Diabetes and Eating Disorders

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Objectives

- Identify the main types of eating disorders.
- Identify signs and symptoms of eating disorders in patients with diabetes.
- Advise on proper treatment of eating disorders, including ED-DMT1 and BED.

Holly Samples, RDN, LD

- Dietitian for 17 years
- Certified Diabetes Educator in physician's group, insulin pump company, and hospital
- Private practice for 6 years, specializing in treatment of eating disorders
- UGA University Health Center, specializing in eating disorders
- Currently Outpatient Dietitian at Piedmont Athens Regional
- Personal and professional interest in eating disorders, helping others develop a healthy relationship with food and their bodies

Eating Disorders[1]

- **Anorexia Nervosa**
  - Significantly low body weight
  - Intense fear of gaining weight or becoming fat
  - Self-evaluation is unduly influenced by body shape or weight
- **Bulimia Nervosa**
  - Recurrent binge-eating: large amounts of food, lack of control
  - Recurrent compensatory measure to prevent weight gain (vomiting, laxatives, meds)
  - Self-evaluation is unduly influenced by body shape or weight
- **Binge-Eating Disorder** (New in DSM-V)
  - Recurrent binge-eating: large amounts of food, lack of control
  - Marked distress
- **Other Specified Feeding or Eating Disorder (OSFED)**
  - Atypical AN, BN, BED

Eating Disorders by THE NUMBERS

EATING DISORDERS DON'T JUST IMPACT WOMEN

10 MILLION ♂

Number of men in the U.S. who will face an eating disorder in their lifetime

50-80%

Percentage of risk factors for anorexia and bulimia that are genetic and heritable

ONE PER HOUR

Nearly one person dies from an eating disorder every 60 minutes

MORE THAN 30 MILLION PEOPLE

in the U.S. will suffer from an eating disorder

LASTING RECOVERY IS POSSIBLE AND WORTH IT

OVER 70% will not seek treatment due to stigma, misperceptions, lack of education, diagnosis and access to care

13% of women over the age of 50 have eating disorder symptoms ♀

119% RATE OF INCREASE **Children under 12** admitted to the hospital for eating disorders rose 119% in less than a decade

#1 Killer

Eating disorders have the highest mortality rate of any mental illness

About **35%** of binge eating disorder patients and 30% of bulimia patients are medically obese

GAY MEN were 7X more likely to report binging and 12X more likely to report purging than straight men

18 TO 25

The majority of eating disorders begin between 18 and 25

There is hope for recovery.

Eating Recovery Center – the only national health care system dedicated to the treatment of serious eating and related disorders at any stage of the illness – is committed to providing innovative approaches to improve patient outcomes and facilitate lasting recoveries.

To learn more or to check out our sources from this Infographic, visit **www.eatingrecovery.com**.

EATING Recovery CENTER

UP TO 80% of patients who receive and complete treatment will recover or improve significantly

OUR TEENS ARE SUFFERING:

Anorexia is the third most chronic illness among adolescents, after asthma and obesity

