

Treating Eating Disorders in Primary Care

PAMELA M. WILLIAMS, MAJ, USAF, MC; JEFFREY GOODIE, MAJ, USAF, BSC; and CHARLES D. MOTSINGER, MAJ, USAF, MC, *Uniformed Services University of the Health Sciences, Bethesda, Maryland*

Binge-eating disorder, bulimia nervosa, and anorexia nervosa are potentially life-threatening disorders that involve complex psychosocial issues. A strong therapeutic relationship between the physician and patient is necessary for assessing the psychosocial and medical factors used to determine the appropriate level of care. Most patients can be effectively treated in the outpatient setting by a health care team that includes a physician, a registered dietitian, and a therapist. Psychiatric consultation may be beneficial. Patients may require inpatient care if they are suicidal or have life-threatening medical complications, such as marked bradycardia, hypotension, hypothermia, severe electrolyte disturbances, end-organ compromise, or weight below 85 percent of their healthy body weight. For the treatment of binge-eating disorder and bulimia nervosa, good evidence supports the use of interpersonal and cognitive behavior therapies, as well as antidepressants. Limited evidence supports the use of guided self-help programs as a first step in a stepped-care approach to these disorders. For patients with anorexia nervosa, the effectiveness of behavioral or pharmacologic treatments remains unclear. (*Am Fam Physician*. 2008;77(2):187-195, 196-197. Copyright © 2008 American Academy of Family Physicians.)

► **Patient information:** A handout on eating disorders, written by the authors of this article, is provided on page 196.

Lifetime prevalence estimates for anorexia nervosa, bulimia nervosa, and binge-eating disorder are 0.6, 1.0, and 2.8 percent, respectively, with the risk up to threefold higher in women than men.¹ Median age of onset is 18 to 21 years.¹ Because most patients do not typically present with the chief complaint

of an eating disorder, a physician must be attentive to the possible diagnosis, especially when caring for young women. Screening for eating disorders should be considered in the routine care of at-risk patients.²⁻⁴ Presenting symptoms may include fatigue, dizziness, low energy, amenorrhea, weight loss or gain, constipation, bloating, abdominal discomfort, heartburn, sore throat, palpitations, polyuria, polydipsia, and insomnia. Most patients with eating disorders do not have signs on physical examination. Clinical signs of advanced eating disorders are listed in *Table 1*.⁴ The diagnostic criteria for anorexia nervosa, bulimia nervosa, and eating disorder not otherwise specified, which includes binge-eating disorder, are summarized in *Tables 2 through 4*.⁵ The comprehensive approach to screening and diagnosing eating disorders in primary care has been well-described.^{4,6,7}

Table 1. Possible Physical Examination Findings in Patients with Advanced Eating Disorders

General appearance	Emaciated, sunken cheeks, sallow skin, flat affect; may be normal weight or overweight
Vital signs	Bradycardia, hypotension, hypothermia, orthostasis
Skin	Dry skin, lanugo, dull or brittle hair, nail changes, hypercarotenemic, subconjunctival hemorrhage
HEENT	Sunken eyes, dry lips, gingivitis, loss of tooth enamel on lingual and occlusal surfaces, dental caries, parotitis
Breasts	Atrophy
Cardiac	Mitral valve prolapse, click, or murmur; arrhythmias
Abdomen	Scaphoid, palpable loops of stool, tender epigastrium
Extremities	Edema, calluses on dorsum of hand (Russell's sign), acrocyanosis, Raynaud's phenomenon
Neuromuscular	Trousseau's sign,* diminished deep tendon reflexes

HEENT = head, eyes, ears, nose, and throat.

*—Trousseau's sign is a test for hypocalcemia manifested by neuromuscular excitability. It is performed by inflating a blood pressure cuff to a pressure greater than the systolic blood pressure for three minutes and observing for carpal spasm, manifested as flexion at the wrist and metacarpophalangeal joints, extension of the distal and proximal interphalangeal joints, and adduction of the thumb and fingers.

Information from reference 4.

Establishing a Care Plan

Once a person is diagnosed with an eating disorder, psychosocial and clinical factors should initially be considered (*Table 5*²), followed by periodic reassessments. The role of the physician is to assess medical complications, monitor weight and nutrition status, assist in the management strategies of other team members, and serve as the care coordinator. Dietitians provide information on a healthy diet and meal planning, and may assist

SORT: KEY RECOMMENDATIONS FOR PRACTICE

<i>Clinical recommendation</i>	<i>Evidence rating</i>	<i>References</i>
Interpersonal or cognitive behavior therapy should be offered to patients with bulimia nervosa and binge-eating disorder.	A	10, 18, 22
A self-help program may be considered as the first step in the treatment of bulimia nervosa and binge-eating disorder.	B	18, 19, 21-23
Most patients with anorexia nervosa should be treated as outpatients in a tertiary care setting by a multidisciplinary team.	C	2, 3
A trial of an antidepressant may be offered as a primary therapy or in combination with psychotherapy in patients with bulimia nervosa.	B	8, 22

A = consistent, good-quality patient-oriented evidence; B = inconsistent or limited-quality patient-oriented evidence; C = consensus, disease-oriented evidence, usual practice, expert opinion, or case series. For information about the SORT evidence rating system, see page 131 or <http://www.aafp.org/afpsort.xml>.

