

Are undiagnosed eating disorders keeping your patients sick?

Undetected binge eating, anorexia, or bulimia can thwart other psychiatric therapies

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The internist next door asks you about his patient with bulimia, who routinely has potassium levels of 2.0 mEq/L. “She admits it’s a problem but thinks she’ll get fat if she stops purging. What can I tell her to get her into treatment?”

That afternoon, your longtime patient Mr. J—age 56 with depression, obesity, and hypertension—arrives for his appointment. With the day’s earlier conversation in mind, you ask him if he has an eating problem. Staring at the floor, he describes a lifelong battle with nighttime eating binges, which he has never mentioned to you before.

Mr. J may have concealed his binge eating because of shame or ambivalence about stopping a psychologically protective behavior. And his eating disorder may be complicating his depression treatment.



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Box

'Subsyndromal' eating disorders: Most common in outpatient practice

Some 40% of persons with eating disorders meet DSM-IV-TR criteria for anorexia or bulimia nervosa. The other 60%—with eating disorder, not otherwise specified (ED-NOS)—are divided nearly evenly between binge eating disorder and subsyndromal anorexia or bulimia. Outpatient psychiatrists see these eating disorders most often.

Anorexia and bulimia nervosa prevalence rates are estimated to be 0.3% and 1%, respectively.³ But including ED-NOS patients increases the overall eating disorder prevalence to 2% to 3%—equal to or greater than the combined rates of schizophrenia and bipolar I disorder.

Although considered “subsyndromal,” ED-NOS patients suffer psychopathology, impairment, and medical comorbidity similar to those of persons who meet DSM-IV-TR criteria for anorexia or bulimia nervosa.⁴

But outpatient psychiatrists can often manage patients like Mr. J in consultation with a nutritionist and primary care physician. Eating disorders are treatable,^{1,2} and many patients can recover. This article describes how to identify eating disorders so that treatment can begin.

PSYCHIATRIC COMORBIDITY

Eating disorders are common in outpatient practice (*Box*)^{3,4} and coexist with a variety of psychiatric diagnoses (*Table 1*). For example, in 248 women with anorexia, bulimia, or unspecified eating disorders, 74% had another Axis I disorder, including:

- anxiety disorders (54%)
- affective disorders (52%)
- substance-related disorders (25%).

The most-common Axis II disorders belonged to cluster C (53%) or cluster B (21%).⁵

Eating disorders also are much more common in persons who present with psychiatric problems than in the general population. For example:

- Among 62 patients with a primary diagnosis of obsessive-compulsive disorder, 13% had anorexia or bulimia nervosa and another 18% met subthreshold criteria.⁶
- In 257 female patients with anxiety disorders, nearly 12% also met criteria for a possible eating disorder.⁷

Overlapping symptoms. Co-morbid eating disorders can be difficult to detect because their psychological symptoms resemble those of Axis I and Axis II disorders. Physiologist Ancel Keys reported depression, apathy, low motivation, tiredness, weakness, anhedonia, and decreased cognitive efficiency in 32 healthy male volunteers who follow a semi-starvation diet (1,600 kcal/d) for 24 weeks.⁸

WHO HAS EATING DISORDERS?

Most eating disorder patients are adolescent girls or young women with pronounced body image dissatisfaction. Other patients include:

Atypical young women. Some young women—usually Asian—meet most criteria for anorexia nervosa but lack the characteristic drive for thinness. They tend to have less psychopathology and better prognosis than typical female patients.⁹

Boys and men. Female-to-male ratios are approximately 11:1 for anorexia, 5:1 for bulimia, and 3:1 for binge eating disorder. Men and boys with eating disorders are similar to their female counterparts but are more likely to report:

- comorbid substance abuse
- having begun weight loss and purging in response to teasing or concerns about health, sports performance, or gay relationships, rather than appearance.¹⁰

Children may present with somatic complaints, obsessive-compulsive disorder, and depression. Rapid weight loss with dehydration and medical compromise is more common than in older eating disorder patients, and growth retardation—sometimes irreversible—can occur.¹¹

Middle-aged to late-life. Midlife onset of eating dis-

orders may be precipitated by losses or concerns about aging. In the elderly, eating disorders may be manifestations of complicated bereavement, and ruling out medical causes of weight loss is crucial in this age group.

