



## Guideline Summary NGC-4987

### Guideline Title

Practice guideline for the treatment of patients with eating disorders.

### Bibliographic Source(s)

American Psychiatric Association (APA). Practice guideline for the treatment of patients with eating disorders. 3rd ed. Washington (DC): American Psychiatric Association (APA); 2006 Jun. 128 p. [765 references]

American Psychiatric Association. Treatment of patients with eating disorders, third edition. Am J Psychiatry 2006 Jul;163 (7 Suppl):4-54. [PubMed](#)

### Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: American Psychiatric Association. Practice guideline for the treatment of patients with eating disorders (revision). Am J Psychiatry 2000 Jan;157(1 Suppl):1-39.

The guideline was reaffirmed for currency by the developer in 2011.

### FDA Warning/Regulatory Alert

**Note from the National Guideline Clearinghouse:** This guideline references a drug(s) for which important revised regulatory and/or warning information has been released.

#### Drug Withdrawal

- [October 8, 2010 – Meridia \(sibutramine\)](#) : Abbott Laboratories and the U.S. Food and Drug Administration (FDA) notified healthcare professionals and patients about the voluntary withdrawal of Meridia (sibutramine), an obesity drug, from the U.S. market because of clinical trial data indicating an increased risk of heart attack and stroke. Physicians are advised to stop prescribing Meridia to their patients, and patients should stop taking this medication. Patients should talk to their health care provider about alternative weight loss and weight loss maintenance programs.

### Scope

#### Disease/Condition(s)

Eating disorders including:

- Anorexia nervosa
- Bulimia nervosa
- Eating disorder not otherwise specified (binge eating disorder, night eating syndrome)

#### Guideline Category

Evaluation

Management

Rehabilitation

Treatment

#### Clinical Specialty

Psychiatry

#### Intended Users

Physicians

#### Guideline Objective(s)

To provide guidance to psychiatrists in the assessment and care of patients with eating disorders

## Target Population

Patients of all ages from childhood to adulthood with eating disorders

## Interventions and Practices Considered

### Psychiatric Management

1. Establishment and maintenance of a therapeutic alliance
2. Coordination of care and collaboration with other clinicians
3. Assessment and monitoring of eating disorder symptoms and behaviors
4. Assessment and monitoring of the patient's general medical condition
5. Assessment and monitoring of the patient's psychiatric status and safety
6. Provision of family assessment and treatment

### Selection of Treatment Site

1. Outpatient
2. Intensive outpatient
3. Partial hospitalization (full-day outpatient care)
4. Residential treatment center
5. Inpatient hospitalization

### Specific Treatments for Anorexia Nervosa

#### *Nutritional Rehabilitation*

1. Establishment of healthy target weights
2. Nutritional rehabilitation and refeeding programs
3. Establishment of expected rates of controlled weight gain
4. Setting advancing intake levels
5. Vitamin and mineral supplementation (e.g., phosphorous)
6. Monitoring of serum potassium and rehydration
7. Setting physical activity
8. Other treatments, when indicated, including liquid food supplements; nasogastric feedings; parenteral feedings
9. Monitoring and treatment of symptoms and conditions associated with gaining weight (e.g., anxiety, abdominal pain, constipation)

#### *Psychosocial Interventions*

1. Family psychotherapy for children and adolescents
2. Family group psychoeducation for adolescents
3. Cognitive-behavioral therapy (CBT) for adults
4. Interpersonal therapy (IPT) and/or psychodynamically oriented individual or group psychotherapy for adults
5. Psychosocial interventions based on addiction models
6. Support groups led by professionals or advocacy organizations
7. Internet-based support
8. Non-verbal therapeutic methods (e.g., creative arts, movement therapy, occupational therapy)

#### *Medications and Other Somatic Treatments*

1. Selective serotonin reuptake inhibitors (SSRIs)
2. Bupropion
3. Tricyclic antidepressants (generally not recommended)
4. Monoamine oxidase inhibitors (generally not recommended)
5. Second generation antipsychotics (e.g., olanzapine, risperidone, quetiapine, ziprasidone)
6. Chlorpromazine
7. Benzodiazepines
8. Pro-motility agents, e.g., metoclopramide
9. Electroconvulsive therapy (ECT)
10. Hormone therapy
11. Vitamin and mineral supplementation, e.g., vitamin D, calcium, zinc, multivitamins
12. Bisphosphonates (not recommended)

### Specific Treatments for Bulimia Nervosa

#### *Nutritional Rehabilitation Counseling*

1. Development of structured meal plans
2. Assessment of nutritional intake
3. Nutritional counseling

#### *Psychosocial Interventions*

1. CBT
2. IBT
3. Psychodynamically oriented therapy
4. Group psychotherapy
5. Family and marital therapy
6. Support groups, 12-step programs

#### *Medications and Other Treatments*

1. SSRIs
2. Tricyclic antidepressants
3. Monoamine oxidase inhibitors (not recommended)
4. Topiramate
5. Lithium (not recommended)
6. Valproic acid
7. Methylphenidate
8. Bright light therapy

### **Specific Treatments for Eating Disorder Not Otherwise Specified**

#### *Nutritional Rehabilitation and Counseling*

1. Behavioral weight control programs
2. Combinations of diets and psychosocial treatments

#### *Other Psychosocial Treatment*

1. Individual or group CBT
2. IPT and dialectical behavior therapy

#### *Medications*

1. Antidepressants
2. Appetite suppressants (e.g., sibutramine\*)
3. Topiramate

**\*Note from the National Guideline Clearinghouse (NGC):** On October 8, 2010, Abbott Laboratories and the U.S. Food and Drug Administration (FDA) notified healthcare professionals and patients about the voluntary withdrawal of Meridia (sibutramine), an obesity drug, from the U.S. market because of clinical trial data indicating an increased risk of heart attack and stroke. Physicians are advised to stop prescribing Meridia to their patients, and patients should stop taking this medication. Patients should talk to their health care provider about alternative weight loss and weight loss maintenance programs. See the [FDA Web site](#) <sup>27</sup> for more information.

#### *Combined Psychosocial and Medication Treatment*

### **Major Outcomes Considered**

#### *Anorexia Nervosa*

- Amount of weight gained within specified time intervals
- Proportion of patients achieving a specified percentage of expected body weight
- Return of menses
- Measures of severity or frequency of eating disorder behaviors

#### *Bulimia Nervosa*

- Reduction in the frequency or severity of eating disorder behaviors (e.g., binge eating, vomiting, laxative use)
- Proportion of patients achieving remission from or a specific reduction in eating disorder behaviors)

### **Methodology**

#### **Methods Used to Collect/Select the Evidence**

Searches of Electronic Databases

#### **Description of Methods Used to Collect/Select the Evidence**

A MEDLINE search, using PubMed, of "anorexia nervosa OR bulimia OR binge eating disorder OR binge eating disorders OR eating disorder OR eating disorders" yielded 15,561 citations, of which 3,596 were published between 1998 and 2004, were written in English, and contained abstracts. Of these, 334 were reports of clinical trials (including randomized controlled trials) or meta-analyses. Abstracts for these articles as well as abstracts for an additional 634 review articles were screened individually for their relevance to the guideline. The Cochrane Library was also searched for relevant abstracts. Additional, less formal literature searches were conducted by American Psychiatric Association (APA) staff and individual members of the Work Group on Eating Disorders.