Table 2. Diagnostic Criteria for Anorexia Nervosa

Refusal to maintain body weight at or above a minimally normal weight for age and height
 Intense fear of gaining weight or becoming fat, even though underweight
 Disturbance in the way one's weight or body shape is experienced; undue influence of body weight on self-evaluation or denial of seriousness of current weight
 Amenorrhea in postmenarchal females
Specify type:
 Restricting type: during current episode, the person has not regularly engaged in eating or purging behaviors
 Binge-eating and purging type: during current episode, the person has regularly engaged in eating or purging behaviors

Adapted with permission from Diagnostic and Statistical Manual of Mental Disorders, 4th ed. rev. Washington, DC: American Psychiatric Association; 2000:589.

Table 3. Diagnostic Criteria for Bulimia Nervosa

Recurrent episodes of binge eating in which an episode is characterized as:
 Eating, in a discrete period of time, an amount of food that is definitely larger than what most persons would eat in a similar timeframe under similar circumstances
 Sense of lack of control over eating during the episode
 Recurrent inappropriate compensatory behavior to prevent weight gain
 Binge eating and inappropriate behaviors occur, on average, at least twice a week for three months
 Self-evaluation unduly influenced by body shape and weight
 Disturbance does not occur exclusively during episodes of anorexia nervosa
Specify type:

Purging type: during current episode, the person has regularly engaged in self-induced vomiting or misuse of laxatives, diuretics, or enemas
 Nonpurging type: during current episode, the person has used inappropriate compensatory behaviors, such as fasting or excessive exercise, but has not regularly engaged in self-induced vomiting or the misuse of laxatives, diuretics, or enemas

Adapted with permission from Diagnostic and Statistical Manual of Mental Disorders, 4th ed. rev. Washington, DC: American Psychiatric Association; 2000:594.

the team in identifying appropriate weight goals. Behavioral health care professionals perform cognitive behavior, interpersonal, or family therapy, and may assist with pharmacotherapy.^{2-4,8} A stepped-care approach may be applied, in which the initial intervention is determined by the patient's needs and available treatment resources.⁹⁻¹¹

The Patient Interaction

A therapeutic relationship between the physician and patient is central to the treatment of an eating disorder.^{2,12,13} As a foundation to this relationship, the physician needs to understand how difficult it can be for patients to change eating-related thoughts and behaviors. These behaviors may serve critical functions for them, such as helping to manage their stressors, difficult emotions, and boredom. Eating disorders also reinforce patient beliefs that their lives are structured and self-controlled, that they are safe and special, and that

they must be thin to be worthwhile.^{14,15} A collaborative approach acknowledging the difficulties associated with change and employing curious, nonconfrontational questioning (i.e., Socratic style) may help motivate the patient to engage in treatment.^{13,15}

Medical Assessment and Treatment

A baseline general medical and psychiatric assessment should be performed at the time of diagnosis and periodically thereafter, as clinically indicated. Medical complications to be managed in patients with eating disorders are listed in *Table 6*.^{2,4} It is necessary to monitor

Table 4. Diagnostic Criteria for Eating Disorder Not Otherwise Specified

This category is for disorders of eating that do not meet the criteria for any specific eating disorder. Examples include:

For females, all of the criteria for anorexia nervosa are met, except the person has regular menses

All of the criteria for anorexia nervosa are met except, despite significant weight loss, the person's current weight is in the normal range

All of the criteria for bulimia nervosa are met, except the binge eating and inappropriate compensatory mechanisms occur at a frequency of less than twice a week or for less than three months' duration

Regular use of inappropriate compensatory behavior by a person of normal body weight after eating a small amount of food

Repeatedly chewing and spitting out, but not swallowing, large amounts of food

Binge-eating disorder: recurrent episodes of binge eating in the absence of the regular use of inappropriate compensatory behaviors characteristic of bulimia nervosa

Adapted with permission from Diagnostic and Statistical Manual of Mental Disorders, 4th ed. rev. Washington, DC: American Psychiatric Association; 2000:594-595.

physiological and psychological signs of decline, such as shifts in weight, blood pressure, pulse, cardiovascular or metabolic status, suicidal ideation or attempts, and other impulsive and compulsive self-harm behaviors.² Although life-threatening medical complications require inpatient hospitalization, preferably in a specialized unit (Table 5²), the majority of complications will resolve when healthy eating habits are restored and a normal weight is achieved. Patients with binge-eating disorder may require management of complications associated with being overweight or obese. Even with successful treatment of the eating disorder, osteoporosis may remain as a medical concern, primarily for patients with anorexia. Dental erosions are most often seen in patients with bulimia, but remain a concern for any patient who purges by vomiting.

