

How to Address Eating Disorders

An overview of screening and treatment in primary care

MARION RUSSELL, MSc, and PHYLLIS L. CARR, MD

Eating disorders are associated with significant mortality and morbidity. Anorexia nervosa, though the least common of the eating disorders, has the highest mortality rate of any psychiatric disorder; it is estimated that the death rate in young women with anorexia nervosa is up to 12 times higher than that in age-matched controls.^{1,2} The mortality rate for bulimia nervosa is much lower than that for anorexia, but long-term morbidity is a concern: Approximately 20% of women with bulimia continue to meet the full diagnostic criteria for the disease five to 10 years after their initial presentation.³ Binge-eating disorder has a more favorable prognosis than either anorexia or bulimia, with a recovery rate of about 80% at five years' follow-up and a low relapse rate.⁴ However, binge-eating disorder is frequently associated with obesity, which negatively affects morbidity and mortality.⁵

Primary care clinicians are often the first medical professionals to evaluate a patient for a possible eating disorder. It is essential to be skilled in recognizing these disorders, because early detection and treatment have been shown to improve outcome. This article will review the three most common eating disorders: binge-eating disorder, bulimia nervosa, and anorexia ner-

ABSTRACT: Eating disorders consist of disturbed eating behaviors as well as excessive concern about body shape or weight. They generally fall into three categories, the most common being binge-eating disorder, followed by bulimia nervosa and anorexia nervosa. Eating disorders typically occur in adolescence and young adulthood, are substantially more likely to develop in women than in men, and carry a high comorbidity with other psychiatric illnesses, including mood disorders, anxiety disorders, and substance abuse. Persons with eating disorders need to understand that they are at risk of developing life-threatening physical complications. An effective treatment regimen must address both the medical and psychosocial aspects of the patient's illness. (*Women Health Primary Care* 2003;6(2):75-81)

vosa. For each, we discuss diagnostic criteria (or defining features, in the case of binge-eating disorder), clinical characteristics, and management.

GENERAL APPROACH TO THE PATIENT

A PRUDENT STRATEGY

Primary care clinicians should consider the possi-

bility of an eating disorder in any female patient presenting with weight loss. A thorough history and physical examination and the use of screening tools will help distinguish patients with or at risk for an eating disorder from those experiencing a natural fluctuation in body mass.

SCREENING

Two well-established methods of screening are the SCOFF questionnaire (Table 1) and the Eating Attitudes Test (EAT; provided as a patient handout on page 82). The EAT, the most widely used self-report questionnaire on eating disorders, is a screening assessment rather than a diagnostic tool and is effective in identifying at-risk patients who could benefit from further evaluation. A score of greater than 20 on the EAT suggests that the patient is at considerable risk for having an eating disorder.^{5,6}

EDUCATION AND SUPPORT

When a patient has an eating disorder, it may be important for the clinician to explicitly state to the patient

Both authors are affiliated with Boston University School of Medicine. Dr. Carr is the Associate Dean for Student Affairs and an Associate Professor of Medicine. Ms. Russell is a fourth-year medical student.

the associated medical concerns and substantial morbidity and mortality, because many patients deny or do not recognize their illness. Explaining the sequelae of disordered eating—as well as pointing out those that are already apparent—may help the patient and her family to acknowledge the eating disorder.⁷

which the individual has a sense of lack of control over eating. A frequency of at least two binge-eating episodes per week for at least six months is generally required for the diagnosis. The following clinical characteristics further define the condition:

- ◆ Binge-eating episodes are accompanied by eating more rapidly

79% for cognitive behavioral therapy and 73% for interpersonal psychotherapy after 20 weeks of treatment. At one-year follow-up, 59% of the women in the cognitive behavior therapy group and 62% in the interpersonal therapy group were still in recovery.¹² In appropriate instances, the use of appetite suppressants or an antidepressant, especially one of the selective serotonin reuptake inhibitors (SSRIs), may be beneficial.¹¹ In the management of the psychologic component of binge-eating disorder, primary care clinicians should:

- ◆ Make the appropriate referrals for psychiatric assistance.
- ◆ Provide close follow-up to evaluate the appropriateness of therapy and ensure that all relevant issues are being addressed.

