02 - 15.2 Bulimia Nervosa

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generated by efforts to restrict eating so as to maintain a socially desirable level of thinness. Still others use binge eating as a means to self-medicate during times of emotional distress.

Regardless of the reason, eating binges provoke panic as individuals feel that their eating has been out of control. The unwanted binges lead to secondary attempts to avoid the feared weight gain by a variety of compensatory behaviors, such as purging or excessive exercise. EPIDEMIOLOGY Bulimia nervosa is more prevalent than anorexia nervosa. Estimates of bulimia nervosa range from 1 to 4 percent of young women. As with anorexia nervosa, bulimia nervosa is more common in women than in men, but its onset is often later in adolescence than that of anorexia nervosa. The onset may also occur in early adulthood. Approximately 20 percent of college women experience transient bulimic symptoms at some point during their college years. Although bulimia nervosa is often present in normal-weight young women, they sometimes have a history of obesity. In industrialized countries the prevalence is about 1 percent of the general population. In the United States, bulimia nervosa may be more prevalent among Hispanics and blacks than non-Hispanic whites. ETIOLOGY Biological Factors Some investigators have attempted to associate cycles of binging and purging with various neurotransmitters. Because antidepressants often benefit patients with bulimia nervosa and because serotonin has been linked to satiety, serotonin and norepinephrine have been implicated. Because plasma endorphin levels are raised in some bulimia nervosa patients who vomit, the feeling of well-being after vomiting that some of these patients experience may be mediated by raised endorphin levels. Increased frequency of bulimia nervosa is found in first-degree relatives of persons with the disorder. Recent research using functional magnetic resonance imaging (MRI) suggests that overeating in bulimia nervosa may result from an exaggerated perception of hunger signals related to sweet taste mediated by the right anterior insula area of the brain. Social Factors Patients with bulimia nervosa, as with those with anorexia nervosa, tend to be high achievers and to respond to societal pressures to be slender. As with anorexia nervosa patients, many patients with bulimia nervosa are depressed and have increased familial depression, but the families of patients with bulimia nervosa are generally less close and more conflictual than the families of those with anorexia nervosa. Patients with bulimia nervosa describe their parents as neglectful and rejecting. Psychological Factors Patients with bulimia nervosa, as with those with anorexia nervosa, have difficulties with adolescent demands, but patients with bulimia nervosa are more outgoing, angry, and impulsive than those with anorexia nervosa. Alcohol dependence, shoplifting, and emotional lability (including suicide attempts) are associated with bulimia nervosa. These patients generally experience their uncontrolled eating as more ego-dystonic than do patients with anorexia nervosa and so

seek help more readily. Patients with bulimia nervosa lack superego control and the ego strength of their counterparts with anorexia nervosa. Their difficulties in controlling their impulses are often manifested by substance dependence and self-destructive sexual relationships in addition to the binge eating and purging that characterize the disorder. Many patients with bulimia nervosa have histories of difficulties separating from caretakers, as manifested by the absence of transitional objects during their early childhood years. Some clinicians have observed that patients with bulimia nervosa use their own bodies as transitional objects. The struggle for separation from a maternal figure is played out in the ambivalence toward food; eating may represent a wish to fuse with the caretaker, and regurgitating may unconsciously express a wish for separation. DIAGNOSIS AND CLINICAL FEATURES Bulimia nervosa is present when (1) episodes of binge eating occurs relatively frequently (once a week or more) for at least 3 months; (2) compensatory behaviors are practiced

after binge eating to prevent weight gain, primarily self-induced vomiting, laxative abuse, diuretics, enemas, abuse of emetics (80 percent of cases), and, less commonly, severe dieting and strenuous exercise (20 percent of cases); (3) weight is not severely lowered as in anorexia nervosa; and (4) the patient has a morbid fear of fatness, a relentless drive for thinness, or both and a disproportionate amount of selfevaluation that depends on body weight and shape. When making a diagnosis of bulimia nervosa, clinicians should explore the possibility that the patient has experienced a brief or prolonged prior bout of anorexia nervosa, which is present in approximately half of those with bulimia nervosa. Binging usually precedes vomiting by about 1 year. The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) diagnostic criteria for bulimia nervosa are listed in Table 15.2-1. Table 15.2-1 DSM-5 Diagnostic Criteria for Bulimia Nervosa