To evaluate for osteoporosis, dual-energy x-ray absorptiometry is recommended, particularly in patients who have had amenorrhea for longer than six months.² The primary treatment for eating-disorder-related osteoporosis is weight gain. The effectiveness of calcium and vitamin D supplementation, estrogen therapy, and growth factors (insulin-like growth factor I) has been mixed.¹⁶ Bisphosphonates are currently not recommended because of concerns about effectiveness and long-term safety.²

Irreversible dental erosions from recurrent regurgitation of gastric acid may occur in those who purge using self-induced vomiting. In addition to routine dental care, patients should be instructed to use a baking soda mouth rinse and to brush their teeth after vomiting.¹⁷

Desensitizing toothpastes and fluoride applications may decrease tooth sensitivity.

Behavioral Interventions

Behavioral interventions for treating eating disorders help patients change their undesirable behaviors (e.g., bingeing, purging, restricting food consumption) and thoughts (e.g., negative body image, negative self-evaluation, perfectionistic thinking). An early step in treatment is to assess a patient's motivation to change. Patients with eating disorders are often ambivalent about changing, but physicians may be able to enhance their motivation.¹³ Unless there are compelling concerns about the health of an unmotivated patient, physicians should provide feedback about their concerns and offer their assistance if the patient decides to change.

BINGE-EATING DISORDER

Cognitive behavior therapy (CBT) is the behavioral intervention of choice for binge-eating disorder.^{2,3,10} In a systematic review of randomized controlled trials, patients treated with CBT reported fewer bingeing episodes and improved ratings of restraint, hunger, and disinhibition than waiting-list control patients.¹⁸ Limited evidence also demonstrates effectiveness of treatment using pure or guided self-help programs.^{3,18,19}

Guided self-help programs often include the components listed in Table 7.²⁰ The treatment is designed to help patients understand the functions of disordered eating; increase healthy eating habits and decrease unhealthy dieting; identify alternatives to the urge to binge; cope with distress; and establish a relapse-prevention plan. Self-help programs may be used by the patient alone (pure self-help) or with the assistance of a nonspecialized medical therapist (guided self-help), making them well-suited for the primary care setting.²¹ Because patients meeting the criteria for binge-eating disorder are typically overweight or obese, therapy to reduce binge eating may need to be coupled with strategies to lose weight.

BULIMIA NERVOSA

CBT and other psychotherapies, particularly interpersonal therapy, are effective in the treatment of patients with bulimia nervosa.^{2,3,10} A systematic review of randomized controlled trials demonstrated that patients treated with behavioral interventions, particularly CBT, have greater decreases in binge and purge frequency and psychological features of the eating disorder than waiting-list control patients.²² The effectiveness of guided self-help treatments for bulimia nervosa is less clear than it is for binge-eating disorder.²²⁻²⁴

