

REPORT 8 OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH (A-07)
Eating Disorders and Promotion of Healthy Body Image
(Resolutions 420 and 423, A-06)
(Reference Committee D)

EXECUTIVE SUMMARY

Objective: To review the etiology, incidence, and treatment of eating disorders, as well as strategies to promote early recognition and access to appropriate medical intervention for people with these disorders. The report also reviews prevention programs, including those aimed at pre-adolescent children and their parents.

Methods: Review articles and position papers on eating disorders by health professional organizations and the Agency for Healthcare Research and Quality were summarized for this report. Literature searches were conducted in the PubMed database for English-language review articles published between January 2005 and July 2006 using the search terms “eating disorders,” “anorexia nervosa,” “bulimia nervosa,” and “binge eating disorder,” cross-indexed with the terms “etiology,” “incidence,” “treatment,” and “prevention.” Additional information was obtained by searching the Cochrane Database of Systematic Reviews and the Web sites of relevant federal agencies and professional and advocacy organizations.

Results: Anorexia nervosa and bulimia nervosa are the most commonly known and studied eating disorders, although most people who exhibit disordered eating behaviors are diagnosed with “eating disorder not otherwise specified” (EDNOS). Genetic, social, and environmental factors, including dieting behaviors, are implicated in the etiology of eating disorders. Efforts to combat overweight and obesity, particularly in children and adolescents, must avoid inadvertently encouraging unhealthful dieting and weight loss behaviors. Most patients will not present to a primary care physician with a complaint of an eating disorder, but rather for treatment of other, possibly related, conditions. Several health professional organizations have published position papers on the identification and treatment of eating disorders, including recommended screening questions. However, there is no simple, standardized treatment for these disorders. Treatment can take years and involve different health specialists. Relapses are common, and many of those who recover continue to suffer from other eating disorders or mental health issues. Early intervention is recommended, although insurance coverage is often limited for early stages of these disorders and for long treatment durations. Research on eating disorders has been limited by inconsistent criteria for the early stages of anorexia nervosa, bulimia nervosa, and other EDNOS conditions; varying definitions of outcomes; high drop-out rates; and small sample sizes, especially across age, sex, and cultural groups. Insufficient evidence is available to recommend any specific prevention programs.

Conclusions: Eating disorders are serious, difficult-to-treat conditions that can affect people of any age, sex, ethnic, or socioeconomic group. More research is needed on the etiology, prevention, and treatment of all eating disorders, including the variety of conditions currently classified under EDNOS. Research on primary prevention, particularly in pre-adolescent children and their parents, is noticeably lacking. Increased awareness of the signs, symptoms, and seriousness of eating disorders may improve rates of early intervention and treatment. However, more work is needed to improve access to care for individuals at all stages of illness and economic status.

REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH

CSAPH Report 8-A-07

Subject: Eating Disorders and Promotion of Healthy Body Image
(Resolutions 420 and 423, A-06)

Presented by: Mohamed K. Khan, MD, PhD

Referred to: Reference Committee D
(Elizabeth P. Kanof, MD, Chair)

1 Resolution 423 (A-06), introduced by the American Academy of Child and Adolescent Psychiatry, the
2 American Psychiatric Association, the American Academy of Pediatrics, and the American Academy
3 of Psychiatry and the Law at the 2006 Annual Meeting and referred to the Board of Trustees, asks:

4
5 That our American Medical Association (AMA) work with all appropriate specialty societies to
6 prepare a review of the scientific literature on the etiology, incidence, and treatment of eating
7 disorders and develop specific strategies designed to promote early recognition and access to
8 appropriate medical intervention for people with eating disorders.
9

10 Resolution 420 (A-06), introduced by the Medical Student Section at the 2006 Annual Meeting and
11 referred to the Board of Trustees, asks:

12
13 That our American Medical Association support school-based primary prevention programs for
14 pre-adolescent children in order to prevent the onset of eating disorders and other behaviors
15 associated with a negative body image.
16

17 This report reviews the scientific literature on the etiology, incidence, and treatment of eating disorders
18 and considers specific strategies to promote early recognition and access to appropriate medical
19 intervention for people with these disorders. It also considers prevention programs, including those
20 aimed at pre-adolescent children and their parents.
21