Table 1. The SCOFF questionnaire: A screening test for disordered eating

For each of the following questions, score 1 point for an answer of “yes.”
A score of 2 points or more indicates a likely diagnosis of anorexia or bulimia.

- ◆ Do you make yourself sick because you feel uncomfortably full?
- ◆ Do you worry that you have lost control over how much you eat?
- ◆ Have you recently lost more than 14 lb in a three-month period?
- ◆ Do you believe yourself to be fat when others say you are too thin?
- ◆ Would you say that food dominates your life?

Adapted from Morgan et al. *BMJ*. 1999.³⁹

We have also found that involving the patient in the formation of a treatment plan can be helpful. However, this may not be possible in the case of a minor who is resistant to treatment or when the patient is in medical danger.

BINGE-EATING DISORDER

The most common form of disturbed eating, binge-eating disorder affects approximately 2% to 5% of the US population and is twice as common in women as it is in men.⁸ Although the etiology of the disorder is unknown, associated risk factors have been identified, notably a history of depression or childhood obesity, or both.

DEFINING FEATURES

Although not distinctly classified in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*, binge-eating disorder is recognized as an “eating disorder not otherwise specified” (see “Partial syndrome eating disorders” on page 79) and is marked by a number of characteristic features. It is defined as recurrent episodes of binge eating during

than normal, eating until uncomfortably full, eating large amounts of food when not truly hungry, and eating alone because of feeling ashamed and disgusted with oneself after overeating.

- ◆ Inappropriate compensatory behaviors, such as purging, fasting, or excessive exercise, *do not* follow the binge-eating episode.⁹

MANAGEMENT

Because the majority of patients with binge-eating disorder are overweight or obese, high blood pressure, high cholesterol levels, heart disease, and gallbladder disease are common.^{4,8} Patients should be screened regularly for these health problems and given appropriate education and counseling to help prevent further complications. Nutrition and dietary counseling are essential.

The psychologic component of the disorder should be addressed as well. Cognitive behavior therapy and interpersonal psychotherapy have been shown to be helpful.^{10,11} For example, a recent study of 162 women with binge-eating disorder demonstrated recovery rates of

BULIMIA NERVOSA

Approximately 1% to 4% of women meet the diagnostic criteria for bulimia nervosa.^{3,13} Estimates suggest, however, that as many as 17% of college-age women engage in bulimic behaviors.¹⁴ Individuals with bulimia tend to be normal in weight to slightly overweight; onset of illness usually occurs in late adolescence to early adulthood.¹⁵

There are several different perspectives on the etiology of bulimia nervosa. From a biologic viewpoint, it is thought that persons with bulimia may have abnormal satiety system functioning, abnormal serotonergic functioning, or a genetic predisposition for the disorder.^{13,16} From a psychologic viewpoint, stress is thought to play an important role, as is the emphasis on thinness in the American culture. Current research suggests a link between a history of sexual abuse and an increased likelihood of developing bulimia.¹⁷ Other risk factors include depression, having an obsessive personality, impulsivity, low self-esteem, social anxiety, dieting, and high personal expectations, as well as a personal or

family history of substance abuse, obesity, or depression.^{16,18} Comorbid psychiatric illnesses are common in individuals with bulimia nervosa and include borderline personality disorder, depression, anxiety, and bipolar disorder.¹⁸⁻²⁰

DIAGNOSTIC CRITERIA

The diagnostic criteria for bulimia nervosa, as described in the *DSM-IV*, include:

- ◆ Recurrent episodes of binge eating followed by inappropriate compensatory behaviors to prevent weight gain, such as self-induced vomiting; fasting; diuretic or laxative abuse; and excessive exercise.
- ◆ Binge eating and compensatory behaviors at least twice a week for three months.
- ◆ Feelings of loss of control accompanying the binges.
- ◆ A self-evaluation that is unduly influenced by body shape and weight.