Night-eating syndrome. Some patients eat at least 25% of daily calories after the evening meal. They experience insomnia, morning anorexia, and sometimes amnesia for the nocturnal eating episodes. Anxiety, depression, or sleep disorders may be contributing factors.¹²

IDENTIFYING EATING DISORDERS

Screening. No formal guidelines recommend which psychiatric patients to screen for eating disorders. We suggest screening any patients who are over- or underweight or have eating disorder risk factors, such as:

- young women (teens and early 20s)
- athletes in certain sports (gymnastics, ballet, figure skating, running, body building, wrestling)
- history of childhood sexual abuse.¹³

Suggested questions include, “How do you feel about your weight?” and “Do you ever binge eat?” If responses suggest an eating disorder, interview thoroughly while being sensitive to patients’ shame and ambivalence.

Interviewing. Evaluate all 4 illness domains—nutritional, medical, psychological, and social. Because patients often do not volunteer information, ask about:

- symptoms and complications
- onset and development of eating and weight problems
- history of being teased or criticized about weight

Eating disorders’ psychological symptoms resemble those of Axis I and Axis II disorders

Table 1

Common psychiatric comorbidities in patients with eating disorders

Disorder	Comorbidities
Anorexia and bulimia nervosa	Anxiety disorders (social phobia, PTSD, OCD) Mood disorders (major depressive disorder, dysthymia, bipolar disorder) Substance use disorders (more common in patients who binge and/or purge) Personality disorders (cluster C more common in restricting anorexia, cluster B more common in patients who binge and purge)
Binge eating disorder	Anxiety disorders (PTSD) Mood disorders (major depressive disorder, bipolar disorder)

PTSD: posttraumatic stress disorder
OCD: obsessive-compulsive disorder

- weight history (premorbid, lowest, highest, and preferred weights).

Bingeing and purging. If the patient acknowledges bingeing, ask about its onset, frequency, triggers, and consequences. Obesity is common in patients who binge, but a person can meet diagnostic criteria for binge eating disorder without being obese.

DSM-IV-TR defines bingeing as consuming a large quantity of food in a discrete time and feeling out of control of eating. Ask specifically how the patient defines “binge,” and seek details of a typical binge. Also ask about compensatory behaviors (purging by vomiting or using laxatives or diuretics). Is the patient abusing ipecac, diet pills, or thyroid hormone? Does he or she fast or exercise compulsively (such as even while ill)?