### **2011 Currency Review Process**

Searches of MEDLINE/PubMed and Cochrane were conducted on December 13, 2011. The MEDLINE search was limited to randomized controlled trials and meta-analyses, human studies only, and English language only. Search terms included "bulimia nervosa," "anorexia nervosa," "binge eating," and "eating disorder." The Cochrane search terms were "anorexia nervosa," "bulimia," "binge eating," and corresponding MeSH terms.

Studies published before 2003 were excluded. This was the year the literature search was originally performed for the practice guideline. This left 983 studies.

The remaining studies were screened for relevance and categorized by a medical researcher; 693 were rejected as not relating to the treatment of eating disorders. Of the remaining, there were 91 studies related to the treatment of anorexia nervosa, 84 to bulimia nervosa, 95 to binge eating disorder, 12 to treatment of osteoporosis in eating disorders, and 60 miscellaneous studies related to eating disorders.

### **Number of Source Documents**

Not stated

### **Methods Used to Assess the Quality and Strength of the Evidence**

Expert Consensus (Committee)

### **Rating Scheme for the Strength of the Evidence**

Not applicable

### **Methods Used to Analyze the Evidence**

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

### **Description of the Methods Used to Analyze the Evidence**

The Work Group on Eating Disorders constructed evidence tables to illustrate the data regarding risks and benefits for each treatment and to evaluate the quality of the data. These tables facilitated group discussion of the evidence and agreement on treatment recommendations before guideline text was written. Evidence tables do not appear in the guideline; however, they are retained by American Psychiatric Association (APA) to document the development process in case queries are received and to inform revisions of the guideline.

### **Methods Used to Formulate the Recommendations**

Expert Consensus

### **Description of Methods Used to Formulate the Recommendations**

This practice guideline was developed under the auspices of the Steering Committee on Practice Guidelines. The development process is detailed in "APA Guideline Development Process," which is available from the American Psychiatric Association (APA) Department of Quality Improvement and Psychiatric Services. The key features of this process include the following:

- A comprehensive literature review to identify all relevant randomized clinical trials as well as less rigorously designed clinical trials and case series when evidence from randomized trials was unavailable
- Development of evidence tables that summarized the key features of each identified study, including funding source, study design, sample sizes, subject characteristics, treatment characteristics, and treatment outcomes
- Initial drafting of the guideline by a work group that included psychiatrists with clinical and research expertise in eating disorders
- Production of multiple revised drafts with widespread review (10 organizations and 58 individuals submitted significant comments)
- Approval by the APA Assembly and Board of Trustees
- Planned revisions at regular intervals

### **2011 Currency Review Process**

In 2010, an alert was added to this guideline regarding the withdrawal of sibutramine (Meridia), an obesity drug, from the U.S. market. In December 2011, the expert work group that developed the original guideline reviewed the guideline and agreed that there had not been other significant changes in evidence or practice that would make recommendations in the guideline potentially harmful to patients if followed.

In December 2011, the chair of the expert work group reviewed the screened studies from the literature search in relation to the published guideline. He concluded that the guideline is still current, as evidence from the newly published studies would not change any of the recommendations in the guideline.

## Rating Scheme for the Strength of the Recommendations

Each recommendation is identified as falling into one of three categories of endorsement, indicated by a bracketed Roman numeral following the statement. The three categories represent varying levels of clinical confidence regarding the recommendation:

- [I] Recommended with substantial clinical confidence.
- [II] Recommended with moderate clinical confidence.
- [III] May be recommended on the basis of individual circumstances.

## Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

## Method of Guideline Validation

External Peer Review

Internal Peer Review

## Description of Method of Guideline Validation

Each practice guideline is extensively reviewed at multiple draft stages. Draft 1 is reviewed by the Steering Committee. Draft 2 is reviewed by approximately 50 reviewers with expertise in the topic, representatives of allied organizations, the American Psychiatric Association (APA) Assembly, District Branches, the Joint Reference Committee, the Board of Trustees, the Council on Quality Care, other components related to the subject area, and any APA member by request. Draft 3 is reviewed and approved for publication by the Assembly and the Board of Trustees.

Ten organizations and fifty-eight individuals are acknowledged in the original guideline document for having submitted significant comments to the draft guideline.

## Recommendations

### Major Recommendations

Each recommendation is identified as meriting one of three categories of endorsement, based on the level of clinical confidence regarding the recommendation, as indicated by a bracketed Roman numeral after the statement. Definitions of the categories of endorsement are presented at the end of the "Major Recommendations" field.

#### 1. **Psychiatric Management**

Psychiatric management begins with the establishment of a therapeutic alliance, which is enhanced by empathic comments and behaviors, positive regard, reassurance, and support [I]. Basic psychiatric management includes support through the provision of educational materials, including self-help workbooks; information on community-based and Internet resources; and direct advice to patients and their families (if they are involved) [I]. A team approach is the recommended model of care [I].

##### a. **Coordinating Care and Collaborating with Other Clinicians**

In treating adults with eating disorders, the psychiatrist may assume the leadership role within a program or team that includes other physicians, psychologists, registered dietitians, and social workers or may work collaboratively on a team led by others. For the management of acute and ongoing medical and dental complications, it is important that psychiatrists consult other physician specialists and dentists [I].

When a patient is managed by an interdisciplinary team in an outpatient setting, communication among the professionals is essential to monitoring the patient's progress, making necessary adjustments to the treatment plan, and delineating the specific roles and tasks of each team member [I].

##### b. **Assessing and Monitoring Eating Disorder Symptoms and Behaviors**

A careful assessment of the patient's history, symptoms, behaviors, and mental status is the first step in making a diagnosis of an eating disorder [I]. The complete assessment usually requires at least several hours and includes a thorough review of the patient's height and weight history; restrictive and binge eating and exercise patterns and their changes; purging and other compensatory behaviors; core attitudes regarding weight, shape, and eating; and associated psychiatric conditions [I]. A family history of eating disorders or other psychiatric disorders, including alcohol and other substance use disorders; a family history of obesity; family interactions in relation to the patient's disorder; and family attitudes toward eating, exercise, and appearance are all relevant to the assessment [I]. A clinician's articulation of theories that imply blame or permit family members to blame one another or themselves can alienate family members from involvement in the treatment and therefore be detrimental to the patient's care and recovery [I]. It is important to identify family stressors whose amelioration may facilitate recovery [I]. In the assessment of children and adolescents, it is essential to involve parents and, whenever appropriate, school personnel and health professionals who routinely work with the patient [I].