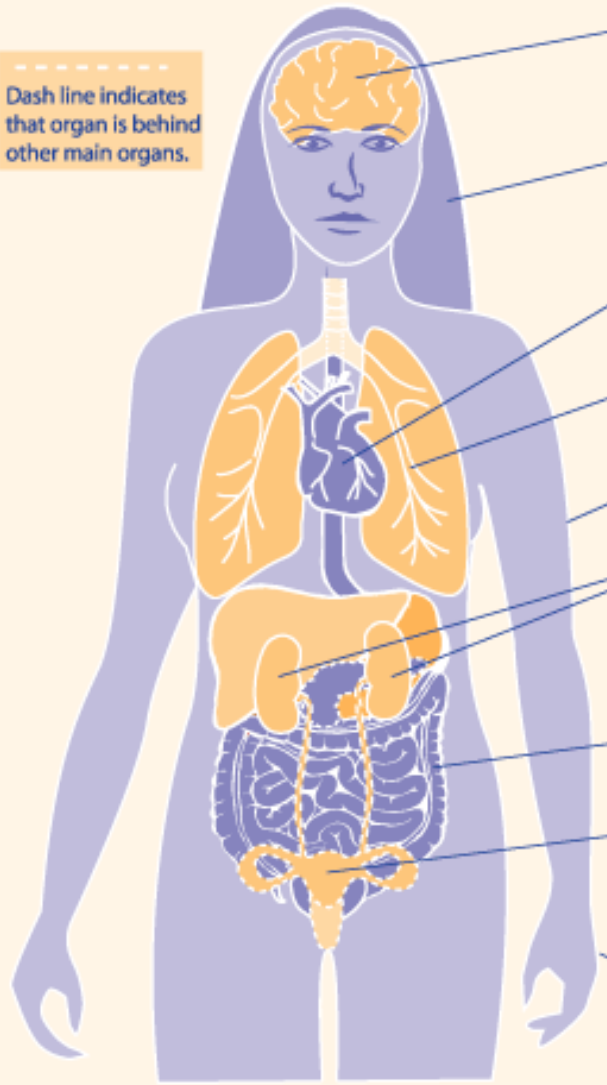
Risk Factors for Eating Disorders

- Female sex
- Dietary restraint and dieting (#1 trigger)
- Weight gain and being overweight (adolescence)
- Early puberty compared to peers
- Low self-esteem
- Disturbed family functioning
- Disturbed parental eating attitudes
- Peer and cultural influences
- Personality traits: perfectionism, anxiety, difficulty adapting to change

Eating Disorders

- Food/weight becomes a way to deal with feelings.
  - Control, distraction, comfort, punishment, identity
- Cause is very complex
  - Biological—genetics, effects of semi-starvation
  - Psychological—personality, mental health, coping skills
  - Sociocultural—”thin ideal” vs. abundance of food, trauma
- Very individualized, complex, and difficult to treat
- Affects 20 million women and 10 million men in America
- Anorexia Nervosa has the highest mortality rate of any psychiatric disorder[2].

Anorexia affects your whole body



Brain and Nerves
can't think right, fear of gaining weight, sad, moody, irritable, bad memory, fainting, changes in brain chemistry

Hair
hair thins and gets brittle

Heart
low blood pressure, slow heart rate, fluttering of the heart (palpitations), heart failure