Eating and exercise patterns. Ask the patient to



Table 2

Potential medical complications of anorexia and bulimia nervosa

Organ system	Symptoms	Signs, syndromes, laboratory abnormalities
Cardiovascular	Palpitations, dyspnea, chest pain, dizziness	Bradycardia, orthostasis, acrocyanosis Prolonged PR and QTc intervals on ECG, mitral valve prolapse, cardiomyopathy in ipecac abusers
CNS	Anxious, depressed, or irritable mood; obsessiveness; cognitive deficits; seizures (rare)	Enlarged ventricles on CT or MRI, deficits on neuropsychological testing, abnormal EEG, signs of peripheral neuropathy
Dermatologic	Hair loss, dry skin	Xerosis, carotenoderma, cheilitis, lanugo, brittle hair and nails, Russell's sign (callus on dorsum of hand used to induce vomiting)
Endocrine	Fatigue, cold intolerance	Hypothermia, hypoglycemia, hypercortisolemia, ↓ T3 and T4
Gastrointestinal	Bloating, constipation, spontaneous vomiting, reflux, abdominal pain, heartburn, hematemesis	Abnormal bowel sounds, delayed gastric emptying, superior mesenteric artery syndrome, pancreatitis In patients who vomit: Mallory-Weiss tears, Barrett's esophagus, occult blood in stool, ↑ amylase, gingivitis, dental caries, sialadenosis, perimolysis
Genitourinary	Polyuria, oliguria	↑ BUN, nephrolithiasis, hypokalemic nephropathy, renal failure (rare)
Hematologic	Fatigue, bruising	Anemia; ↓ numbers of WBCs, RBCs and platelets; ↓ ferritin, B12, folate
Metabolic	Weakness, cardiac or CNS manifestations	↓ K, Na, Mg, phosphate; ↑ cholesterol; metabolic alkalosis (from vomiting), or acidosis (from laxatives); thiamin and niacin deficiencies (rare)
Musculoskeletal	Weakness, cramps, bone pain	Wasting, ↑ CK (rare), decreased bone mineral density, pathologic fractures
Reproductive	Amenorrhea, ↓ libido, infertility, ↑ pregnancy, neonatal complications	Arrested sexual development; ↓ estrogen or testosterone; prepubertal levels of LH and FSH

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recall everything eaten in the past 24 hours. This history can help estimate caloric intake and may reveal problematic eating patterns. For example, does the patient:

- avoid certain foods, consider others to be “safe,” or use diet products, gum, or mints?
- engage in food rituals, such as slow eating, hoarding food, or eating odd combinations?
- steal food, weigh him/herself frequently, or visit pro-anorexia/pro-bulimia Web sites?

Complications. Ask the patient to describe the effect of eating disorder behaviors on relationships with family and friends and whether significant others also have eating or weight problems. Inquire about physical symptoms (*Table 2, page 64*) and psychological experiences such as preoccupation with food and impaired concentration.

Past treatment. Has the patient been treated for an eating disorder or attempted to change his or her behavior without seeking treatment? What worked, what didn't, and why? To recover, what does the patient think he or she needs?

INTERVIEW ADJUNCTS

Assessment tools. In addition to patient interviews, some clinicians use self-report scales to screen for eating disorders or to monitor treatment. Reliable and valid self-report questionnaires include the Eating Disorder Examination-Q (36 items),¹⁴ Eating Disorder Inventory (91 items),¹⁵ and Eating Attitudes Test (26 items).¹⁶

The Eating Attitudes Test takes 10 minutes to complete and is widely used for screening. A cut-off score of 20 indicates a potential eating disorder and the need for a follow-up interview.

Self-report diaries can help identify binge eating triggers—usually dietary restriction combined with interpersonal stressors. Ask the patient to record all meals, snacks, binges, purges, and exercise activities, plus time of day and associated

Self-report diaries reveal binge eating triggers, distorted thoughts, and coping problems

Table 3

Common medical complications of binge eating disorder

Obesity (body mass index > 30) and related comorbidities:

- Hypertension
- Diabetes mellitus
- Hyperlipidemia
- Increased cardiovascular mortality
- Obstructive sleep apnea
- Degenerative arthritis

Gastroesophageal reflux symptoms and complications

feelings, thoughts, and situations. Diaries can also reveal maladaptive thoughts, such as body image distortion, and problematic coping strategies, such as purging or excessive exercising.

MEDICAL WORKUP

Measure height and weight, calculate body mass index, and check vital signs (including supine and standing blood pressure and pulse) and hydration status. Perform a neurologic exam, particularly for peripheral neuropathy, and check for cardiac, dermatologic, and GI complications (*Tables 2 and 3*). Include a dental examination if the patient admits or you suspect self-induced vomiting.

If treating eating disorders' medical consequences is beyond the scope of your practice, refer the patient for evaluation by a physician with this experience.