Vomiting is common and is usually induced by sticking a finger down the throat, although some patients are able to vomit at will. Vomiting decreases the abdominal pain and the feeling of being bloated and allows patients to continue eating without fear of gaining weight. The acid content of vomitus can damage tooth enamel, a not uncommon finding in patients with the disorder. Depression, sometimes called postbinge anguish, often follows the episode. During binges, patients eat food that is sweet, high in calories, and generally soft or smooth textured, such as cakes and pastry. Some patients prefer bulky foods without regard to taste. The food is eaten secretly and rapidly and is sometimes not even chewed. Annie is a 26-year-old Dutch woman. She works as a nurse in a city hospital and lives alone. Annie would wake up at night, go to her kitchen, and start eating whatever food she could lay her hands on. She stopped only after an hour or two when she could find no more food. The bouts of overeating went on for 5 years until she consulted her general practitioner, who referred her to outpatient psychiatric treatment for a depression related to the eating spells. Annie’s spells of uncontrollable overeating were preceded by a feeling of severe tension and were followed by relaxation, although this was coupled with shame and despair. During the year before her referral, the frequency of the overeating spells had increased to two or three times a week. They usually appeared at night after just a few hours of sleep. After eating her way through whatever she could find, she would feel bloated but would not vomit. She tried to get rid of the food by taking large quantities of laxatives. Her weight was

unstable, but she managed to keep it within normal limits simply by fasting between the overeating spells. Annie despised obesity but had never really been slim. Her bouts of overeating made her feel increasingly low-spirited and despairing. She had even considered committing suicide by taking an overdose of the sleeping tablets that her general practitioner had prescribed because of her interrupted sleep. Annie managed to do her job adequately and had taken only a few days of sick leave. Annie was brought up in a village, where her father was a schoolteacher. After secondary school she trained as a nurse and had various jobs on geriatric wards. Annie had always been very sensitive and fearful of criticism and had low self-esteem. She tried hard to live up to expectations and felt frustrated by minor criticisms. She had been in love more than once, but never dared to become engaged because she feared rejection and possibly also because she feared a sexual relationship. She had only a few close friends because she had difficulty engaging in close relationships. She often felt tense and diffident in company. She avoided going to meetings or parties because she feared being criticized or rejected. On examination Annie appeared quiet and reticent. Her mood was mildly depressed, and she cried silently as she described her difficulties. No psychotic features were suspected. She was otherwise healthy and of average

weight. She perceived her own weight to be slightly higher than the weight she would prefer. She said she was afraid of becoming obese. (Courtesy of International Statistical Classification of Diseases and Related Health Problems, 10th ed. Casebook) Most patients with bulimia nervosa are within their normal weight range, but some may be underweight or overweight. These patients are concerned about their body image and their appearance, worried about how others see them, and concerned about their sexual attractiveness. Most are sexually active, compared with anorexia nervosa patients, who are not interested in sex. Pica and struggles during meals are sometimes revealed in the histories of patients with bulimia nervosa. Bulimia nervosa occurs in persons with high rates of mood disorders and impulse control disorders. Bulimia nervosa is also reported to occur in those at risk for substancerelated disorders and a variety of personality disorders. Patients with bulimia nervosa also have increased rates of anxiety disorders, bipolar I disorder, dissociative disorders, and histories of sexual abuse. Subtypes Evidence indicates that bulimic persons who purge differ from binge eaters who do not purge in that the latter tend to have less body-image disturbance and less anxiety concerning eating. Those with bulimia nervosa who do not purge tend to be obese. Distinct physiological differences also exist between patients with bulimia who purge and those who do not. Because of all these differences, the diagnosis of bulimia nervous is sometimes subtyped into a purging type, for those who regularly engage in self-induced vomiting or the use of laxatives or diuretics, and a nonpurging type, for those who use strict dieting, fasting, or vigorous exercise but do not regularly engage in purging. Patients who purge may have a different course from that of patients who binge and then diet or exercise.