##### c. **Assessing and Monitoring the Patient's General Medical Condition**

A full physical examination of the patient is strongly recommended and may be performed by a physician familiar with common findings in patients with eating disorders. The examination should give particular attention to vital signs, physical status (including height and weight), cardiovascular and peripheral vascular function, dermatological manifestations, and evidence of self-injurious behaviors [I]. Calculation of the patient's body mass index (BMI) is also useful (see <http://apps.nccd.cdc.gov/dnpabmi/> [for ages 2-20] and [http://www.cdc.gov/healthyweight/assessing/bmi/adult\\_bmi/english\\_bmi\\_calculator/bmi\\_calculator.html](http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/english_bmi_calculator/bmi_calculator.html) [for adults]) [I]. Early recognition of eating disorder symptoms and early intervention may prevent an eating disorder from becoming chronic [I]. During treatment, it is important to monitor the patient for shifts in weight, blood

pressure, pulse, other cardiovascular parameters, and behaviors likely to provoke physiological decline and collapse [1]. Patients with a history of purging behaviors should also be referred for a dental examination [1]. Bone density examinations should be obtained for patients who have been amenorrheic for 6 months or more [1].

In younger patients, examination should include growth pattern, sexual development (including sexual maturity rating), and general physical development [1]. The need for laboratory analyses should be determined on an individual basis depending on the patient's condition or the laboratory tests' relevance to making treatment decisions [1].

#### d. **Assessing and Monitoring the Patient's Safety and Psychiatric Status**

The patient's safety will be enhanced when particular attention is given to suicidal ideation, plans, intentions, and attempts as well as to impulsive and compulsive self-harm behaviors [1]. Other aspects of the patient's psychiatric status that greatly influence clinical course and outcome and that are important to assess include mood, anxiety, and substance use disorders, as well as motivational status, personality traits, and personality disorders [1]. Assessment for suicidality is of particular importance in patients with co-occurring alcohol and other substance use disorders [1].

#### e. **Providing Family Assessment and Treatment**

For children and adolescents with anorexia nervosa, family involvement and treatment are essential [1]. For older patients, family assessment and involvement may be useful and should be considered on a case-by-case basis [1]. Involving spouses and partners in treatment may be highly desirable [1].

## 2. **Choosing a Site of Treatment**

Services available for treating eating disorders can range from intensive inpatient programs (in which general medical care is readily available) to residential and partial hospitalization programs to varying levels of outpatient care (in which the patient receives general medical treatment, nutritional counseling, and/or individual, group, and family psychotherapy). Because specialized programs are not available in all geographic areas and their financial requirements are often significant, access to these programs may be limited; petition, explanation, and follow-up by the psychiatrist on behalf of patients and families may help procure access to these programs. Pretreatment evaluation of the patient is essential in choosing the appropriate treatment setting [1].

In determining a patient's initial level of care or whether a change to a different level of care is appropriate, it is important to consider the patient's overall physical condition, psychology, behaviors, and social circumstances rather than simply rely on one or more physical parameters, such as weight [1]. Weight in relation to estimated individually healthy weight, the rate of weight loss, cardiac function, and metabolic status are the most important physical parameters to be considered when choosing a treatment setting; other psychosocial parameters are also important [1]. Healthy weight estimates for a given individual must be determined by that person's physicians [1]. Such estimates may be based on historical considerations (often including that person's growth charts) and, for women, the weight at which healthy menstruation and ovulation resume, which may be higher than the weight at which menstruation and ovulation became impaired. Admission to or continuation of an intensive level of care (e.g., hospitalization) may be necessary when access to a less intensive level of care (e.g., partial hospitalization) is absent because of geography or a lack of resources [1].

Generally, adult patients who weigh less than approximately 85% of their individually estimated healthy weights have considerable difficulty gaining weight outside of a highly structured program [1]. Such programs, including inpatient care, may be medically and psychiatrically necessary even for some patients who are above 85% of their individually estimated healthy weight [1]. Factors suggesting that hospitalization may be appropriate include rapid or persistent decline in oral intake, a decline in weight despite maximally intensive outpatient or partial hospitalization interventions, the presence of additional stressors that may interfere with the patient's ability to eat, knowledge of the weight at which instability previously occurred in the patient, co-occurring psychiatric problems that merit hospitalization, and the degree of the patient's denial and resistance to participate in his or her own care in less intensively supervised settings [1].

Hospitalization should occur before the onset of medical instability as manifested by abnormalities in vital signs (e.g., marked orthostatic hypotension with an increase in pulse of 20 beats per minute (bpm) or a drop in standing blood pressure of 20 millimeters of mercury (mmHg), bradycardia <40 bpm, tachycardia >110 bpm, or an inability to sustain core body temperature), physical findings, or laboratory tests [1]. To avert potentially irreversible effects on physical growth and development, many children and adolescents require inpatient medical treatment, even when weight loss, although rapid, has not been as severe as that suggesting a need for hospitalization in adult patients [1].

Patients who are physiologically stabilized on acute medical units will still require specific inpatient treatment for eating disorders if they do not meet biopsychosocial criteria for less intensive levels of care and/or if no suitable less intensive levels of care are accessible because of geographic or other reasons [1]. Weight level per se should never be used as the sole criterion for discharge from inpatient care [1]. Assisting patients in determining and practicing appropriate food intake at a healthy body weight is likely to decrease the chances of their relapsing after discharge [1].

In shifting between levels of care, it is important to establish continuity of care [1]. If the patient is going from one treatment setting or locale to another, transition planning requires that the care team in the new setting or locale be identified and that specific patient appointments be made [1]. It is preferable that a specific clinician on the team be designated as the primary coordinator of care to ensure continuity and attention to important aspects of treatment [1].

Most patients with uncomplicated bulimia nervosa do not require hospitalization; indications for the hospitalization of such patients include severe disabling symptoms that have not responded to adequate trials of outpatient treatment, serious concurrent general medical problems (e.g., metabolic abnormalities, hematemesis, vital sign changes, uncontrolled vomiting), suicidality, psychiatric disturbances that would warrant the patient's hospitalization independent of the eating disorder diagnosis, or severe concurrent alcohol or drug dependence or abuse [1].

Legal interventions, including involuntary hospitalization and legal guardianship, may be necessary to address the safety of treatment-reluctant patients whose general medical conditions are life threatening [1].

The decision about whether a patient should be hospitalized on a psychiatric versus a general medical or adolescent/pediatric unit should be made based on the patient's general medical and psychiatric status, the skills and abilities of local psychiatric and general medical staff, and the availability of suitable programs to care for the patient's general medical and psychiatric problems [1]. There is evidence to suggest that patients with eating

disorders have better outcomes when treated on inpatient units specializing in the treatment of these disorders than when treated in general inpatient settings where staff lack expertise and experience in treating eating disorders [1].

Outcomes from partial hospitalization programs that specialize in eating disorders are highly correlated with treatment intensity. The more successful programs involve patients in treatment at least 5 days/week for 8 hours/day; thus, it is recommended that partial hospitalization programs be structured to provide at least this level of care [1].

Patients who are considerably below their healthy body weight and are highly motivated to adhere to treatment, have cooperative families, and have a brief symptom duration may benefit from treatment in outpatient settings, but only if they are carefully monitored and if they and their families understand that a more restrictive setting may be necessary if persistent progress is not evident in a few weeks [1]. Careful monitoring includes at least weekly (and often two to three times a week) weight determinations done directly after the patient voids and while the patient is wearing the same class of garment (e.g., hospital gown, standard exercise clothing) [1]. In patients who purge, it is important to routinely monitor serum electrolytes [1]. Urine specific gravity, orthostatic vital signs, and oral temperatures may need to be measured on a regular basis [1].