Eating Disorders

Table 5. Level-of-Care Guidelines for Patients with Eating Disorders

Characteristic	Level 1: outpatient	Level 2: intensive outpatient	Level 3: full day outpatient	Level 4: residential treatment center	Level 5: inpatient hospitalization
Medical status	Medically stable to the extent that more extensive monitoring, as defined in Levels 4 and 5, is not required			Medically stable (not requiring IV fluids, NG tube feedings, or multiple daily laboratory tests)	<p>Adults: heart rate < 40 beats per minute; blood pressure < 90/60 mm Hg; glucose < 60 mg/dL (3.33 mmol/L); potassium < 3 mEq/L (3 mmol/L); electrolyte imbalance; temperature < 97.0°F (36.1°C); dehydration; hepatic, renal or cardiovascular organ compromise; poorly controlled diabetes</p> <p>Children and adolescents: heart rate near 40 beats per minute; orthostatic blood pressure changes; blood pressure < 80/50 mm Hg; hypokalemia, hypophosphatemia, or hypomagnesemia</p>
Suicidality	If suicidality is present, inpatient monitoring and treatment may be needed depending on the estimated level of risk				Specific plan with lethality or intent; admission may also be indicated after suicide attempt depending on the presence or absence of other factors modulating suicide risk
Weight, as percentage of healthy body weight	Generally > 85%	Generally > 80%	Generally > 80%	Generally < 85%	Generally < 85%; acute weight decline with food refusal even if not < 85% of healthy body weight
Motivation to recover (i.e., cooperativeness, insight, ability to control obsessive thoughts)	Fair to good motivation	Fair motivation	Partial motivation; cooperative; patient preoccupied with intrusive, repetitive thoughts > 3 hours/day	Poor to fair motivation; patient preoccupied with intrusive, repetitive thoughts 4 to 6 hours/day; patient cooperative with highly structured treatment	Very poor to poor motivation; patient preoccupied with intrusive, repetitive thoughts; patient uncooperative with treatment or cooperative only in a highly structured environment
Comorbid disorders (e.g., substance abuse, depression, anxiety)	Presence of comorbid condition may influence choice of level of care				Any existing psychiatric disorder that would require hospitalization
Structure needed for eating/gaining weight	Self-sufficient	Self-sufficient	Needs some structure to gain weight	Needs supervision at all meals or will restrict eating	Needs supervision during and after all meals or nasogastric/special feeding modality
Ability to control compulsive exercising	Can manage compulsive exercising through self-control	Some degree of external structure beyond self-control required to prevent patient from compulsive exercising; rarely a sole indication for increasing the level of care			

Table continues

Table 5 (continued)

Characteristic	Level 1: outpatient	Level 2: intensive outpatient	Level 3: full day outpatient	Level 4: residential treatment center	Level 5: inpatient hospitalization
Purging behavior (e.g., use of laxatives or diuretics)	Can greatly reduce incidents of purging in an unstructured setting; no significant medical complications suggesting need for hospitalization			Can ask for and use support from others or use cognitive behavior therapy skills to inhibit purging	Needs supervision during and after all meals and in bathrooms; unable to control multiple daily episodes of purging that are severe and disabling, despite appropriate trial of outpatient care, even if routine laboratory test results are normal
Environmental stress	Others able to provide adequate emotional and practical support and structure		Others able to provide at least limited support and structure	Severe family conflict or problems, or absence of family so unable to receive structured treatment in home, or patient lives alone without adequate support system	
Geographic availability of treatment program	Patient lives near treatment setting			Treatment program is too distant for patient to participate from home	

IV = intravenous; NG = nasogastric.

Adapted with permission from Yager J, Devlin MJ, Halmi KA, et al., for the Work Group on Eating Disorders. Practice Guideline for the Treatment of Patients with Eating Disorders. 3rd ed. Washington, DC: American Psychiatric Association; 2006:37-39.

Persons with bulimia nervosa often demonstrate unhealthy thinking styles similar to those with anorexia nervosa. There is often a negative self-evaluation based almost exclusively on body image and weight, and a severe drive toward thinness.²⁵ As a result, patients with bulimia nervosa often omit mentioning purging or other compensatory behaviors (e.g., use of laxatives, diuretics, and diet pills; vomiting; excessive exercise) unless they are specifically asked about them. A physician may adapt strategies used in CBT to address these issues. Asking “Socratic style” questions to challenge their thoughts (Table 8²⁶) may help patients modify their dysfunctional thinking habits, as well as their unhealthy eating and compensatory behaviors.¹³

ANOREXIA NERVOSA

Patients with anorexia nervosa typically require specialized, outpatient tertiary care treatment, although hospitalization may be indicated in severe anorexia (Table 5²). Multiple behavioral interventions (e.g., individual psychotherapy, CBT, family therapy) are commonly used for the treatment of anorexia nervosa. However, the long-term effectiveness of these therapies remains unclear.^{2,3} A systematic review of 32 randomized controlled trials assessed the overall evidence for treatment

effectiveness as weak, with the exception of psychotherapy for adolescents, which was rated moderately strong.²⁷ Self-help strategies are not appropriate for patients with anorexia nervosa.^{2,3}

Because patients with anorexia nervosa rarely self-identify, physicians need to help them recognize their eating problems, increase their motivations for treatment, and assist with care coordination.³ Once this has been accomplished, an early treatment intervention is nutritional rehabilitation, which involves a stepwise and structured reintroduction of meals and snacks, with a short-term goal of 1.1 to 2.2 lb (0.5 to 1 kg) weight gain per week and a long-term goal of an age- and gender-appropriate weight.²⁻⁴ For women with anorexia nervosa, the weight goal is that at which menstruation and ovulation resume. Individual psychotherapy may be ineffective in the starving patient.² Patients with rapid or severe weight loss (i.e., those who weigh less than 70 percent of their healthy body weight) must be monitored closely for refeeding syndrome during the first two to three weeks of nutritional rehabilitation. Along with weight gain, treatment efforts focus on modifying thoughts and beliefs about food, weight, self-concept, and control, as well as developing relapse-prevention strategies.