Patients with purging type may be at risk for certain medical complications such as hypokalemia from vomiting or laxative abuse and hypochloremic alkalosis. Those who vomit repeatedly are at risk for gastric and esophageal tears, although these complications are rare. PATHOLOGY AND LABORATORY EXAMINATIONS Bulimia nervosa can result in electrolyte abnormalities and various degrees of starvation, although it may not be as obvious as in low-weight patients with anorexia nervosa. Thus, even normal-weight patients with bulimia nervosa should have laboratory studies of electrolytes and metabolism. In general, thyroid function remains intact in bulimia nervosa, but patients may show nonsuppression on a dexamethasonesuppression test. Dehydration and electrolyte disturbances are likely to occur in patients with bulimia nervosa who purge regularly. These patients commonly exhibit hypomagnesemia and hyperamylasemia. Although not a core diagnostic feature, many patients with bulimia nervosa have menstrual disturbances. Hypotension and bradycardia occur in some patients. DIFFERENTIAL DIAGNOSIS The diagnosis of bulimia nervosa cannot be made if the binge-eating and purging behaviors occur exclusively during episodes of anorexia nervosa. In such cases, the diagnosis is anorexia nervosa, binge eating-purging type. Clinicians must ascertain that patients have no neurological disease, such as epilepticequivalent seizures, central nervous system tumors, Klüver-Bucy syndrome, or KleineLevin syndrome. The pathological features manifested by Klüver-Bucy syndrome are visual agnosia, compulsive licking and biting, examination of objects by the mouth, inability to ignore any stimulus, placidity, altered sexual behavior (hypersexuality), and altered dietary habits, especially hyperphagia. The syndrome is exceedingly rare and is unlikely to cause a problem in differential diagnosis. Kleine-Levin syndrome consists of periodic hypersomnia lasting for 2 to 3 weeks and hyperphagia. As in bulimia nervosa, the onset is usually during adolescence, but the syndrome is more common in men than in women. Patients with bulimia nervosa who have concurrent seasonal affective disorder and patterns of atypical depression (with overeating and oversleeping in low-light months) may manifest seasonal worsening of both bulimia nervosa and depressive features. In

these cases, binges are typically much more severe during winter months. Bright light therapy (10,000 lux for 30 minutes, in early morning, at 18 to 22 inches from the eyes) may be a useful component of comprehensive treatment of an eating disorder with seasonal affective disorder. Some patients with bulimia nervosa—perhaps 15 percent—have multiple comorbid impulsive behaviors, including substance abuse, and lack of ability to control themselves in such diverse areas as money management (resulting in impulse buying and compulsive shopping) and sexual relationships (often resulting in brief, passionate attachments and promiscuity). They exhibit self-mutilation, chaotic emotions, and