In an outpatient setting, patients can remain with their families and continue to attend school or work. Inpatient care may interfere with family, school, and work obligations; however, it is important to give priority to the safe and adequate treatment of a rapidly progressing or otherwise unresponsive disorder for which hospital care might be necessary [1].

### 3. Choice of Specific Treatments for Anorexia Nervosa

The aims of treating anorexia nervosa are to 1) restore patients to a healthy weight (associated with the return of menses and normal ovulation in female patients, normal sexual drive and hormone levels in male patients, and normal physical and sexual growth and development in children and adolescents); 2) treat physical complications; 3) enhance patients' motivation to cooperate in the restoration of healthy eating patterns and participate in treatment; 4) provide education regarding healthy nutrition and eating patterns; 5) help patients reassess and change core dysfunctional cognitions, attitudes, motives, conflicts, and feelings related to the eating disorder; 6) treat associated psychiatric conditions, including deficits in mood and impulse regulation and self-esteem and behavioral problems; 7) enlist family support and provide family counseling and therapy where appropriate; and 8) prevent relapse.

#### a. **Nutritional Rehabilitation**

The goals of nutritional rehabilitation for seriously underweight patients are to restore weight, normalize eating patterns, achieve normal perceptions of hunger and satiety, and correct biological and psychological sequelae of malnutrition [1]. For patients age 20 years and younger, an individually appropriate range for expected weight and goals for weight and height may be determined by considering measurements and clinical factors, including current weight, bone age estimated from wrist x-rays and nomograms, menstrual history (in adolescents with secondary amenorrhea), mid-parental heights, assessments of skeletal frame, and benchmarks from Centers for Disease Control and Prevention (CDC) growth charts (available at <http://www.cdc.gov/growthcharts/>) [1].

For individuals who are markedly underweight and for children and adolescents whose weight has deviated below their growth curves, hospital-based programs for nutritional rehabilitation should be considered [1]. For patients in inpatient or residential settings, the discrepancy between healthy target weight and weight at discharge may vary depending on patients' ability to feed themselves, their motivation and ability to participate in aftercare programs, and the adequacy of aftercare, including partial hospitalization [1]. It is important to implement refeeding programs in nurturing emotional contexts [1]. For example, it is useful for staff to convey to patients their intention to take care of them and not let them die even when the illness prevents the patients from taking care of themselves [1]. It is also useful for staff to communicate clearly that they are not seeking to engage in control battles and have no punitive intentions when using interventions that the patient may experience as aversive [1].

In working to achieve target weights, the treatment plan should also establish expected rates of controlled weight gain. Clinical consensus suggests that realistic targets are 2-3 pounds (lb)/week for hospitalized patients and 0.5-1 lb/week for individuals in outpatient programs [1]. Registered dietitians can help patients choose their own meals and can provide a structured meal plan that ensures nutritional adequacy and that none of the major food groups are avoided [1]. Formula feeding may have to be added to the patient's diet to achieve large caloric intake [1]. It is important to encourage patients with anorexia nervosa to expand their food choices to minimize the severely restricted range of foods initially acceptable to them [1]. Caloric intake levels should usually start at 30-40 kilocalories/kilogram (kcal/kg) per day (approximately 1,000-1,600 kcal/day). During the weight gain phase, intake may have to be advanced progressively to as high as 70-100 kcal/kg per day for some patients; many male patients require a very large number of calories to gain weight [1].

Patients who require much lower caloric intakes or are suspected of artificially increasing their weight by fluid loading should be weighed in the morning after they have voided and are wearing only a gown; their fluid intake should also be carefully monitored [1]. Urine specimens obtained at the time of a patient's weigh-in may need to be assessed for specific gravity to help ascertain the extent to which the measured weight reflects excessive water intake [1]. Regular monitoring of serum potassium levels is recommended in patients who are persistent vomiters [1]. Hypokalemia should be treated with oral or intravenous potassium supplementation and rehydration [1].

Physical activity should be adapted to the food intake and energy expenditure of the patient, taking into account the patient's bone mineral density and cardiac function [1]. Once a safe weight is achieved, the focus of an exercise program should be on the patient's gaining physical fitness as opposed to expending calories [1].

Weight gain results in improvements in most of the physiological and psychological complications of semistarvation [1]. It is important to warn patients about the following aspects of early recovery [1]: As they start to recover and feel their bodies getting larger, especially as they approach frightening, magical numbers on the scale that represent phobic weights, they may experience a resurgence of anxious and depressive symptoms, irritability, and sometimes suicidal thoughts. These mood symptoms, non-food-related obsessional thoughts, and compulsive behaviors, although often not eradicated, usually decrease with sustained weight gain and weight maintenance. Initial refeeding may be associated with mild transient fluid retention, but patients who abruptly stop taking laxatives or diuretics may experience marked rebound fluid retention for several weeks. As weight gain progresses, many patients also develop acne and breast tenderness and become unhappy and demoralized about resulting changes in body shape. Patients may experience abdominal pain and bloating with meals from the



delayed gastric emptying that accompanies malnutrition. These symptoms may respond to pro-motility agents [III]. Constipation may be ameliorated with stool softeners; if unaddressed, it can progress to obstipation and, rarely, to acute bowel obstruction.

When life-preserving nutrition must be provided to a patient who refuses to eat, nasogastric feeding is preferable to intravenous feeding [I]. When nasogastric feeding is necessary, continuous feeding (i.e., over 24 hours) may be better tolerated by patients and less likely to result in metabolic abnormalities than three to four bolus feedings a day [II]. In very difficult situations, where patients physically resist and constantly remove their nasogastric tubes, feeding through surgically placed gastrostomy or jejunostomy tubes may be an alternative to nasogastric feeding [II]. In determining whether to begin involuntary forced feeding, the clinician should carefully think through the clinical circumstances, family opinion, and relevant legal and ethical dimensions of the patient's treatment [I]. The general principles to be followed in making the decision are those directing good, humane care; respecting the wishes of competent patients; and intervening respectfully with patients whose judgment is severely impaired by their psychiatric disorders when such interventions are likely to have beneficial results [I]. For cooperative patients, supplemental overnight pediatric nasogastric tube feeding has been used in some programs to facilitate weight gain [III].

With severely malnourished patients (particularly those whose weight is <70% of their healthy body weight) who undergo aggressive oral, nasogastric, or parenteral refeeding, a serious refeeding syndrome can occur. Initial assessments should include vital signs and food and fluid intake and output, if indicated, as well as monitoring for edema, rapid weight gain (associated primarily with fluid overload), congestive heart failure, and gastrointestinal symptoms [I]. Patients' serum levels of phosphorus, magnesium, potassium, and calcium should be determined daily for the first 5 days of refeeding and every other day for several weeks thereafter, and electrocardiograms should be performed as indicated [II]. For children and adolescents who are severely malnourished (weight <70% of healthy body weight), cardiac monitoring, especially at night, may be desirable [II]. Phosphorus, magnesium, and/or potassium supplementation should be given when indicated [I].