Table 6. Medical Complications of Eating Disorders

<i>Complication type</i>	<i>Anorexia nervosa</i>	<i>Bulimia nervosa</i>
Cardiovascular	Arrhythmias Bradycardia Conduction defects (e.g., QTc prolongation) ECG abnormalities (e.g., low voltage, T-wave inversions, ST-segment depression) Hypotension Mitral valve prolapse Peripheral edema Sudden death	Arrhythmias Diet pill toxicity (e.g., palpitations, hypertension) Emetine cardiomyopathy (ipecac syrup) Mitral valve prolapse Peripheral edema
Dermatologic	Carotenosis Dry skin, brittle nails Lanugo Starvation-associated pruritus	Russell's sign (i.e., calluses on dorsum of hand from purging)
Endocrine	Amenorrhea Hypercholesterolemia Hypercortisolemia Hypoglycemia Impaired temperature regulation Infertility Neurogenic diabetes insipidus Osteopenia/osteoporosis Thyroid abnormalities	Amenorrhea Hypoglycemia Irregular menses Mineralocorticoid excess Osteopenia
Gastrointestinal	Abnormal liver function tests Acute gastric dilation from refeeding Bloating/fullness Constipation Delayed gastric emptying Refeeding pancreatitis Slowed gastrointestinal motility	Acute gastric dilation Cathartic colon Constipation from laxative abuse Dental erosion Esophageal rupture Esophagitis Gastroesophageal reflux Mallory-Weiss syndrome Parotid gland swelling Post-binge pancreatitis
Hematologic	Anemia (normocytic, normochromic) Decreased erythrocyte sedimentation rate Mild leukopenia with relative lymphocytosis Thrombocytopenia	None commonly associated
Metabolic	Dehydration Electrolyte imbalance Increased serum carotene Refeeding syndrome	Dehydration Electrolyte imbalance
Neurologic	Cognitive impairment Pseudoatrophy (i.e., enlarged cerebral ventricles and external cerebrospinal fluid spaces) Seizures	Cognitive impairment Cortical atrophy, ventricular enlargement Peripheral neuropathy
Pulmonary/mediastinal	Decreased pulmonary capacity	Aspiration pneumonitis Pneumomediastinum precipitated by vomiting Pneumothorax or rib fractures
Renal	Increased blood urea nitrogen concentration Renal stones	Increased blood urea nitrogen concentration Renal stones

QTc = corrected QT intervals; ECG = electrocardiography.

Information from references 2 and 4.

Table 7. Components of Guided Self-Help

<i>Components</i>	<i>Purpose and strategies</i>
Initiate self-monitoring of food consumption	Track time, location, situation, and content of eating behaviors Establish environmental, cognitive, and emotional precipitants and responses to bingeing and purging Increase awareness of eating habits
Educate about relationship between eating and weight, and establish standard eating schedule	Inform about healthy weight range and physical consequences of eating-disordered behaviors and ineffectiveness of purging behaviors for weight management Eat three meals and two to three snacks per day; skipping meals contributes to bingeing and purging Avoid vomiting after meals
Develop alternatives to bingeing and purging	Do pleasurable activities that help to delay and distract from urge to binge and purge (e.g., walking, e-mailing, telephoning someone, watching television, engaging in a hobby, taking a shower) Reinforce that the urge to binge and purge will dissipate with time
Develop problem-solving strategies	Learn to identify problems early Develop strategies for coping with distress (e.g., relaxation techniques)
Reduce strict dieting	Encourage balanced healthy eating and avoidance of unhealthy dieting strategies, such as not eating for long periods of time, setting unrealistic calorie goals, and avoiding specific foods or food groups
Develop relapse-prevention strategies	Plan for slips in bingeing and purging behaviors and possible responses (e.g., reinitiating self-monitoring, scheduling appointment with physician)

Information from reference 20.