Weight. To quantify an eating disorder's effect on weight gain or loss, determine the patient's pre-morbid, lowest, highest, current, and ideal weight. In diagnosing anorexia nervosa in adults, pre-morbid weight is the most reliable gauge of “expected”



Table 4

Laboratory studies for patients with suspected eating disorders

For whom	Recommended tests
All eating disorder patients	Comprehensive metabolic panel (electrolytes, glucose, albumin, measures of hepatic and renal function), complete blood count, urinalysis, ECG, TSH
Add for patients with anorexia	Serum magnesium, phosphate, calcium; creatinine clearance; chest radiography; estrogen in women, testosterone in men; DEXA bone density scan; consider echocardiography, brain MRI; screen urine for unreported substances of abuse
Add for patients with bulimia and purging type anorexia	Serum magnesium, phosphate, calcium; DEXA scan if patient is amenorrheic or has history of anorexia; amylase (fractionated, if possible); consider fecal occult blood, urine for electrolytes and laxatives, urine drug screen
Add for patients with binge eating disorder	Fasting blood glucose, fasting lipid profile

body weight by DSM-IV-TR diagnostic criteria. If premorbid weight is unknown, consider using the Hamwi formula:

- Weight for height in women: 100 lbs for the first 5 feet, +5 lbs/inch over 5 feet
- Weight for height in men: 106 lbs for the first 5 feet, +6 lbs/inch over 5 feet.

Another option for men and women ages 25 to 59 is to use the midpoint of the appropriate height/weight range in the Metropolitan Life tables.

For adolescents with suspected anorexia nervosa, estimate expected body weight from individual growth curves or standard growth charts posted on the Centers for Disease Control and Prevention Web site (*see Related resources, page 75*).

Note that the DSM-IV-TR weight criterion for anorexia of “less than 85% of expected” is an example, not an absolute cutoff. Anorexia nervosa would be an appropriate diagnosis for a patient who weighs more than 85% of expected weight but has lost substantial weight and meets the other diagnostic criteria.

BMI <17.5 in young women or <18.5 in young men also indicates anorexia if other diagnostic criteria are met.

Laboratory tests vary, depending on patients’ suspected eating disorders (*Table 4*). In 214 outpatient women with anorexia, the most common abnormalities were anemia (38.6%), leukocytopenia (34.4%), hyponatremia (19.7%) and hypokalemia (19.7%).¹⁷ With few exceptions, abnormal values are not predicted by the apparent degree of undernutrition.

FROM DIAGNOSIS TO TREATMENT

Talking with patients. Discussing abnormal lab results with patients can be therapeutic. In our experience, recovered patients often report that worry about medical complications was their primary reason to seek treatment for eating disorders.

Relate the patient’s cognitive, mood, and physical symptoms to abnormal eating behavior, then present the eating disorder diagnosis as the beginning of treatment. For example, you could

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praise Mr. J for his courage in revealing his binge eating and tell him that identifying this problem is the first step toward solving it. Not only can he overcome binge eating, but treatment will also likely improve his mood, weight, and blood pressure.

Eating disorder patients who are medically stable, motivated for treatment, have good support, and are able and willing to come for frequent appointments are good candidates for outpatient eating disorder treatment.

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Related resources

For clinicians

- ▶ Standard growth charts. National Center for Health Statistics. Centers for Disease Control and Prevention. www.cdc.gov/growthcharts.
- ▶ Brewerton TD. *Clinical handbook of eating disorders: an integrated approach*. New York: Marcel Dekker; 2004.
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For clinicians and patients

- ▶ Zerbe KJ. *The body betrayed: a deeper understanding of women, eating disorders, and treatment*. Carlsbad, CA: Gürze Books; 1995.
- ▶ National Eating Disorders Association. www.nationaleatingdisorders.org.
- ▶ National Association of Anorexia Nervosa and Associated Disorders. www.anad.org.

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Think of eating disorders as potential comorbidities, especially in patients with mood and anxiety disorders. Look for atypical patients and presentations. Develop a collaborative relationship that mitigates shame and ambivalence. Get detailed information about diet, weight, and eating behaviors. Provide a thorough medical evaluation.

BottomLine