## b. Psychosocial Interventions

The goals of psychosocial interventions are to help patients with anorexia nervosa 1) understand and cooperate with their nutritional and physical rehabilitation, 2) understand and change the behaviors and dysfunctional attitudes related to their eating disorder, 3) improve their interpersonal and social functioning, and 4) address comorbid psychopathology and psychological conflicts that reinforce or maintain eating disorder behaviors.

### i. Acute Anorexia Nervosa

During acute refeeding and while weight gain is occurring, it is beneficial to provide anorexia nervosa patients with individual psychotherapeutic management that is psychodynamically informed and provides empathic understanding, explanations, praise for positive efforts, coaching, support, encouragement, and other positive behavioral reinforcement [I]. Attempts to conduct formal psychotherapy with starving patients who are often negativistic, obsessional, or mildly cognitively impaired may be ineffective [II].

For children and adolescents, the evidence indicates that family treatment is the most effective intervention [I]. In methods modeled after the Maudsley approach, families become actively involved, in a blame-free atmosphere, in helping patients eat more and resist compulsive exercising and purging. For some outpatients, a short-term course of family therapy using these methods may be as effective as a long-term course; however, a shorter course of therapy may not be adequate for patients with severe obsessive-compulsive features or nonintact families [II].

Most inpatient-based nutritional rehabilitation programs create a milieu that incorporates emotional nurturance and a combination of reinforcers that link exercise, bed rest, and privileges to target weights, desired behaviors, feedback concerning changes in weight, and other observable parameters [II]. For adolescents treated in inpatient settings, participation in family group psychoeducation may be helpful to their efforts to regain weight and may be equally as effective as more intensive forms of family therapy [III].

### ii. Anorexia Nervosa after Weight Restoration

Once malnutrition has been corrected and weight gain has begun, psychotherapy can help patients with anorexia nervosa understand 1) their experience of their illness; 2) cognitive distortions and how these have led to their symptomatic behavior; 3) developmental, familial, and cultural antecedents of their illness; 4) how their illness may have been a maladaptive attempt to regulate their emotions and cope; 5) how to avoid or minimize the risk of relapse; and 6) how to better cope with salient developmental and other important life issues in the future. Clinical experience shows that patients may often display improved mood, enhanced cognitive functioning, and clearer thought processes after there is significant improvement in nutritional intake, even before there is substantial weight gain [II].

To help prevent patients from relapsing, emerging data support the use of cognitive-behavioral psychotherapy for adults [II]. Many clinicians also use interpersonal and/or psychodynamically oriented individual or group psychotherapy for adults after their weight has been restored [II]. For adolescents who have been ill <3 years, after weight has been restored, family therapy is a necessary component of treatment [I]. Although studies of different psychotherapies focus on these interventions as distinctly separate treatments, in practice there is frequent overlap of interventions [II].

It is important for clinicians to pay attention to cultural attitudes, patient issues involving the gender of the therapist, and specific concerns about possible abuse, neglect, or other developmental traumas [II]. Clinicians need to attend to their countertransference reactions to patients with a chronic eating disorder, which often include beleaguerment, demoralization, and excessive need to change the patient [I]. At the same time, when treating patients with chronic illnesses, clinicians need to understand the longitudinal course of the disorder and that patients can recover even after many years of illness [I]. Because of anorexia nervosa's enduring nature, psychotherapeutic treatment is frequently required for at least 1 year and may take many years [I].

Anorexics and Bulimics Anonymous and Overeaters Anonymous are not substitutes for professional treatment [I]. Programs that focus exclusively on abstaining from binge eating, purging, restrictive eating, or excessive exercising (e.g., 12-step programs) without attending to nutritional considerations or cognitive and behavioral deficits have not been studied and therefore cannot be recommended as the sole treatment for anorexia nervosa [I]. It is important for programs using 12-step models to be equipped to care for patients with the substantial psychiatric and general medical problems often associated with eating disorders [I].



Although families and patients are increasingly accessing worthwhile, helpful information through online web sites, newsgroups, and chat rooms, the lack of professional supervision within these resources may sometimes lead to users' receiving misinformation or create unhealthy dynamics among users. It is recommended that clinicians inquire about a patient's or family's use of Internet-based support and other alternative and complementary approaches and be prepared to openly and sympathetically discuss the information and ideas gathered from these sources [1].

### iii. *Chronic Anorexia Nervosa*

Patients with chronic anorexia nervosa generally show a lack of substantial clinical response to formal psychotherapy. Nevertheless, many clinicians report seeing patients with chronic anorexia nervosa who, after many years of struggling with their disorder, experience substantial remission, so clinicians are justified in maintaining and extending some degree of hope to patients and families [1]. More extensive psychotherapeutic measures may be undertaken to engage and help motivate patients whose illness is resistant to treatment [1] or, failing that, as compassionate care [1]. For patients who have difficulty talking about their problems, clinicians have reported that a variety of nonverbal therapeutic methods, such as the creative arts, movement therapy programs, and occupational therapy, can be useful [11]. Psychosocial programs designed for patients with chronic eating disorders are being implemented at several treatment sites and may prove useful [1].

## c. **Medications and Other Somatic Treatments**

### i. *Weight Restoration*

The decision about whether to use psychotropic medications and, if so, which medications to choose will be based on the patient's clinical presentation [1]. The limited empirical data on malnourished patients indicate that selective serotonin reuptake inhibitors (SSRIs) do not appear to confer advantage regarding weight gain in patients who are concurrently receiving inpatient treatment in an organized eating disorder program [1]. However, SSRIs in combination with psychotherapy are widely used in treating patients with anorexia nervosa. For example, these medications may be considered for those with persistent depressive, anxiety, or obsessive-compulsive symptoms and for bulimic symptoms in weight-restored patients [1]. A U.S. Food and Drug Administration (FDA) black box warning concerning the use of bupropion in patients with eating disorders has been issued because of the increased seizure risk in these patients. Adverse reactions to tricyclic antidepressants and monoamine oxidase inhibitors (MAOIs) are more pronounced in malnourished individuals, and these medications should generally be avoided in this patient population [1]. Second-generation antipsychotics, particularly olanzapine, risperidone, and quetiapine, have been used in small series and individual cases for patients, but controlled studies of these medications are lacking. Clinical impressions suggest that they may be useful in patients with severe, unremitting resistance to gaining weight; severe obsessional thinking; and denial that assumes delusional proportions [11]. Small doses of older antipsychotics such as chlorpromazine may be helpful prior to meals in very disturbed patients [11]. Although the risks of extrapyramidal side effects are less with second-generation antipsychotics than with first-generation antipsychotics, debilitated anorexia nervosa patients may be at a higher risk for these than expected. Therefore, if these medications are used, it is recommended that patients be carefully monitored for extrapyramidal symptoms and akathisia [1]. It is also important to routinely monitor patients for potential side effects of these medications, which can result in insulin resistance, abnormal lipid metabolism, and prolongation of the QTc interval [1]. Because ziprasidone has not been studied in individuals with anorexia nervosa and can prolong QTc intervals, careful monitoring of serial electrocardiograms and serum potassium measurements is needed if anorexic patients are treated with ziprasidone [1]. Antianxiety agents used selectively before meals may be useful to reduce patients' anticipatory anxiety before eating [11], but because eating disorder patients may have a high propensity to become dependent on benzodiazepines, these medications should be used routinely only with considerable caution [1]. Pro-motility agents such as metoclopramide may be useful for bloating and abdominal pains that occur during refeeding in some patients [11]. Electroconvulsive therapy (ECT) has generally not been useful except in treating severe co-occurring disorders for which ECT is otherwise indicated [1].