Table 8. Practical Questions and Statements for the Assessment and Treatment of Eating Disorders

<i>Goal</i>	<i>Questions/statements</i>
Start a conversation about eating habits	Would it be okay if we discussed your eating habits? I'm concerned about your eating. May we discuss how you typically eat?
Assess motivation to change eating habits	On a scale of 0 to 10, how important is it for you to change your eating? What would make it more important? On a scale of 0 to 10, how confident are you that you could change the way you eat? What would make you more confident? What do you like about the way you eat? What do you dislike? What would be the benefits of changing the way you eat? What would be the downside of changing the way you eat? How would your life be different if you didn't need to spend so much time thinking about your eating? It sounds like your eating habits are really important for helping you get through the day.
Determine the antecedents and consequences of disordered eating patterns	Do you ever feel that you lose control over the way you eat? How often does that happen? When are you most likely to binge? Sometimes people binge and purge when they are overwhelmed, stressed, sad, or anxious; do any of those situations apply to you? How do you feel before you binge? After you binge? Before you purge? After you purge? What happens after you purge? How does eating impact your ability to function during the day? Do you feel tired? Is it difficult to concentrate? Sometimes people think about how they are eating all day to the point that it is difficult to concentrate on anything else. Does that happen to you?
Develop alternatives to bingeing	When you feel an urge to binge, what could you do instead of bingeing? Consider activities that you could do in the situations when you are most likely to binge.
Change negative thinking	Who demands that you must be perfect? Who determines how you think about yourself? What can you control?

Information from reference 26.

Eating Disorders

Pharmacotherapy

BINGE-EATING DISORDER

Several medications have shown benefit in the short-term treatment of binge-eating disorder.^{2,28,29} A systematic review of randomized controlled trials studying the use of a variety of selective serotonin reuptake inhibitors (SSRIs; e.g., fluoxetine [Prozac], sertraline [Zoloft], citalopram [Celexa]); tricyclic antidepressants (e.g., imipramine [Tofranil]); antiepileptics (topiramate [Topamax]); and appetite suppressants (sibutramine [Meridia]) demonstrated moderate evidence of the effectiveness of medication. Use of these agents resulted in a significant decrease in binge frequency and illness severity when compared with placebo.¹⁸ Other symptoms of binge-eating disorder, such as depressed mood and eating-related obsessions and compulsions, as well as impact on body weight, were variably affected, depending on the agent studied.¹⁸ Treatment dosages in most studies using SSRIs were at or near the high end of the recommended dosage range.

The addition of antidepressant medication (e.g., fluoxetine) to CBT does not appear to add to the effectiveness of CBT in reducing binge-eating episodes.²⁹ However, in a randomized controlled trial comparing CBT plus placebo with CBT plus orlistat (Xenical), persons treated with CBT plus orlistat achieved greater remission rates (i.e., zero binges for 28 days) at the end of treatment, as well as greater initial weight loss (-3.5 lb [-1.6 kg] versus -7.7 lb [-3.5 kg]).³⁰

BULIMIA NERVOSA

The effectiveness of antidepressant agents in treating the symptoms of bulimia nervosa has been systematically studied. When compared with placebo, treatment resulted in improved remission rates, but was associated with higher drop-out rates.²² The combination of CBT plus medication has been shown to have added benefit over medication or therapy alone.^{8,22} Although most patients are first offered a trial of a behavioral therapy, antidepressant medication may be considered as an alternative or additional first step.³ Various classes of antidepressant medications decrease binge eating and vomiting in patients with bulimia nervosa.^{2,22,29} SSRIs are recommended as first-line agents because of their effectiveness and safety profile.² Fluoxetine, in a dosage of 60 mg per day, is the only agent approved by the U.S. Food and Drug Administration for the treatment of eating disorders, specifically for bulimia nervosa. As with binge-eating disorder, higher doses of SSRIs may be more effective in treating bulimic symptoms. Despite its proven effectiveness, bupropion (Wellbutrin) is contraindicated because of the association of its use with seizures in patients

who purge.² Additional agents that appear promising include topiramate and ondansetron (Zofran).^{2,31-33}

ANOREXIA NERVOSA

Antidepressant medications for the treatment of anorexia nervosa have limited effectiveness and should not be the sole treatment modality.^{2,3,27} Preliminary studies using the atypical antipsychotic olanzapine (Zyprexa) have demonstrated positive results.³⁴⁻³⁶ Psychotropic medications may be effective as an adjunctive therapy when treating comorbid disorders, such as depression and anxiety.

Patient Education

It is helpful to provide patients and their families with education on the nature, course, and treatment of eating disorders. When treating children and adolescents, caregivers and family members should be included in the treatment process to share information, provide guidance on behavioral management (i.e., meal planning, limit-setting), and facilitate communication.³⁴ Family member participation in support groups should also be encouraged.³

Prognosis

Approximately 70 percent of persons with bulimia nervosa and 27 to 50 percent of persons with anorexia nervosa will not show evidence of a clinical eating disorder within 10 years of follow-up after receiving treatment in a tertiary care setting.³⁷⁻³⁹ The remaining persons will not improve, maintain a subclinical eating disorder, or meet criteria for another eating disorder. Standardized mortality ratios (SMRs) are elevated for patients with anorexia nervosa, ranging from 1.36 for females 20 years following treatment to 30.5 for females less than one year following treatment.³⁹ SMRs for patients with bulimia nervosa are not significantly different from the rate expected in the population matched by age and sex.³⁹ The long-term prognosis for binge-eating disorder remains unclear.^{2,39}

This article represents the views of the authors and does not represent the views of the Uniformed Services University of the Health Sciences, the United States Air Force, or the U.S. Department of Defense.