chaotic sleeping patterns. They often meet criteria for borderline personality disorder and other mixed personality disorders and, not infrequently, bipolar II disorder. COURSE AND PROGNOSIS Bulimia nervosa is characterized by higher rates of partial and full recovery compared with anorexia nervosa. As noted in the treatment section, those treated fare much better than those who are untreated. Patients who are untreated tend to remain chronic or may show small, but generally unimpressive, degrees of improvement with time. In a 10-year follow-up study of patients who had previously participated in treatment programs, the number of women who continued to meet the full criteria for bulimia nervosa declined as the duration of follow-up increased. Approximately 30 percent continued to engage in recurrent binge-eating or purging behaviors. A history of substance use problems and a longer duration of the disorder at presentation predicted worse outcome. Approximately 40 percent of women were fully recovered at follow-up. The mortality rate for bulimia nervosa has been estimated at 2 percent per decade according to DSM-5. TREATMENT Most patients with uncomplicated bulimia nervosa do not require hospitalization. In general, patients with bulimia nervosa are not as secretive about their symptoms as patients with anorexia nervosa. Therefore, outpatient treatment is usually not difficult, but psychotherapy is frequently stormy and may be prolonged. Some obese patients with bulimia nervosa who have had prolonged psychotherapy do surprisingly well. In some cases—when eating binges are out of control, outpatient treatment does not work, or a patient exhibits such additional psychiatric symptoms as suicidality and substance abuse—hospitalization may become necessary. In addition, electrolyte and metabolic disturbances resulting from severe purging may necessitate hospitalization. Psychotherapy Cognitive-Behavioral Therapy. Cognitive-behavioral therapy (CBT) should be considered the benchmark, first-line treatment for bulimia nervosa. The data supporting the efficacy of CBT are based on strict adherence to rigorously implemented, highly detailed, manual-guided treatments that include about 18 to 20 sessions over 5 to 6 months. CBT implements a number of cognitive and behavioral procedures to (1) interrupt the self-maintaining behavioral cycle of binging and dieting and (2) alter the individual’s dysfunctional cognitions; beliefs about food, weight, body image; and overall self-concept. Dynamic Psychotherapy. Psychodynamic treatment of patients with bulimia nervosa has been of limited success. Psychodynamic formulations revealed a tendency to concretize introjective and projective defense mechanisms. In a manner analogous to

splitting, patients divide food into two categories: items that are nutritious and those that are unhealthy. Food that is designated nutritious may be ingested and retained because it unconsciously symbolizes good introjects. But junk food is unconsciously associated with bad introjects and, therefore, is expelled by vomiting, with the unconscious fantasy that all destructiveness, hate, and badness are being evacuated. Patients can temporarily feel good after vomiting because of the fantasized evacuation, but the associated feeling of “being all good” is short-lived because it is based on an unstable combination of splitting and projection. Other

Modalities. Controlled trials have shown that a variety of novel ways of administering and facilitating cognitive-behavioral therapy are effective for bulimia nervosa. Some have been incorporated in “stepped-care” programs and including Internet-based platforms, computer facilitated programs, email enhanced programs, and administration of cognitive-behavioral therapy via telemedicine to remote areas. Pharmacotherapy Antidepressant medications have been shown to be helpful in treating bulimia. This includes the selective serotonin reuptake inhibitors (SSRIs), such as fluoxetine (Prozac). This may be based on elevating central 5-hydroxytryptamine levels. Antidepressant medications can reduce binge eating and purging independent of the presence of a mood disorder. Thus, antidepressants have been used successfully for particularly difficult binge-purge cycles that do not respond to psychotherapy alone. Imipramine (Tofranil), desipramine (Norpramin), trazodone (Desyrel), and monoamine oxidase inhibitors (MAOIs) have been helpful. In general, most of the antidepressants have been effective at dosages usually given in the treatment of depressive disorders. Dosages of fluoxetine that are effective in decreasing binge eating, however, may be higher (60 to 80 mg a day) than those used for depressive disorders. Medication is helpful in patients with comorbid depressive disorders and bulimia nervosa. Carbamazepine (Tegretol) and lithium (Eskalith) have not shown impressive results as treatments for binge eating, but they have been used in the treatment of patients with bulimia nervosa with comorbid mood disorders, such as bipolar I disorder. Evidence indicates that the use of antidepressants alone results in a 22 percent rate of abstinence from binging and purging; other studies show that CBT and medications are the most effective combination. REFERENCES Andersen AE, Yager J. Eating disorders. In: Sadock BJ, Sadock VA, Ruiz P, eds. Kaplan & Sadock’s Comprehensive Textbook of Psychiatry. 9th ed. Philadelphia: Lippincott Williams & Wilkins; 2009:2128. Glasner-Edwards S, Mooney LJ, Marinelli-Casey P, Ang A, Rawson R. Bulimia nervosa among methamphetamine dependent adults: Association with outcomes 3 years after treatment. Eat Disord. 2011;19:259. Hildebrandt T, Alfano L, Tricamo M, Pfaff DW. Conceptualizing the role of estrogens and serotonin in the development and maintenance of bulimia nervosa. Clin Psychol Rev. 2010;30:655.

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