Although no specific hormone treatments or vitamin supplements have been shown to be helpful [1], supplemental calcium and vitamin D are often recommended [11]. Zinc supplements have been reported to foster weight gain in some patients, and patients may benefit from daily zinc-containing multivitamin tablets [11].

### ii. *Relapse Prevention*

Some data suggest that fluoxetine in dosages of up to 60 mg/day may help prevent relapse [1]. For patients receiving cognitive-behavioral therapy (CBT) after weight restoration, adding fluoxetine does not appear to confer additional benefits with respect to preventing relapse [11]. Antidepressants and other psychiatric medications may be used to treat specific, ongoing psychiatric symptoms of depressive, anxiety, obsessive-compulsive, and other comorbid disorders [1]. Clinicians should attend to the black box warnings in the package inserts relating to antidepressants and discuss the potential benefits and risks of antidepressant treatment with patients and families if such medications are to be prescribed [1].

### iii. *Chronic Anorexia Nervosa*

Although hormone replacement therapy (HRT) is frequently prescribed to improve bone mineral density in female patients, no good supporting evidence exists either in adults or in adolescents to demonstrate its efficacy [1]. Hormone therapy usually induces monthly menstrual bleeding, which may contribute to the patient's denial of the need to gain further weight [1]. Before estrogen is offered, it is recommended that efforts be made to increase weight and achieve resumption of normal menses [1]. There is no indication for the use of bisphosphonates such as alendronate in patients with anorexia nervosa [11]. Although there is no evidence that calcium or vitamin D supplementation reverses decreased bone mineral density, when calcium dietary intake is inadequate for growth and maintenance, calcium supplementation should be considered [1], and when the individual is not exposed to daily sunlight, vitamin D supplementation may be used [1]. However, large supplemental doses of vitamin D may be hazardous [1].

## 4. **Choice of Specific Treatments for Bulimia Nervosa**

The aims of treatment for patients with bulimia nervosa are to 1) reduce and, where possible, eliminate binge eating and purging; 2) treat physical complications of bulimia nervosa; 3) enhance patients' motivation to cooperate in the restoration of healthy eating patterns and participate in treatment; 4) provide education regarding healthy nutrition

and eating patterns; 5) help patients reassess and change core dysfunctional thoughts, attitudes, motives, conflicts, and feelings related to the eating disorder; 6) treat associated psychiatric conditions, including deficits in mood and impulse regulation, self-esteem, and behavior; 7) enlist family support and provide family counseling and therapy where appropriate; and 8) prevent relapse.

#### a. Nutritional Rehabilitation Counseling

A primary focus for nutritional rehabilitation is to help the patient develop a structured meal plan as a means of reducing the episodes of dietary restriction and the urges to binge and purge [I]. Adequate nutritional intake can prevent craving and promote satiety [I]. It is important to assess nutritional intake for all patients, even those with a normal body weight (or normal BMI), as normal weight does not ensure appropriate nutritional intake or normal body composition [I]. Among patients of normal weight, nutritional counseling is a useful part of treatment and helps reduce food restriction, increase the variety of foods eaten, and promote healthy but not compulsive exercise patterns [I].

#### b. Psychosocial Interventions

It is recommended that psychosocial interventions be chosen on the basis of a comprehensive evaluation of the individual patient that takes into consideration the patient's cognitive and psychological development, psychodynamic issues, cognitive style, comorbid psychopathology, and preferences as well as patient age and family situation [I]. For treating acute episodes of bulimia nervosa in adults, the evidence strongly supports the value of CBT as the most effective single intervention [I]. Some patients who do not respond initially to CBT may respond when switched to either interpersonal therapy (IPT) or fluoxetine [II] or other modes of treatment such as family and group psychotherapies [III]. Controlled trials have also shown the utility of IPT in some cases [II].

In clinical practice, many practitioners combine elements of CBT, IPT, and other psychotherapeutic techniques. Compared with psychodynamic or interpersonal therapy, CBT is associated with more rapid remission of eating symptoms [I], but using psychodynamic interventions in conjunction with CBT and other psychotherapies may yield better global outcomes [II]. Some patients, particularly those with concurrent personality pathology or other co-occurring disorders, require lengthy treatment [II]. Clinical reports suggest that psychodynamic and psychoanalytic approaches in individual or group format are useful once bingeing and purging improve [III].

Family therapy should be considered whenever possible, especially for adolescent patients still living with their parents [II] or older patients with ongoing conflicted interactions with parents [III]. Patients with marital discord may benefit from couples therapy [II].

A variety of self-help and professionally guided self-help programs have been effective for some patients with bulimia nervosa [I]. Several innovative online programs are currently under investigation and may be recommended in the absence of alternative treatments [III]. Support groups and 12-step programs such as Overeaters Anonymous may be helpful as adjuncts in the initial treatment of bulimia nervosa and for subsequent relapse prevention, but they are not recommended as the sole initial treatment approach for bulimia nervosa [I].

Issues of countertransference, discussed above with respect to the treatment of patients with anorexia nervosa, also apply to the treatment of patients with bulimia nervosa [I].

#### c. Medications

##### i. Initial Treatment

Antidepressants are effective as one component of an initial treatment program for most bulimia nervosa patients [I], with SSRI treatment having the most evidence for efficacy and the fewest difficulties with adverse effects [I]. To date, fluoxetine is the best studied of these and is the only FDA-approved medication for bulimia nervosa. Sertraline is the only other SSRI that has been shown to be effective, as demonstrated in a small, randomized controlled trial. In the absence of the therapists qualified to treat bulimia nervosa with CBT, fluoxetine is recommended as an initial treatment [I]. Dosages of SSRIs higher than those used for depression (e.g., fluoxetine 60 mg/day) are more effective in treating bulimic symptoms [I]. Evidence from a small open trial suggests fluoxetine may be useful for adolescents with bulimia [II].

Antidepressants may be helpful for patients with substantial concurrent symptoms of depression, anxiety, obsessions, or certain impulse disorder symptoms or for patients who have not benefited from or had only a suboptimal response to appropriate psychosocial therapy [I]. Tricyclic antidepressants and MAOIs have been rarely used with bulimic patients and are not recommended as initial treatments [I]. Several different antidepressants may have to be tried sequentially to identify the specific medication with the optimum effect [I].

Clinicians should attend to the black box warnings relating to antidepressants and discuss the potential benefits and risks of antidepressant treatment with patients and families if such medications are to be prescribed [I].

Small controlled trials have demonstrated the efficacy of the anticonvulsant medication topiramate, but because adverse reactions to this medication are common, it should be used only when other medications have proven ineffective [III]. Also, because patients tend to lose weight on topiramate, its use is problematic for normal or underweight individuals [III].

Two drugs that are used for mood stabilization, lithium and valproic acid, are both prone to induce weight gain in patients [I] and may be less acceptable to patients who are weight preoccupied. However, lithium is not recommended for patients with bulimia nervosa because it is ineffective [I]. In patients with co-occurring bulimia nervosa and bipolar disorder, treatment with lithium is more likely to be associated with toxicity [I].