Blood
anemia and other blood problems

Muscles and Joints
weak muscles, swollen joints, fractures, osteoporosis

Kidneys
kidney stones, kidney failure

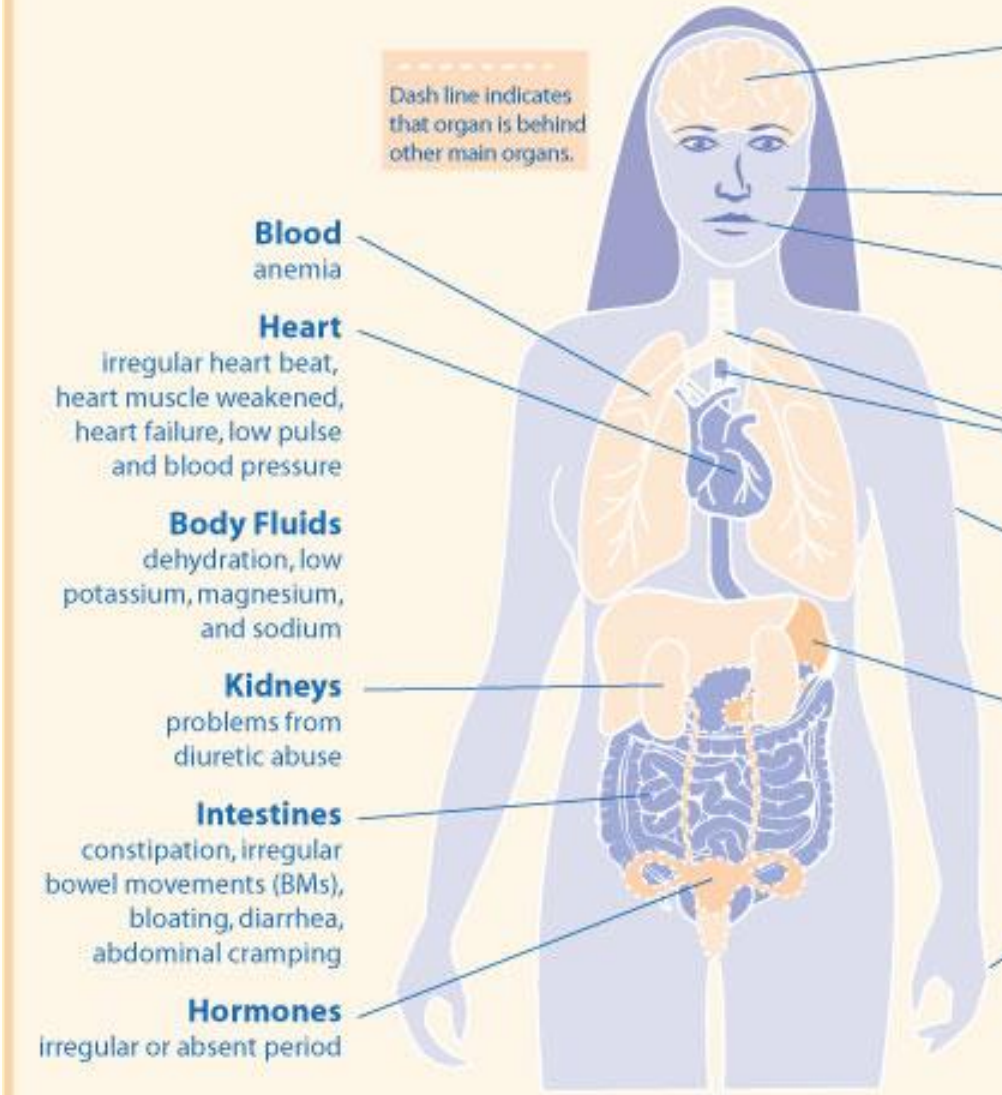
Body Fluids
low potassium, magnesium, and sodium

Intestines
constipation, bloating

Hormones
periods stop, bone loss, problems growing, trouble getting pregnant. If pregnant, higher risk for miscarriage, having a C-section, baby with low birthweight, and post partum depression.

Skin
bruise easily, dry skin, growth of fine hair all over body, get cold easily, yellow skin, nails get brittle

How bulimia affects your body



Brain
depression, fear of gaining weight, anxiety, dizziness, shame, low self-esteem

Cheeks
swelling, soreness

Mouth
cavities, tooth enamel erosion, gum disease, teeth sensitive to hot and cold foods

Throat & Esophagus
sore, irritated, can tear and rupture, blood in vomit

Muscles
fatigue

Stomach
ulcers, pain, can rupture, delayed emptying

Skin
abrasion of knuckles, dry skin

Blood
anemia

Heart
irregular heart beat, heart muscle weakened, heart failure, low pulse and blood pressure

Body Fluids
dehydration, low potassium, magnesium, and sodium

Kidneys
problems from diuretic abuse

Intestines
constipation, irregular bowel movements (BMs), bloating, diarrhea, abdominal cramping

Hormones
irregular or absent period

Diabetes and Eating Disorders

- 2 Different Co-Occurring Diseases
- 2 Types of Diabetes: Type 1 and Type 2
- 4 Major Types of eating disorders: AN, BN, BED, OSFED

Most Common:

1. “Diabulimia”/ ED-DMT1
2. ED-DMT2

Eating Disorders and Type 1 DM

- Women with Type 1 DM have 2.4X greater risk of developing an eating disorder
- 30% of women with DM between the ages of 15 and 30 manipulate or omit their insulin in order to lose weight
- “Diabulimia”--often used by media, suggesting “purging” by withholding insulin to cause hyperglycemia and weight loss
- “ED-DMT1”—more encompassing term used in research to designate anyone with Eating Disorder and Diabetes Mellitus Type 1.
- No distinct diagnosis or ICD-10 code
- Question: Does diabetes CAUSE the eating disorder?