22 Current AMA Policy on Eating Disorders, Health Promotion, and Disease Prevention

23
24 Policy H-150.965 (AMA Policy Database) on eating disorders asks AMA members to help their
25 patients avoid obsessions with dieting and to develop balanced, individualized approaches to finding
26 the body weight that is best for each of them. Additionally, this policy encourages training of all
27 school-based physicians, counselors, coaches, trainers, teachers, and nurses to recognize unhealthy
28 eating, dieting, and weight restrictive behaviors in adolescents and to offer education and appropriate
29 referral of adolescents and their families for interventional counseling. Policy H-425.993 directs our
30 AMA to actively support appropriate scientific, educational, and legislative activities that encourage
31 healthful lifestyles and personal living habits, and strongly emphasizes the cost savings of disease
32 prevention. (See Appendix A for complete policy statements.)

Background

Eating disorders are psychiatric disorders that involve aberrant eating patterns and distorted ideas about food and body size, with adverse effects on physical and mental health status, some of which can be life-threatening. Although most commonly found in adolescent girls and young women, eating disorders increasingly affect pre-pubertal children and middle-aged adults, including males and females of all ethnic and economic backgrounds. A full understanding of the etiology of eating disorders is evolving, but research implicates a genetic predisposition, structural and functional abnormalities in the brain, and social and environmental factors. Treatment of eating disorders is often lengthy and complex, involving different health specialists. As such, it can be expensive, and insurance coverage for eating disorders is frequently inadequate.

Prevention of eating disorders and early intervention can be difficult. Individuals with, or at risk for, eating disorders may be adept at hiding their condition, particularly at early stages. However, prevention and early intervention are especially important in children and adolescents, in whom nutrient deficiencies can cause potentially irreversible physical and psychological damage.¹ Nevertheless, the primary prevention of eating disorders has not been adequately addressed, particularly programs that target pre-adolescent children and their parents.

Methods

Several review articles and position papers on eating disorders have been published by various health professional organizations¹⁻⁹; this report summarizes those reviews for a general physician audience. To supplement these comprehensive reviews, literature searches also were conducted in the PubMed database for English-language review articles published between January 2005 and July 2006 using the search terms “eating disorders,” “anorexia nervosa,” “bulimia nervosa,” and “binge eating disorder,” cross-indexed with the terms “etiology,” “incidence,” “treatment,” and “prevention.” The Cochrane Database of Systematic Reviews was likewise searched for reviews published between 2001 and July 2006. The evidence-based review on eating disorders published by the Agency for Healthcare Research and Quality¹⁰ was reviewed, as were Web sites managed by federal agencies and applicable professional and advocacy organizations. Additional articles were identified by reviewing the reference lists of pertinent publications.

Definitions and Diagnostic Criteria

Eating disorders encompass a wide range of conditions, all of which can have serious, adverse effects on health. Anorexia nervosa (AN) and bulimia nervosa (BN) are the most commonly known and studied eating disorders, and both have strict diagnostic criteria.¹¹ Most individuals who exhibit disordered eating symptoms do not meet the full criteria for either condition and are usually diagnosed with “eating disorder not otherwise specified” (EDNOS), including those suffering from binge eating disorder (BED).¹¹ Despite the greater prevalence of EDNOS within the general population, EDNOS is less well studied than AN or BN due to the diverse nature of this category.¹⁰

AN is characterized by a refusal to maintain a normal body weight, despite having a very low body weight (eg, less than 85% of expected body weight).¹¹ Individuals with AN have an extreme and obsessive fear of weight gain and a distorted view of their own body size or shape, which inordinately influences their self-esteem and self-image. Despite their low weight, individuals resort to unhealthy behaviors to continue their weight loss, such as fasting, excessive exercise, and purging. Amenorrhea is required for a diagnosis of AN in postmenarcheal girls and women, although its significance is

1 questionable.^{8,10} AN is defined as either restricting type or as binge-eating/purging type (Appendix
2 B).¹¹