##### ii. Maintenance Phase

Limited evidence supports the use of fluoxetine for relapse prevention [II], but substantial rates of relapse occur even with treatment. In the absence of adequate data, most clinicians recommend continuing antidepressant therapy for a minimum of 9 months and probably for a year in most patients with bulimia nervosa [II]. Case reports indicate that methylphenidate may be helpful for bulimia nervosa patients with concurrent attention-deficit/hyperactivity disorder (ADHD) [III], but it should be used only for patients who have a very clear diagnosis of ADHD [I].

##### iii. Combining Psychosocial Interventions and Medications

In some research, the combination of antidepressant therapy and CBT results in the highest remission rates; therefore, this combination is recommended initially when qualified CBT therapists are available [II]. In addition, when CBT alone does not result in a substantial reduction in symptoms after 10 sessions, it is recommended that fluoxetine be added [II].

#### iv. *Other Treatments*

Bright light therapy has been shown to reduce binge frequency in several controlled trials and may be used as an adjunct when CBT and antidepressant therapy have not been effective in reducing bingeing symptoms [III].

### 5. **Eating Disorder not Otherwise Specified**

Patients with subsyndromal anorexia nervosa or bulimia nervosa who meet most but not all of the DSM-IV-TR criteria (e.g., weight >85% of expected weight, binge and purge frequency less than twice per week) merit treatment similar to that of patients who fulfill all criteria for these diagnoses [II].

#### a. **Binge Eating Disorder**

##### i. *Nutritional Rehabilitation and Counseling*

Behavioral weight control programs incorporating low- or very-low-calorie diets may help with weight loss and usually with reduction of symptoms of binge eating [I]. It is important to advise patients that weight loss is often not maintained and that binge eating may recur when weight is gained [I]. It is also important to advise them that weight gain after weight loss may be accompanied by a return of binge eating patterns [I]. Various combinations of diets, behavior therapies, interpersonal therapies, psychodynamic psychotherapies, non-weight-directed psychosocial treatments, and even some "nondiet/health at every size" psychotherapy approaches may be of benefit for binge eating and weight loss or stabilization [III]. Patients with a history of repeated weight loss followed by weight gain ("yo-yo" dieting) or patients with an early onset of binge eating may benefit from following programs that focus on decreasing binge eating rather than on weight loss [II].

There is little empirical evidence to suggest that obese binge eaters who are primarily seeking weight loss should receive different treatment than obese individuals who do not binge eat [I].

##### ii. *Other Psychosocial Treatments*

Substantial evidence supports the efficacy of individual or group CBT for the behavioral and psychological symptoms of binge eating disorder [I]. IPT and dialectical behavior therapy have also been shown to be effective for behavioral and psychological symptoms and can be considered as alternatives [II]. Patients may be advised that some studies suggest that most patients continue to show behavioral and psychological improvement at their 1-year follow-up [II]. Substantial evidence supports the efficacy of self-help and guided self-help CBT programs and their use as an initial step in a sequenced treatment program [I]. Other therapies that use a "nondiet" approach and focus on self-acceptance, improved body image, better nutrition and health, and increased physical movement have been tried, as have addiction-based 12-step approaches, self-help organizations, and treatment programs based on the Alcoholics Anonymous model, but no systematic outcome studies of these programs are available [III].

##### iii. *Medications*

Substantial evidence suggests that treatment with antidepressant medications, particularly SSRI antidepressants, is associated with at least a short-term reduction in binge eating behavior but, in most cases, not with substantial weight loss [I]. The medication dosage is typically at the high end of the recommended range [I]. The appetite-suppressant medication sibutramine\* is effective for binge suppression, at least in the short term, and is also associated with significant weight loss [II].

**\*Note from the National Guideline Clearinghouse (NGC):** On October 8, 2010, Abbott Laboratories and the U.S. Food and Drug Administration (FDA) notified healthcare professionals and patients about the voluntary withdrawal of Meridia (sibutramine), an obesity drug, from the U.S. market because of clinical trial data indicating an increased risk of heart attack and stroke. Physicians are advised to stop prescribing Meridia to their patients, and patients should stop taking this medication. Patients should talk to their health care provider about alternative weight loss and weight loss maintenance programs. See the [FDA Web site](#) for more information.

The anticonvulsant medication topiramate is effective for binge reduction and weight loss, although adverse effects may limit its clinical utility for some individuals [II]. Zonisamide may produce similar effects regarding weight loss and can also cause side effects [III].

##### iv. *Combining Psychosocial and Medication Treatments*

For most eating disorder patients, adding antidepressant medication to their behavioral weight control and/or CBT regimen does not have a significant effect on binge suppression when compared with medication alone. However, medications may induce additional weight reduction and have associated psychological benefits [II]. Adding the weight loss medication orlistat to a guided self-help CBT program may yield additional weight reduction [II]. Fluoxetine in conjunction with group behavioral treatment may not aid in binge cessation or weight loss but may reduce depressive symptoms [II].

#### b. **Night Eating Syndrome**

Progressive muscle relaxation has been shown to reduce symptoms associated with night eating syndrome [III]. Sertraline has also been shown to reduce these symptoms [II].

#### **Definitions:**

The three categories of endorsement are as follows:

[I] Recommended with substantial clinical confidence

[II] Recommended with moderate clinical confidence

[III] May be recommended on the basis of individual circumstances

## Clinical Algorithm(s)

None provided

## Evidence Supporting the Recommendations

### Type of Evidence Supporting the Recommendations

The type of evidence supporting the recommendations is not specifically stated.

The evidence base for practice guidelines is derived from two sources: research studies and clinical consensus. Where gaps exist in the research data, evidence is derived from clinical consensus, obtained through extensive review of multiple drafts of each guideline. In addition, each reference at the end of the original guideline document is followed by a letter code in brackets that indicates the nature of the supporting evidence, as follows:

- **[A]** *Double-blind, randomized clinical trial.* A study of an intervention in which subjects are prospectively followed over time; there are treatment and control groups; subjects are randomly assigned to the two groups; both the subjects and the investigators are blind to the assignments.
- **[A-]** *Randomized clinical trial.* Same as above but not double-blind.
- **[B]** *Clinical trial.* A prospective study in which an intervention is made and the results of that intervention are tracked longitudinally; study does not meet standards for a randomized clinical trial.
- **[C]** *Cohort or longitudinal study.* A study in which subjects are prospectively followed over time without any specific intervention.
- **[D]** *Control study.* A study in which a group of patients and a group of control subjects are identified in the present and information about them is pursued retrospectively or backward in time.
- **[E]** *Review with secondary analysis.* A structured analytic review of existing data, e.g., a meta-analysis or a decision analysis.
- **[F]** *Review.* A qualitative review and discussion of previously published literature without a quantitative synthesis of the data.
- **[G]** *Other.* Textbooks, expert opinion, case reports, and other reports not included above.