Diabetes Management That Increase Risk of ED-DMT1

- Higher BMI—intensive insulin therapy
- Need to focus on food, counting, calculating (Diabulimia video)
- Easy availability of deliberate insulin omission to control weight
- Effect of diabetes on self-concept, body image, and family interactions
- Family dynamics involving autonomy and independence concerning diabetes self-management

Katie

- Diagnosed with Type 1 diabetes at 11 yo.
- High functioning, “good girl,” always did what parents and doctor told her, perfectionist
- Goes to college—freedom and independence, no curfew or constant questions about diabetes management, late-night pizza, alcohol
- Boys, parties = desire to fit in, be attractive
- Leaves off insulin pump and weighs less the next morning
- Weight loss becomes appealing and she continues
- Katie is noticed, praised for weight loss
- Katie is constantly nauseated and fatigued, experienced hair loss, skin dryness, dark eye circles, and becomes depressed.
- Mom brings Katie to your office…

Warning Signs of ED-DMT1

- Overall deterioration in psychosocial functioning (school attendance and performance, work functioning, interpersonal relationships)
- Increasing neglect of diabetes management (“diabetes burnout”)
- Erratic clinic attendance
- Significant weight gain or loss
- Increased concerns about meal planning and food composition
- Depressive symptoms (sad mood, low energy, poor concentration, fatigue, disrupted sleep)
- Multiple episodes of DKA
- Poor or worsening metabolic control

What Would You Do With "Katie?"

- Ask open-ended questions:
  - "How are you feeling about your diabetes, now that you are in college?"
  - "What are your biggest concerns?"
  - "How has your routine changed?"
- Recognition of patient's feelings, "this is a tough time"
- Measure vitals: weight, blood pressure, heart rate
- Labs: CBC, CMP, liver enzymes, A1c, fasting cholesterol profile, UA
- Patients purging should be assessed for hypokalemia

Diabetes Eating Problem Survey

Items retained in DEPS-R[‡]

Losing weight is an important goal to me

I skip meals and/or snacks

Other people have told me that my eating is out of control

When I overeat, I don't take enough insulin to cover the food

I eat more when I am alone than when I am with others

I feel that it's difficult to lose weight and control my diabetes at the same time

I avoid checking my blood sugar when I feel like it is out of range

I make myself vomit

I try to keep my blood sugar high so that I will lose weight

I try to eat to the point of spilling ketones in my urine

I feel fat when I take all of my insulin

Other people tell me to take better care of my diabetes

After I overeat, I skip my next insulin dose

I feel that my eating is out of control

I alternate between eating very little and eating huge amounts

I would rather be thin than to have good control of my diabetes

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*Reverse-scored items.

†Items are answered on a 6-point Likert scale: 0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4 = usually, 5 = always.

Complications

- Basically, the complications of uncontrolled DM:
  - higher A1C levels
  - higher risk of developing infections
  - more frequent episodes of DKA
  - more frequent hospital and emergency room visits
  - higher rates and earlier onset of diabetes complications - nerve damage, eye disease, kidney disease and possible heart disease
- Co-occurring complications of ED

