01 - Chapter 14 Eating Disorders

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154 EATING DISORDERS Definition WARDS TIP Suspect an eating disorder? Ask the patient what is their highest/lowest weight, their ideal body weight, if they count calories/fat/carbs/protein, how much they exercise, if they binge and purge, and if they have food rituals (e.g., drinking water between bites). Eating disorders include anorexia nervosa, bulimia nervosa, and binge-eating disorder. Patients with anorexia or bulimia have a disturbed body image and use extreme measures to avoid gaining weight (vomiting, laxatives, diuretics, enemas, fasting, and excessive

exercise). Patients with binge-eating disorder typically binge in response to negative emotions. Ms. Williams is a 17-year-old female without prior psychiatric history who is brought to the emergency room by ambulance after her parents called 911 when they found her having a seizure in their living room. She was admitted to the medical intensive care unit in status epilepticus and was quickly stabilized with intramuscular lorazepam and fosphenytoin loading. Her height is 5 feet 6 inches, she is of medium build, and her weight is 101 pounds (BMI 16.3 kg/m2). She has no significant medical history, and this is her first seizure. Laboratory workup shows an electrolyte imbalance as the most likely cause for her seizures. Although initially reluctant, she admits to self-induced vomiting several times this week. She reports that although she normally restricts her daily caloric intake to 500 calories, she regularly induces vomiting if her weight is above 100 pounds. Her last menstrual cycle was 1 year ago. Psychiatric consultation is requested in order to confirm her diagnosis. As the psychiatrist on call, you evaluate Ms. Williams and find that she appears underweight and younger than her stated age. She is in mild distress, has a nasogastric tube in place, and exhibits poor eye contact. She reports feeling “sad” and admits to experiencing constant preoccupation about her physical appearance, stating “I’m fat. I hate my body.” She also reports insomnia, low energy levels, and a history of self-harm behavior by cutting her forearms. She reports that she is careful in hiding her symptoms from her parents, whom she describes as strict disciplinarians. She also expresses concerns that she will disappoint them. Ms. Williams’s parents describe her as a perfectionist. They say that she is involved in multiple school activities, takes advanced placement classes, and has been recently concerned about being accepted to her college of choice. They report that she has maintained a 4.0 grade point average in high school, and they expect her to become a doctor. Her parents have noticed that she is underweight and rarely see her eat, but have attributed this to stress from her many academic pursuits. Ms. Williams’s mother receives treatment for obsessive-compulsive disorder. What is Ms. Williams’s most likely diagnosis? The most likely diagnosis is anorexia nervosa—binge-eating/purging type. As described above, she refuses to weigh more than 100 pounds, which is significantly below the minimal normal weight for her height. Despite being underweight, she expresses intense fear of gaining weight and has a disturbed self-image. In addition, she has engaged in bingeeating/purging behavior regularly. You should also explore for comorbid depression, anxiety, and a personality disorder. Remember that malnutrition in itself can lead to some of the symptoms experienced in depression, and that many patients show an improvement in their mood when nutrition is replenished. What are some of the medical complications associated with this condition? Patients with anorexia nervosa can present with bradycardia, orthostatic hypotension, arrhythmias, QTc prolongation, and ST-T wave changes on electrocardiogram, as well as anemia and leukopenia. They may also experience cognitive impairment, evidence of enlarged ventricles and/or

decrease in gray and white matter on brain imaging, and peripheral neuropathy. Lanugo and muscle wasting sometimes become evident. Amenorrhea and loss of libido are commonly reported. In patients who regularly engage in self-induced vomiting, parotid enlargement, increased amylase levels, and electrolyte imbalances (e.g., hypokalemia) not uncommonly occur as a result, and may lead to seizures if severe. Anorexia Nervosa Patients with anorexia nervosa are preoccupied with their weight, their body image, and being thin. It is often associated with obsessive-compulsive personality traits. There are two main subtypes: ■ Restricting type: Has not regularly engaged in binge-eating or purging behavior; weight loss is achieved through diet, fasting, and/or excessive exercise. ■ Binge-eating/purging type: Eating binges followed by purges including selfinduced vomiting, using laxatives, enemas, or diuretics. Some individuals purge after eating small amounts