Bulimia is divided into two subtypes: purging and nonpurging. Patients with purging-type bulimia engage in self-induced vomiting and use laxatives and diuretics to compensate for their binge, whereas patients with nonpurging-type bulimia employ excessive exercise or fasting, or both. Patients who have the purging subtype are more likely to present with electrolyte abnormalities, dehydration, and dental caries; medical management of these patients thus differs from that of patients in the nonpurging subtype. Psychotherapeutic and psychopharmacologic treatments are generally similar between the two subgroups.⁹

CLINICAL FEATURES

Persons with bulimia often feel guilty and ashamed of their behavior and may be reluctant to disclose relevant information. Thus, it is important to ask specific questions about eating habits and purging behaviors if bulimia is suspected.

Possible presenting signs and symptoms include abdominal pain and cramping, diarrhea secondary to laxative abuse, parotid gland enlargement, dental caries, calluses on the knuckles (from induced vomiting), postural hypotension, and muscle weakness and cramps secondary to hypokalemia. Altered laboratory findings may also be present, including hypokalemia, hypochloremia, and metabolic alkalosis secondary to vomiting or laxative abuse.^{3,16,21,22} A listing of the medical complications of bulimia nervosa, as well as how to confirm these complications, can be found in Table 2.

MANAGEMENT

Of initial concern is medical stabilization of the patient. A baseline set of vital signs (including orthostatic blood pressures) should be obtained and a physical assessment for dehydration should be performed; fluid resuscitation may be required. Electrocardiography should be performed to assess for cardiac changes resulting from electrolyte disturbance. If electrocardiographic and electrolyte abnormalities are found, the patient

should be admitted for medical management. Routine monitoring of serum potassium and magnesium levels should follow.³

The primary goal of treatment is to reduce or eliminate binge-eating and purging behaviors. Education about medical complications and on how to achieve nutritional rehabilitation is essential.

Cognitive behavior therapy is the most effective psychotherapeutic approach for bulimia nervosa.^{23,24} Individual, group, and family therapy may also be helpful. Antidepressants, especially SSRIs, have been found to be helpful in lessening the number of binge-eating episodes and associated dysphoria, as well as in preventing relapse. Fluoxetine combined with cognitive behavior therapy may be the optimal treatment.

However, the length of time that either or both interventions should be used to obtain the best outcome has not been determined. From a pharmacologic perspective, it is general practice to continue treatment for six months to one year after achieving adequate symptom relief.^{11,23-26}

Table 2. Medical complications and their evaluation in bulimia nervosa

Involved system	Possible complications	Recommended work-up
Cardiovascular	Postural hypotension, arrhythmia, ECG abnormalities, ipecac cardiomyopathy	Orthostatics, baseline ECG measurements
Endocrine	Irregular menses, hypoglycemia	Measurement of blood glucose
Gastrointestinal	Dental erosion, parotid swelling, esophagitis, esophageal tears, constipation due to laxative abuse	Upper gastrointestinal series, or endoscopy if hematemesis is present
Hematologic	Uncommon	As appropriate
Metabolic	Hypokalemia, hypochloremic alkalosis, dehydration, nephropathy	Measurement of electrolyte, serum urea nitrogen, creatinine, calcium, magnesium, and phosphorous levels

ECG, electrocardiogram.

ANOREXIA NERVOSA

The least common but most serious eating disorder, anorexia nervosa is seen in approximately 1% to 3% of women.^{2,16,21,27} Its prevalence is about nine times greater in females than in males.²¹ Comorbidity with depression occurs in about 50% to 75% of cases.²¹

Although the literature reports that approximately 30% to 50% of anorexic patients fully recover and close to 80% achieve partial recovery, anorexia is a life-threatening illness with a mortality rate of greater than 10%.²⁸⁻³¹ The most common causes of death are medical complications, such as electrolyte imbalances, which can lead to cardiac arrest and death.¹ Table 3 describes the work-up for the various medical complications of anorexia. Definitive causes of anorexia nervosa remain unclear, though contributing factors have been identified. They include psychosocial influences (such as an excessive drive for perfection), a family

history of disordered eating or mental illness, and the emphasis on thinness in American culture.^{16,22} In the past, anorexia was shown to have a greater prevalence among the higher socioeconomic groups; however, current studies suggest it is now more evenly distributed among all social classes.³²