Treatment

- Very delicate balance of treatment, made more difficult by conflicting interventions
- **Multidisciplinary team--**endocrinologist, a dietitian who has knowledge of both diabetes and eating disorders, and a mental health professional who specializes in eating disorders.
- **Flexible diabetes management--**“good enough” vs. perfection
- **Outpatient treatment--**patient must be medically stable, able to follow treatment team recommendations, and make consistent progress
- **Inpatient treatment**--preferably one familiar with ED-DMT1
- Remember that ED-DMT1 is a serious mental health disorder, thus it cannot be treated by simply reinforcing diabetes education or stressing the dangers of diabetes complications

Total Diet Approach for ED-DMT1

Table 2. Total Diet Approach for ED-DMT1

Topics	Eating Disorders Philosophy	Diabetes Philosophy	Compromise for ED-DMT1
"All foods fit"	Yes	Very important	Same
Number of food groups	7	1 main (carbohydrate)	Focusing on 7 food groups is more important than just counting carbohydrates
Exact portion sizes of foods/measuring	Approximate determination of portions is adequate	Very important for carbohydrate counting	Food estimation may be the same as when the patient goes out to eat versus measuring everything
Individual meal plan	Yes (3 meals/3 snacks)	Very important for establishing and using insulin-to-carbohydrate ratio	Meal plans are always individualized, but if patients are being treated for an eating disorder, an eating disorder prescribed meal plan is encouraged
Snacks	Very important	Not needed; use of snacks would require additional insulin	Individualized based on insulin regimen and eating disorder symptoms
Food labels	Not a focus	Very important	Individualized depending on insulin regimen and symptoms. If focusing on food labels is a trigger for worsening eating disorder symptoms, patients should be encouraged to estimate portions with help from a dietitian
Diet/sugar-free foods	Not appropriate	Important; use of these foods should be encouraged	Diet drinks, sugar substitutes, and sugar-free syrup/gum/mints are acceptable with moderate use
Fat	Important to include, but not to focus on	A key component of diabetes education; focused more with adults	Moderate fat intake is important for overall health; long-term education is focused on healthier fats versus saturated or *trans* fats

Binge Eating Disorder

Bob's Story

Martha Comes To Your Office…

- Forty year-old female with Type 2 diabetes
- 264# now, has gained 30# in past 6 months
- FBGs are 150-200, A1c is 9.3
- You have continued to increase her insulin at each visit over past year.
- You have encouraged her to lose weight many times (suggested gym membership, referred to dietitian but she no-showed).
- You have reminded her of the dangers of uncontrolled diabetes. She voices understanding, but she never seems to make any changes.
- She doesn't really want to talk about her eating habits and seems ashamed about her weight.
- What could be going on with this patient?

Binge Eating Disorder

- Three times more common than anorexia and bulimia combined[7]
- More common that breast cancer, HIV, and schizophrenia[7]
- 3 out of 10 individuals looking for weight loss treatments show signs of BED
- Patients don't report due to shame/guilt about behaviors
- Providers' weight bias and assumptions about causes for obesity
- Complexity of treatment
- Could some of your patients with diabetes (Type 2) actually be dealing with an eating disorder?

What Would You Do With Martha?

- Ask open-ended questions:
  - “How do you feel about your weight/diet?”
  - “What are your biggest obstacles?”
  - “What can I do to support you?”
- Recognition of patient’s feelings, “Sounds like this is really hard for you.”
- Measure vitals and pertinent labs
- OK to address abnormal lab values and diet/behavior effects on health/disease
- Referral to therapist/treatment center

Prevention of Eating Disorders in Diabetes

- Foster open, honest communication by being supportive and receptive
- Ask open-ended questions:
  - "How are you feeling about having diabetes?"
  - "How do you feel about your body?"
  - "What worries/concerns do you have about your diabetes/health/body?"
- Focus on BEHAVIORS, not just the scale
- Don't over-emphasize or "moralize" weight
  - Only address if dramatic changes
  - "Health at Every Size"
- Sometimes settle for "good enough" BG control. Don't expect perfection.
- Avoid lecturing and shaming patients
- Early referral to mental health professional or dietitian

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