of food without binging. DIAGNOSIS AND DSM-5 CRITERIA ■ Restriction of energy intake relative to requirements, leading to significant low body weight—defined as less than minimally normal or expected. ■ Intense fear of gaining weight or becoming fat, or persistent behaviors that prevent weight gain. ■ Disturbed body image, undue influence of weight or shape on selfevaluation, or denial of the seriousness of the current low body weight. PHYSICAL FINDINGS AND MEDICAL COMPLICATIONS ■ The medical complications of eating disorders are related to weight loss and purging (e.g., vomiting and laxative abuse). ■ Physical manifestations: Amenorrhea, cold intolerance/hypothermia, hypotension (especially orthostasis), bradycardia, arrhythmia, acute coronary syndrome, cardiomyopathy, mitral valve prolapse, constipation, lanugo (fine, soft body hair typically found in newborns), alopecia, edema, dehydration, peripheral neuropathy, seizures, hypothyroidism, osteopenia, osteoporosis. ■ Laboratory/Imaging abnormalities: Hyponatremia, hypochloremic hypokalemic alkalosis (if vomiting), arrhythmia (especially QTc prolongation), hypercholesterolemia, transaminitis, leukopenia, anemia (normocytic, normochromic), elevated blood urea nitrogen (BUN), increased growth hormone (GH), increased cortisol, reduced gonadotropins (luteinizing hormone [LH], follicle-stimulating hormone [FSH]), reduced sex steroid hormones (estrogen, testosterone), hypothyroidism, hypoglycemia, osteopenia. EPIDEMIOLOGY ■ Ten to one female to male ratio. Twelve-month prevalence among young females is 0.4%. EATING DISORDERS WARDS QUESTION Q: What are the core differences between anorexia and bulimia? A: Anorexia is marked by low body weight and restriction of caloric intake, while bulimia is marked by normal (or over) body weight. KEY FACT Classic example of anorexia nervosa: An extremely thin teenage girl with amenorrhea, whose mother says she eats very little, does aerobic exercise for 2 hours a day, and ritualistically performs 400 sit-ups every day (500 if she has “overeaten”).

156 EATING DISORDERS KEY FACT Anorexia nervosa versus major depressive disorder: Appetite Anorexia nervosa: Patients have a good appetite but starve themselves due to distorted body image. They are often quite preoccupied with food (e.g., preparing it for others) but do not eat it themselves. Major depressive disorder: Patients usually have poor appetite, which leads to weight loss. These patients have no or decreased interest in food. ETIOLOGY ■ Multifactorial. DIFFERENTIAL DIAGNOSIS KEY FACT COURSE AND PROGNOSIS Refeeding syndrome refers to dangerous electrolyte and fluid shifts that occur when severely malnourished patients are refed too quickly. Look for fluid retention and decreased levels of phosphorus, magnesium, and calcium. Complications include arrhythmias, respiratory failure, delirium, and seizures. Manage by replacing electrolytes and slowing the feedings. TREATMENT ■ Food is the best medicine. WARDS TIP When a patient with anorexia learns that weight gain is a common side effect, they may refuse medication. ■ Bimodal age of onset (age 13–14: hormonal influences; age 17–18: environmental influences). More common in industrialized countries where food is abundant and a thin body ideal is held. ■ Common in sports that involve thinness, revealing attire, subjective judging, and weight classes (e.g., running, ballet, wrestling, diving, cheerleading, figure skating). ■ Genetics: Higher concordance in monozygotic than dizygotic twin studies. ■ Social theories: Exaggeration of social values (achievement, control, and perfectionism), idealization of thin body and prepubescent appearance in Western cultures, increased prevalence of dieting at earlier ages. ■ Medical conditions: Endocrine disorders (e.g., hypothalamic disease, diabetes mellitus, hyperthyroidism), gastrointestinal illnesses (e.g., malabsorption, inflammatory bowel disease), genetic disorders (e.g., Turner syndrome, Gaucher disease), cancer, AIDS. ■ Psychiatric disorders: Major depression, bulimia, or other disorders (such as somatic symptom disorder or schizophrenia). ■ Chronic and relapsing illness. Variable course—may completely recover, have fluctuating symptoms with