Risk factors for anorexia also include compulsivity, weight dissatisfaction, low self-esteem, early puberty, and a history of sexual abuse.^{14,17,29} The role of genetics and the neuroendocrine-hypothalamic axis in the development of anorexia nervosa is currently being investigated.^{2,16,22,29,33}

DIAGNOSTIC CRITERIA

As per the *DSM-IV*, patients given a diagnosis of anorexia nervosa must exhibit each of the following:

- ◆ Weight loss or failure to gain weight during growth, resulting in the maintenance of body weight 15% below the ideal for height and age.

- ◆ Excessive fear of gaining weight or of being obese, despite being underweight.
- ◆ Distorted body image.
- ◆ Interruption of the menstrual cycle for at least three consecutive months.

Anorexia nervosa is divided into two subtypes: restricting type and binge-eating/purging type. Patients in the restricting subtype substantially limit their caloric intake, whereas those with the purging subtype also engage in purging behaviors.⁹ As a result, patients in the purging subtype are more likely to develop electrolyte abnormalities (and therefore cardiac arrhythmias) and need to be carefully monitored for this possibility.²

CLINICAL FEATURES

Persons with anorexia often do not go willingly to their clinicians but rather seek medical attention on the urging of a concerned parent or friend. As a result, these patients frequently present with nonspecific symptoms rather than the chief complaint of an eating disorder or weight loss. Common presenting symptoms include fatigue, abdominal pain, hair loss, fainting spells, intolerance to cold, and amenorrhea. Vital sign disturbances, such as hypotension, hypothermia, and bradycardia, may be present. Common clinical findings at presentation include dry skin, brittle hair, prominent ribs, and scaphoid abdomen. In extreme cases, the patient may develop fine downy hair on the body (ie, lanugo). Altered laboratory findings may or may not be evident.^{2,16,21}

Because marked weight loss is characteristic of many illnesses, it is important to consider other possible causes. Among the entities in the differential diagnosis of anorexia nervosa are general medical conditions (such as thyroid disease, inflammatory bowel disease, diabetes mellitus, and malabsorptive syndromes), major depressive

Table 3. Medical complications and their evaluation in anorexia nervosa

Involved system	Possible complications	Recommended work-up
Cardiovascular	Bradycardia, postural hypotension, arrhythmia, sudden death, ECG abnormalities	Orthostatics, baseline ECG assessment
Endocrine	Decreased levels of LH, FSH, and T ₃ ; amenorrhea, osteopenia, hypothermia, delayed puberty	Measurement of body temperature, measurements of LH and FSH levels, thyroid tests, bone densitometry
Gastrointestinal	Abnormal liver enzyme levels, hypercholesterolemia, diarrhea (from laxative abuse), constipation	Liver function tests, cholesterol profile
Hematologic	Neutropenia, with relative lymphocytosis; thrombocytopenia; low erythrocyte sedimentation rate	Complete blood cell count, with differential; iron studies; measurement of vitamin B ₁₂ and folate levels
Metabolic	Electrolyte disturbances, dehydration; hypophosphatemia (upon refeeding)	Measurement of electrolyte, serum urea nitrogen, creatinine, calcium, and phosphorous levels

ECG, electrocardiogram; LH, leuteinizing hormone; FSH, follicle-stimulating hormone; T₃, triiodothyronine.

disorder, obsessive-compulsive disorder, body dysmorphic disorder, and bulimia nervosa.²

MANAGEMENT

Treatment of anorexia is complicated, with the patient requiring extensive medical and psychologic therapy to achieve long-term recovery. Disease severity will dictate whether inpatient or outpatient treatment is appropriate.

