  - "People sometimes feel that food and eating are a difficult part of managing diabetes. Do you find it hard to control what and how much you eat? Can you tell me a bit more about it? How often does this occur?"

  - *Explore Underlying Eating Behaviors*
    - Could you tell me a bit more about the changes in your eating patterns?

    - *Have you noticed any changes in your life that may be the reasons for your changes in eating patterns?*

    - *Your A1C has been going up over the last several months and you have mentioned that you have gained or lost weight. How do you feel about this? Can you share what you think may be affecting this?*
Option 2: Use a Brief Questionnaire

- If a person answers yes to **one or more** questions, further assessment is needed.

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**The mSCOFF consists of five questions:**

- Do you make yourself sick (vomit) because you feel uncomfortably full? □ Yes □ No
- Do you worry you have lost control over how much you eat? □ Yes □ No
- Have you recently lost more than 14 pounds in a three-month period? □ Yes □ No
- Do you believe yourself to be fat when others say you are too thin? □ Yes □ No
- Do you ever take less insulin than you should? (modified item) □ Yes □ No

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ADVISE

ACKNOWLEDGE AND ELICIT FEEDBACK

• “From what you have told me, it sounds like you are having some concerns about your [eating habits/weight/body image/insulin use]. These concerns are not uncommon in people with diabetes. If you are OK with this, perhaps we could talk a bit more about what is going on and see what is needed to reduce your concerns.”

• Continue: “After listening to you and seeing your lab results, I wonder if you might be struggling with disordered eating or even an eating disorder. Has this crossed your mind? Has anyone else suggested they are concerned about your [health/ eating habits/weight?]
ACKNOWLEDGE AND ELICIT FEEDBACK

• Provide information about the specific eating problem that was identified during the comprehensive clinical assessment, and its likely impact on diabetes management/outcomes and general health.

• Assist the person to identify and access appropriate support and treatment (e.g., if you are a PCP, establish a collaborative care team and write a treatment plan and/or a referral to a relevant health professional who can provide psychotherapy).

• Make sure the person is comfortable with this approach and consider giving them information to read at home or refer them to online resources.
Case Study

Sarah

59-year-old woman living alone
Type 2 diabetes, managed with diet and exercise; BMI=32
Health professional: Dr. Lydia Morris (PCP)
Take Home Message

• Comorbidity of T2D and ED exists, mainly with BED

• Awareness, effective communication, and investigation are necessary for providers to be able to support patients with ED and T2D

• Balancing both ED and T2D include implementation of a reliable and regular eating routine, shifting shame and guilt associate with diagnoses, regularly tracking blood sugar levels, concise and patient-centered nutrition education.
Questions

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Eating Disorders (EDs): An Overview


Intersection of Type II Diabetes and Eating Disorders


Binge Eating Disorder and Type II Diabetes


The Influence of Type II Diabetes and Stress on Eating Behaviors

- The Influence of Type II Diabetes and Weight Loss on Eating Behaviors

Identifying EDs in this Patient Population


Health Outcomes for Patients with Type II Diabetes and EDs


How Providers can Support Patients with Type II Diabetes who Display Symptoms of Disordered Eating


Tips to Balancing BED and Type II Diabetes

- https://www.waldeneatingdisorders.com/blog/5-tips-to-balancing-binge-eating-disorder-type-2-diabetes/
Thank you!