relapses, or progressively deteriorate. Most remit within 5 years. ■ Mortality rate is cumulative and approximately 5% per decade due to starvation, suicide, or cardiac failure. Rates of suicide are approximately 12 per 100,000 per year. ■ Patients may be treated as outpatients unless they are dangerously below ideal body weight (>20–25% below) or if there are serious medical or psychiatric complications, in which case they should be hospitalized for supervised refeeding. ■ Treatment involves cognitive-behavioral therapy, family therapy (e.g., Maudsley approach—the gold standard for treatment of anorexia nervosa in teenagers), and supervised weight-gain programs. ■ Selective serotonin reuptake inhibitors (SSRIs) have not been effective in the treatment of anorexia nervosa but may be used for comorbid anxiety or depression. ■ Little evidence that second-generation antipsychotics can treat preoccupation with weight and food, or independently promote weight gain. Olanzapine has the most evidence in this regard. ■ There is some consensus that a premeal anxiolytic (such as alprazolam) can help encourage eating by decreasing anticipatory anxiety.

Bulimia Nervosa Bulimia nervosa involves binge eating combined with behaviors intended to counteract weight gain, such as vomiting; use of laxatives, enemas, or diuretics; fasting; or excessive exercise. Patients are embarrassed by their binge eating and are overly concerned with body weight. However, unlike patients with anorexia, they usually maintain a normal weight (and may be overweight). DIAGNOSIS AND DSM-5 CRITERIA ■ Recurrent episodes of binge eating. ■ Recurrent, inappropriate attempts to compensate for overeating and prevent weight gain (such as laxative abuse, vomiting, diuretics, fasting, or excessive exercise). ■ The binge eating and compensatory behaviors occur at least once a week for 3 months. ■ Perception of self-worth is excessively influenced by body weight and shape. ■ Does not occur exclusively during an episode of anorexia nervosa. PHYSICAL FINDINGS AND MEDICAL COMPLICATIONS ■ Patients with anorexia and bulimia may have similar medical complications related to weight loss and vomiting. ■ Physical manifestations: Salivary gland enlargement (sialadenosis), dental erosion/caries, esophageal tear or ruptures, callouses/abrasions on dorsum of hand (“Russell’s sign” from self-induced vomiting), petechiae, peripheral edema, aspiration. ■ Laboratory/Imaging abnormalities: Hypochloremic hypokalemic alkalosis, metabolic acidosis (laxative abuse), elevated bicarbonate (compensation), hypernatremia, increased BUN, increased amylase, altered thyroid hormone, esophagitis. EPIDEMIOLOGY ■ Twelve-month prevalence in young females is 1–1.5%. ■ Significantly more common in women than men (10:1 ratio). ■ Onset is in late adolescence or early adulthood. ■ More common in developed countries. ■ High incidence of comorbid mood disorders, anxiety disorders, impulse control disorders, substance use, prior physical/sexual abuse, as well as increased prevalence of borderline personality disorder. ETIOLOGY ■ Multifactorial, with similar factors as for anorexia (e.g., genetic and social theories). ■ Childhood obesity and early pubertal maturation increase risk for bulimia nervosa. COURSE AND PROGNOSIS ■ Chronic and relapsing illness. ■ Better prognosis than anorexia nervosa. EATING DISORDERS WARDS TIP Unlike patients with anorexia nervosa, bulimic patients usually maintain a normal weight (or are overweight) and their symptoms are more ego-dystonic (distressing); they are therefore more likely to seek help. WARDS QUESTION Q: What is binge eating? A: Excessive food intake within a 2-hour period accompanied by a sense of lack of control. WARDS QUESTION Q: What is a potentially lethal complication of both anorexia nervosa and bulimia nervosa? A: Cardiac arrhythmias due to electrolyte disturbances such as hypokalemia. KEY FACT Compared to patients with bulimia nervosa, cortisol is often increased in patients with anorexia nervosa.