Short-term objectives: Inpatient treatment is indicated when the patient weighs less than 70% to 75% of her ideal body weight, has persistent suicidality, or has failed outpatient treatment.^{2,21} The main goals of inpatient treatment are restoring appropriate weight gain and ensuring the safety of the patient.

Outpatient care involves treating the medical complications associated with starvation; providing nutritional counseling; offering individual, group, or family therapy, as necessary; and managing any associated psychiatric disorders.

Long-term objectives: Patients who are recovering from anorexia require careful follow-up. The responsibilities of the primary care clinician include regular weight checks and the evaluation and management of amenorrhea, bone health, and any medical complications that arise. A written contract with the patient outlining weight gain goals, as well as developments that would require the patient to be hospitalized, may be helpful. Long-term complications such as osteoporosis should be continually assessed for by obtaining serial bone densitometry measurements.

Calcium supplementation and estrogen replacement using oral contraceptives should be considered. However, there is no definitive evidence that estrogen therapy preserves bone density in women with anorexia.^{34,35}


Similarly, evidence is lacking on whether either antidepressants or anti-anxiety medications are

Partial syndrome eating disorders

The prevalence of partial syndrome eating disorders, which fall into the *DSM-IV* category of eating disorder not otherwise specified (NOS), is at least twice that of full-syndrome eating disorders. Persons with an eating disorder NOS exhibit characteristics of one or more of the distinct eating disorders but do not fit the full diagnostic criteria for any one disorder; among such patients, there is often a progression from a less to a more severe disturbance in eating behavior.²⁷ Binge-eating disorder is currently categorized as an eating disorder NOS. Other scenarios in which the designation eating disorder NOS would be applicable include⁹:

- ◆ All of the criteria for anorexia nervosa are met except that the patient has regular menses.
- ◆ All of the criteria for anorexia nervosa are met except that, despite substantial weight loss, the patient's current weight is within the normal range.
- ◆ All of the criteria for bulimia nervosa are met except that the binge-eating and inappropriate compensatory mechanisms occur at a frequency of less than twice a week or for a duration of less than three months.
- ◆ The patient is of normal body weight but regularly engages in inappropriate compensatory behavior after eating small quantities of food (eg, self-induced vomiting after the consumption of two cookies).
- ◆ The patient regularly chews and spits out large amounts of food without swallowing much of it.

helpful or indicated in the treatment of acute anorexia. Nonetheless, in patients with anorexia whose weight has been restored, SSRIs appear to be quite useful in preventing relapse.^{36,37}

Lastly, it is important for the primary care provider to monitor patients for relapse, since anorexia nervosa is generally characterized by high rates of partial recovery and low to moderate rates of full recovery.^{28,31} Moreover, close to 50% of patients with anorexia eventually develop bulimic symptoms.³⁸ Post-weight gain depression, which is common in patients who are recovering from anorexia, is also of concern and should be closely evaluated for as well. 

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PRIMARY POINTS

Addressing Eating Disorders

The three major classes of disordered eating—binge-eating disorder, bulimia nervosa, and anorexia nervosa—affect mostly women. Each condition can cause serious medical complications and even death.

Binge-eating disorder consists of recurrent episodes of binge eating in the absence of inappropriate compensatory behaviors, such as purging, fasting, or excessive exercise. Most binge eaters are overweight or obese and are thus at increased risk for diabetes mellitus, high blood pressure, high cholesterol levels, heart disease, and gallbladder disease.

Persons with bulimia nervosa, who follow binge eating with compensatory behavior, often feel guilty and shameful about their illness and thus do not willingly disclose information.

Anorexia nervosa, though the least common eating disorder, is the most serious: Associated mortality is greater than 10%. Hospitalization should always be considered and is indicated if the patient is less than 70% of her ideal body weight, has persistent suicidality, or has failed outpatient treatment.

Cognitive behavior therapy and interpersonal psychotherapy are important modes of treatment for all three eating disorders. Selective serotonin reuptake inhibitors appear to be helpful for binge-eating disorder and bulimia nervosa, as well as for anorexia nervosa after successful weight restoration.

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