The Authors

PAMELA M. WILLIAMS, MAJ, USAF, MC, is an assistant professor of family medicine at the Uniformed Services University of the Health Sciences in Bethesda, Md. Dr. Williams received her medical degree from the University of Pennsylvania in Philadelphia. She completed a family medicine residency at David Grant USAF Medical Center at Travis Air Force Base, Calif., and a faculty development fellowship at the University of California, San Francisco.

JEFFREY GOODIE, MAJ, USAF, BSC, is an assistant professor of family medicine at the Uniformed Services University of the Health Sciences. He

is a board-certified clinical health psychologist. Dr. Goodie received his doctorate in clinical psychology from West Virginia University in Morgantown. He completed an internship and fellowship in clinical health psychology at Wilford Hall Medical Center in San Antonio, Tex.

CHARLES D. MOTTSINGER, MAJ, USAF, MC, is board certified in family medicine and psychiatry. He received his medical degree from the Uniformed Services University of the Health Sciences. He is currently the program director of the combined family medicine and psychiatry residency of the National Capital Consortium in Bethesda, where he also received his training.

Address correspondence to Pamela M. Williams, MAJ, USAF, MC, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Rd., Bethesda, MD 20814 (e-mail: pawilliams@usuhs.mil). Reprints are not available from the authors.

Author disclosure: Nothing to disclose.