## Benefits/Harms of Implementing the Guideline Recommendations

### Potential Benefits

Appropriate treatment of eating disorders with improved clinical outcomes

### Potential Harms

#### **Treatment of Anorexia Nervosa**

- *Nutritional rehabilitation:* For some patients, giving up severe dietary restrictions and restraints appears to increase binge-eating behavior, which is often accompanied by compensatory purging. Patients may experience abdominal pain and bloating with meals from the delayed gastric emptying that accompanies malnutrition. Constipation, which may be ameliorated with stool softeners, can progress to obstipation and, rarely, acute bowel obstruction. As weight gain progresses, many patients also develop acne and breast tenderness. Many patients become unhappy and demoralized about resulting changes in body shape. A severe refeeding syndrome may occur when severely malnourished patients (generally those weighing <70% of their healthy body weight) are re-fed too rapidly, particularly in the context of enteral or parenteral feedings but also with vigorous oral refeeding regimens. This syndrome consists of hypophosphatemia, hypomagnesemia, hypocalcemia, and fluid retention. Thiamine deficiency may also be seen as a feature of this syndrome. Excessively rapid refeeding and nasogastric or parenteral feeding may be particularly dangerous because of their potential for inducing severe fluid retention, cardiac arrhythmias, cardiac failure, respiratory insufficiency, delirium, seizures, rhabdomyolysis, red cell dysfunction, and even sudden death, especially in the lowest-weight patients. Infection is always a risk with parenteral feedings in emaciated and potentially immunocompromised patients with anorexia nervosa. As patients start to recover and feel their bodies becoming larger, and especially as they approach frightening magical numbers on the scale that represent phobic weights, they may experience a resurgence of anxious and depressive symptoms, irritability, and sometimes suicidal thoughts. These mood symptoms, non-food-related obsessional thoughts, and compulsive behaviors, although often not eradicated, usually decrease with sustained weight gain.
- *Medications:* Malnourished patients are much more prone to the side effects of medications.

#### **Treatment of Bulimia Nervosa**

- *Psychosocial treatments:* Patients with bulimia nervosa occasionally have difficulties with certain elements of psychotherapy. Possible adverse effects of psychotherapeutic and psychosocial interventions, steps that clinicians might take to minimize negative therapeutic reactions, and issues concerning countertransference apply to the treatment of patients with bulimia nervosa.
- *Medications:* High dropout rates may also be seen in patients using selective serotonin reuptake inhibitors (SSRIs). Side effects vary widely across studies depending on the type of antidepressant medication used. In the multicenter fluoxetine trials, sexual side effects were common, and at the dosage of 60 mg/day, insomnia, nausea, and asthenia were seen in 25%-33% of patients. For the tricyclic antidepressants, common side effects include sedation, constipation, dry mouth, and, with amitriptyline, weight gain. The toxicity and potential lethality of tricyclic antidepressant overdosage also dictate caution in prescribing this class of drug for patients who are at risk for suicide. There is a risk of spontaneous hypertensive crises in patients with bulimia nervosa taking monoamine oxidase inhibitors (MAOIs). Although there are data indicating that fluoxetine can be effective in preventing relapse in these patients,

Other data suggest that high rates of relapse occur while antidepressants are being taken and possibly higher rates are seen when the medication is withdrawn. The use of lithium carbonate is problematic, because lithium levels may shift markedly with rapid volume changes. Practitioners have reported several patients experiencing adverse effects with the drug, such as word-finding difficulties and paresthesias in a sizable minority of patients.

## Qualifying Statements

### Qualifying Statements

This guideline is not intended to be construed or to serve as a standard of medical care. Standards of medical care are determined on the basis of all clinical data available for an individual patient and are subject to change as scientific knowledge and technology advance and patterns evolve. These parameters of practice should be considered guidelines only. Adherence to them will not ensure a successful outcome in every individual, nor should they be interpreted as including all proper methods of care or excluding other acceptable methods of care aimed at the same results. The ultimate judgment regarding a particular clinical procedure or treatment plan must be made by the psychiatrist in light of the clinical data presented by the patient and the diagnostic and treatment options available.

## Implementation of the Guideline

### Description of Implementation Strategy

An implementation strategy was not provided.

### Implementation Tools

Mobile Device Resources

Quick Reference Guides/Physician Guides

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

## Institute of Medicine (IOM) National Healthcare Quality Report Categories

### IOM Care Need

Getting Better

### IOM Domain


Effectiveness

Patient-centeredness

## Identifying Information and Availability

### Bibliographic Source(s)

American Psychiatric Association (APA). Practice guideline for the treatment of patients with eating disorders. 3rd ed. Washington (DC): American Psychiatric Association (APA); 2006 Jun. 128 p. [765 references]

American Psychiatric Association. Treatment of patients with eating disorders, third edition. *Am J Psychiatry* 2006 Jul;163 (7 Suppl):4-54. [PubMed](#) 

### Adaptation

Not applicable: The guideline was not adapted from another source.

### Date Released

1993 (revised 2006 Jun; reaffirmed 2011)

### Guideline Developer(s)

American Psychiatric Association - Medical Specialty Society

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Work Group on Eating Disorders

Steering Committee on Practice Guidelines

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### Financial Disclosures/Conflicts of Interest

This practice guideline has been developed by psychiatrists who are in active clinical practice. In addition, some contributors are primarily involved in research or other academic endeavors. It is possible that through such activities some contributors, including work group members and reviewers, have received income related to treatments discussed in this guideline. A number of mechanisms are in place to minimize the potential for producing biased recommendations due to conflicts of interest. Work group members are selected on the basis of their expertise and integrity. Any work group member or reviewer who has a potential conflict of interest that may bias (or appear to bias) his or her work is asked to disclose this to the Steering Committee on Practice Guidelines and the work group. Iterative guideline drafts are reviewed by the Steering Committee, other experts, allied organizations, American Psychiatric Association (APA) members, and the APA Assembly and Board of Trustees; substantial revisions address or integrate the comments of these multiple reviewers. The development of the APA practice guidelines is not financially supported by any commercial organization.

### Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: American Psychiatric Association. Practice guideline for the treatment of patients with eating disorders (revision). *Am J Psychiatry* 2000 Jan; 157(1 Suppl): 1-39.

The guideline was reaffirmed for currency by the developer in 2011.

### Guideline Availability

Electronic copies: Available from the [American Psychiatric Association \(APA\) Web site](#).

Print copies: Available from the American Psychiatric Press, Inc (APPI), 1000 Wilson Boulevard, Suite 1825, Arlington, VA 22209-3901; (703) 907-7322; (800) 368-5777; fax (703) 907-1091

### Availability of Companion Documents

The following are available:

- **Treating eating disorders. Quick reference guide.** Arlington, VA: APA, 2006 Jul. Available from the [American Psychiatric Association \(APA\) Web site](#).
- **American Psychiatric Association practice guideline development process.** Arlington (VA): APA, 2004. Available from the [APA Web site](#). Also available in a PDA version.

Print copies: Available from the American Psychiatric Press, Inc (APPI), 1000 Wilson Boulevard, Suite 1825, Arlington, VA 22209-3901; (703) 907-7322; (800) 368-5777; fax (703) 907-1091

Additionally, a continuing medical education (CME) course is available online at the [APA Web site](#).

### Patient Resources

None available

### NGC Status

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