3
4 BN is typified by recurring episodes of binge eating followed by inappropriate compensatory behaviors
5 to prevent weight gain. Binge eating involves the consumption of an unusually large amount of food in
6 a discrete time period (eg, within 2 hours) while feeling unable to stop or otherwise control one's eating
7 behavior. Inappropriate compensatory behaviors include self-induced vomiting; misuse of laxatives,
8 diuretics, enemas, or other treatments; fasting; and excessive exercise. To receive a diagnosis of BN,
9 the episodes of binge eating and inappropriate compensatory behavior must occur at least twice per
10 week for three months. In addition, body size and shape must have an excessive impact on the
11 individual's self-esteem.¹¹ BN differs from AN-binge eating/purging (AN-P) in that people who binge
12 and purge, weigh less than 85% of their expected body weight, and are amenorrheic are diagnosed with
13 AN-P; if these last two criteria are not met, the diagnosis is BN-purging. BN-non-purging refers to
14 those who fast or exercise excessively after a binge eating episode (Appendix B). In contrast to AN,
15 people with BN are often normal weight or overweight.⁹

16
17 EDNOS is a broad "catch-all" category that includes individuals with disordered eating behaviors who
18 do not meet the full diagnostic criteria of AN or BN (for example, meeting all AN criteria except for
19 amenorrhea). Appendix B lists 6 examples of such disorders from the *Diagnostic and Statistical*
20 *Manual of Mental Disorders* (DSM)-IV-TR. The most commonly studied EDNOS condition is binge
21 eating disorder (BED), which involves repeated binge eating behavior (as defined for BN) at least twice
22 per week for six months, without habitual use of inappropriate compensatory behaviors. EDNOS also
23 includes other types of disordered eating, such as purging disorder, which is similar to BN but does not
24 involve binging. Purging behavior is considered by some to include the under-dosing of insulin by
25 diabetic patients in order to manage their weight.⁸ In addition, athletes with the "female athlete triad,"
26 which involves disordered eating (ranging from simple dieting to clinical eating disorders),
27 amenorrhea, and osteoporosis, could be diagnosed with EDNOS.⁸ Despite the imprecise nature of the
28 EDNOS classification, it covers important disorders that require treatment.

29
30 Eating disorders encompass other conditions as well, including lesser-known (and less well-studied)
31 conditions related to nighttime eating. These nighttime eating conditions do not have established DSM-
32 IV diagnostic criteria, but have been reported in the literature. Night eating syndrome (NES) involves
33 hyperphagia in the evening, insomnia, and loss of appetite in the morning.⁸ Individuals with NES
34 consume more than one-third of their total energy intake after dinner, waking several times in the night
35 to eat. They remember what they ate and generally do not binge or purge.¹² Nocturnal eating/drinking
36 syndrome is a sleep disorder involving waking several times in the night to quickly and uncontrollably
37 consume large quantities of food.¹³ Nocturnal sleep-related eating disorder is associated with
38 sleepwalking, as sufferers do not, or only partially, remember consuming foods, which are often
39 unusual (eg, raw bacon).¹² While not the focus of this report, these lesser-known disorders are
40 mentioned to increase awareness of the wide spectrum of disordered eating behaviors.

41
42 Definitions of specific eating disorders continue to evolve. Current diagnostic criteria were based on
43 the presentation of these disorders in teenage girls and young women, most of whom were Caucasian.
44 Likewise, research on prevalence, etiology, and treatment options has focused on Caucasian girls and
45 young women. The presentation, natural history, and best treatment options for non-Caucasians, older
46 women, pre-adolescent children, and teenage boys and men may differ, and more research is needed in
47 these nontraditional populations. There is considerable variability in the severity and type of eating
48 disorders. Physicians are encouraged to consider the potential signs and symptoms of disordered

1 eating, not just diagnostic criteria, that may present in any individual, such as calorie counting and
2 dieting in a healthy young child.