158 EATING DISORDERS KEY FACT Classic example of bulimia nervosa: A 20-year-old college student is referred by her dentist because of multiple dental caries. She is normal weight for her height but feels that “she needs to lose 15 pounds.” She reluctantly admits to eating large quantities of food in a short period of time and then inducing vomiting. ■ Crude mortality rate is 2% per decade. TREATMENT ■ SSRIs are first-line medication. ■ Nutritional counseling and education. WARDS QUESTION Q: What is the only FDA-approved medication for the treatment of bulimia? A: Fluoxetine. KEY FACT In patients with bulimia, make sure to check that they aren’t on medications that could further lower their seizure threshold, such as the antidepressant Wellbutrin (bupropion). Binge-Eating Disorder DIAGNOSIS AND DSM-5 CRITERIA ■ Severe distress over binge eating. ■ Symptoms are usually exacerbated by stressful conditions. ■ One-half recover fully with treatment; the other half have a chronic course with fluctuating symptoms. ■ Elevated suicide risk compared to the general population. ■ Antidepressants plus therapy are more efficacious for treating bulimia nervosa than either treatment alone. ■ Fluoxetine is the only Food and Drug Administration (FDA)-approved medication for bulimia (60–80 mg/day). ■ Therapy includes cognitive-behavioral therapy, interpersonal psychotherapy, group therapy, and family therapy. Cognitive behavioral therapy has demonstrated more efficacy than the other therapies. ■ Avoid bupropion due to its potential side effect to lower seizure threshold. Key Differences: Anorexia vs. Bulimia Anorexia Nervosa Bulimia Nervosa Concern about body weight Main concern Concern about body weight with intense fear of gaining weight Eating behavior Avoids eating (restricting), ± purging Binge eating with compensatory behavior (purging, exercise) Weight Underweight Normal weight/Overweight Medical complications Nutritional deficiencies Hypotension Nutritional deficiencies Russel’s sign Dental/esophageal problems Patients with binge-eating disorder suffer emotional distress over their binge eating, but they do not try to control their weight by purging or restricting calories, as do individuals with anorexia or bulimia. Unlike in anorexia and bulimia, patients with binge-eating disorder are not as fixated on their body shape and weight. ■ Recurrent episodes of binge eating (eating an excessive amount of food in a 2-hour period associated with a lack of control), with at least three of the following: eating very rapidly, eating until uncomfortably full, eating large amounts when not hungry, eating alone due to embarrassment, and feeling disgusted/depressed/guilty after eating. ■ Binge eating occurs at least once a week for 3 months. ■ Binge eating is not associated with compensatory behaviors (such as vomiting and laxative use), and doesn’t occur exclusively during the course of anorexia or bulimia.

PHYSICAL FINDINGS AND MEDICAL COMPLICATIONS Patients are typically obese and suffer from medical problems related to obesity including metabolic syndrome, type 2 diabetes, and cardiovascular disease. EPIDEMIOLOGY ■ Twelve-month prevalence is 1.6% for females and 0.8% for males. ■ Equal prevalence in females across ethnicities. ■ Increased prevalence among individuals seeking weight-loss treatment compared to the general population. ETIOLOGY Runs in families, reflecting likely genetic influences. COURSE AND PROGNOSIS ■ Typically begins in adolescence or young adulthood. ■ Appears to be relatively persistent, though remission rates are higher than for other eating disorders. ■ Most obese individuals do not binge eat; those who do have more functional impairment, lower quality of life, and more subjective distress than weightmatched controls. ■ Higher rates of psychiatric comorbidities than in obese individuals without binge-eating disorder. TREATMENT ■ Treatment involves individual (cognitive-behavioral or interpersonal) psychotherapy with a strict diet and exercise program coordinated by a registered dietician. Comorbid mood disorders or anxiety disorders should be treated as necessary. ■ SSRIs are first-line treatment due to their efficacy and tolerability. ■ Although not frequently used due to

significant side effects and limited long-term efficacy, pharmacotherapy may be used adjunctively to directly promote weight loss: • Lisdexamfetamine (Vyvanse)—Stimulant that suppresses appetite and is FDA-approved for the treatment of binge-eating disorder. • Topiramate and zonisimide—Antiepileptics associated with weight loss. • Orlistat (Xenical)—Inhibits pancreatic lipase, thus decreasing amount of fat absorbed from the gastrointestinal tract. • Comorbid medical problems such as diabetes and metabolic syndrome should be monitored and treated appropriately. EATING DISORDERS

Revision #1
Created 2026-01-04 19:41:05 UTC by Omar Ayman
Updated 2026-01-04 19:41:05 UTC by Omar Ayman