REFERENCES

- Hudson JI, Hiripi E, Pope HG, Kessler RC. The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. *Biol Psychiatry*. 2007;61(3):348-358.
- Yager J, Devlin MJ, Halmi KA, et al., for the Work Group on Eating Disorders. *Practice Guideline for the Treatment of Patients with Eating Disorders*. 3rd ed. Washington, DC: American Psychiatric Association; 2006. http://www.psych.org/psych_pract/treatg/pg/EatingDisorders3ePG_04-28-06.pdf. Accessed June 28, 2007.
- National Collaborating Centre for Mental Health. Eating disorders: core interventions in the treatment and management of anorexia nervosa, bulimia nervosa and related eating disorders. Clinical guideline 9. London, UK: National Institute for Health and Clinical Excellence; 2004. <http://www.nice.org.uk/guidance/CG9/niceguidance/pdf/English>. Accessed June 28, 2007.
- American Academy of Pediatrics, Committee on Adolescence. Identifying and treating eating disorders. *Pediatrics*. 2003;111(1):204-211.
- American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 4th ed. rev. Washington, DC: American Psychiatric Association; 2000:583-595,787.
- Pritts SD, Susman J. Diagnosis of eating disorders in primary care. *Am Fam Physician*. 2003;67(2):297-304.
- Walsh JM, Wheat ME, Freund K. Detection, evaluation, and treatment of eating disorders: the role of the primary care physician. *J Gen Intern Med*. 2000;15(8):577-590.
- Bacaltchuk J, Hay P, Trefiglio R. Antidepressants versus psychological treatments and their combination for bulimia nervosa. *Cochrane Database Syst Rev*. 2001;(4):CD003385.
- Davison GC. Stepped care: doing more with less? *J Consult Clin Psychol*. 2000;68(5):580-585.
- Hay PJ, Bacaltchuk J, Stefano S. Psychotherapy for bulimia nervosa and bingeing. *Cochrane Database Syst Rev*. 2004;(3):CD000562.
- Wilson GT, Vitousek KM, Loeb KL. Stepped care treatment for eating disorders. *J Consult Clin Psychol*. 2000;68(4):564-572.
- Loeb KL, Wilson GT, Labouvie E, et al. Therapeutic alliance and treatment adherence in two interventions for bulimia nervosa: a study of process and outcome. *J Consult Clin Psychol*. 2005;73(6):1097-1107.
- Vitousek K, Watson S, Wilson GT. Enhancing motivation for change in treatment-resistant eating disorders. *Clin Psychol Rev*. 1998;18(4):391-420.
- Gale C, Holliday J, Troop NA, Serpell L, Treasure J. The pros and cons of change in individuals with eating disorders: a broader perspective. *Int J Eat Disord*. 2006;39(5):394-403.
- Geller J, Brown KE, Zaitsoff SL, Goodrich S, Hastings F. Collaborative versus directive interventions in the treatment of eating disorders: implications for care providers. *Prof Psychol Res Pr*. 2003;34(4):406-413.
- Legroux-Gerot I, Vignau J, Collier F, Cortet B. Bone loss associated with anorexia nervosa. *Joint Bone Spine*. 2005;72(6):489-495.
- Little JW. Eating disorders: dental implications. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*. 2002;93(2):138-143.
- Brownley KA, Berkman ND, Sedway JA, Lohr KN, Bulik CM. Binge eating disorder treatment: a systematic review of randomized controlled trials. *Int J Eat Disord*. 2007;40(4):337-348.
- Perkins SJ, Murphy R, Schmidt U, Williams C. Self-help and guided self-help for eating disorders. *Cochrane Database Syst Rev*. 2006;(3):CD004191.
- Fairburn CG. *Overcoming Binge Eating*. New York, NY: Guilford Press; 1995.
- Stefano SC, Bacaltchuk J, Blay SL, Hay P. Self-help treatments for disorders of recurrent binge eating: a systematic review. *Acta Psychiatr Scand*. 2006;113(6):452-459.
- Shapiro JR, Berkman ND, Brownley KA, Sedway JA, Lohr KN, Bulik CM. Bulimia nervosa treatment: a systematic review of randomized controlled trials. *Int J Eat Disord*. 2007;40(4):321-336.
- Banasiak SJ, Paxton SJ, Hay P. Guided self-help for bulimia nervosa in primary care: a randomized controlled trial. *Psychol Med*. 2005;35(9):1283-1294.
- Walsh BT, Fairburn CG, Mickley D, Sysko R, Parides MK. Treatment of bulimia nervosa in a primary care setting. *Am J Psychiatry*. 2004;161(3):556-561.
- Fairburn CG, Harrison PJ. Eating disorders. *Lancet*. 2003;361(9355):407-416.
- Rollnick S, Mason P, Butler C. *Health Behavior Change: A Guide for Practitioners*. New York, NY: Churchill Livingstone; 1999.
- Bulik CM, Berkman ND, Brownley KA, Sedway JA, Lohr KN. Anorexia nervosa treatment: a systematic review of randomized controlled trials. *Int J Eat Disord*. 2007;40(4):310-320.
- Arnold LM, McElroy SL, Hudson JI, Welge JA, Bennett AJ, Keck PE. A placebo-controlled, randomized trial of fluoxetine in the treatment of binge-eating disorder. *J Clin Psychiatry*. 2002;63(11):1028-1033.
- Mitchell JE, de Zwaan M, Roerig JL. Drug therapy for patients with eating disorders. *Curr Drug Targets CNS Neurol Disord*. 2003;2(1):17-29.
- Griolo CM, Masheb RM, Salant SL. Cognitive behavioral therapy guided self-help and orlistat for the treatment of binge eating disorder: a randomized, double-blind, placebo-controlled trial. *Biol Psychiatry*. 2005;57(10):1193-1201.
- Faris PL, Kim SW, Meller WH, et al. Effect of decreasing afferent vagal activity with ondansetron on symptoms of bulimia nervosa: a randomized, double-blind trial. *Lancet*. 2000;355(9206):792-797.
- Nickel C, Tritt K, Muehlbacher M, et al. Topiramate treatment in bulimia nervosa patients: a randomized, double-blind, placebo-controlled trial. *Int J Eat Disord*. 2005;38(4):295-300.
- Hedges DW, Reimherr FW, Hoopes SP, et al. Treatment of bulimia nervosa with topiramate in a randomized, double-blind, placebo-controlled trial, part 2: improvement in psychiatric measures. *J Clin Psychiatry*. 2003;64(12):1449-1454.
- Barbarich NC, McConaha CW, Gaskill J, et al. An open trial of olanzapine in anorexia nervosa. *J Clin Psychiatry*. 2004;65(11):1480-1482.
- Malina A, Gaskill J, McConaha C, et al. Olanzapine treatment of anorexia nervosa: a retrospective study. *Int J Eat Disord*. 2003;33(2):234-237.
- Powers PS, Santana CA, Bannon YS. Olanzapine in the treatment of anorexia nervosa: an open label trial. *Int J Eat Disord*. 2002;32(2):146-154.
- Sullivan PF, Bulik CM, Fear JL, Pickering A. Outcome of anorexia nervosa: a case-control study. *Am J Psychiatry*. 1998;155(7):939-946.
- Keel PK, Mitchell JE, Miller KB, Davis TL, Crow SJ. Long-term outcome of bulimia nervosa. *Arch Gen Psychiatry*. 1999;56(1):63-69.
- Berkman ND, Lohr KN, Bulik CM. Outcomes of eating disorders: a systematic review of the literature. *Int J Eat Disord*. 2007;40(4):293-309.