3
4 Some patients with disordered eating behaviors seek care from their primary care pediatrician, internist,
5 or gynecologist at the urging of family or friends, despite their lack of motivation to change their
6 behavior. Other patients will not present with a complaint of an eating disorder per se, but may seek
7 treatment for other conditions.^{7,9} Thus, primary care physicians should be aware of possible signs and
8 symptoms of eating disorders in their patients (Appendix C). Patients exhibiting these signs or
9 symptoms should receive a thorough history and physical examination. As part of routine health care,
10 the American Academy of Pediatrics (AAP) recommends screening all preteens and adolescents about
11 their eating patterns and satisfaction with their body appearance.² Appendix D outlines specific
12 screening questions recommended by the AAP and others to identify children, adolescents, or young
13 adults with eating disorders.^{2,7} Additional screening tools have also been developed.^{14,15} Screening
14 questions may be helpful for patients at any age, and commonly address weight, diet, physical activity,
15 and physical symptoms. However, it is important to remember that the primary issues for individuals
16 with eating disorders concern control or the lack of control. Patients in whom eating disorders are
17 suspected or apparent should be referred for psychiatric evaluation. A team approach is generally
18 recommended, involving mental health professionals such as an individual therapist and a family
19 therapist (for a child or adolescent), as well as a registered dietitian.^{1,2,5,7-9} Other specialists to treat
20 complications or other health conditions associated with the eating disorder may also be recommended,
21 such as a recreation therapist or dentist. The primary care physician often maintains an active role by
22 frequently monitoring the patient's medical status and nutrition intake, and by providing health
23 education.⁷ Members of the treatment team need to consider the individual and his or her readiness to
24 change at the center of the treatment plan, and provide clear and consistent communication between
25 themselves and the individual. Appendix E lists resources recommended by the American Psychiatric
26 Association for clinicians and their patients.⁸

27 28 Prevalence

29
30 Estimates of the overall prevalence of eating disorders are lacking. As noted above, eating disorders
31 are more commonly found in adolescent girls and young women, although increasingly, pre-pubertal
32 children and middle-aged adults are exhibiting disordered eating behaviors.¹⁰ Males comprise as many
33 as 5% to 10% of eating disorder cases.² Although eating disorders are less commonly diagnosed
34 among young African American and Asian women than in Hispanic, Native American, and Caucasian
35 women in the United States, no ethnic or socioeconomic group is immune.⁸ In addition, the true
36 prevalence of eating disorders is likely higher than reported, as many people with these disorders hide
37 their behaviors.¹⁶

38
39 In women, the lifetime prevalence of AN ranges from 0.3% to 3.7%, depending on the definition.⁸
40 Incidence of AN is estimated at 8 per 100,000 persons per year, although estimates again vary by
41 definition of AN and study design.¹⁶ The prevalence ratio is 1:9, males to females,¹⁰ although a recent
42 survey indicated that males may comprise as many as 25% of AN cases.¹⁷ The prevalence of AN in
43 children and younger adolescents is not well studied.⁸

44
45 The lifetime prevalence of BN in women ranges from 1% to 4.2%.⁸ As with AN, the prevalence ratio
46 is 1:9, males to females,¹⁰ although recent data indicate the prevalence in men may be higher than
47 previously reported.¹⁷ Also like AN, the prevalence of BN in children and young adolescents is not
48 well known.⁸

1 The prevalence of EDNOS has not been reported, although estimates for BED (a type of EDNOS) are
2 between 0.7% and 3%. Among obese individuals the prevalence of BED is estimated at between 5%
3 and 8%.¹⁰ The prevalence of binge eating and BED is relatively equal across the sexes and racial and
4 ethnic groups, although some studies suggest a greater risk of BED among lower socioeconomic
5 groups.¹⁰ The prevalence of BED in children and young adolescents has not been reported.
6

7 In the general population, the prevalence of NES is estimated at 1.5%. Research has found that 7% to
8 9% of obesity clinic patients and 27% of bariatric surgery patients suffer from NES^{12,18} and 12% of
9 psychiatric outpatients.¹⁸ However, consistent diagnostic criteria have not been established for NES,^{8,19}
10 making estimates of the prevalence of NES and other sleep-related eating syndromes difficult to
11 calculate.
12

13 Etiology

14
15 Research implicates genetics, structural and functional abnormalities in the brain, and social and
16 environmental factors in the etiology of eating disorders. Etiology varies by type of disorder, although
17 AN, BN, and many types of EDNOS share numerous common risk factors, such as sex, race/ethnicity,
18 family history of eating disorders and gastrointestinal problems in childhood, early menarche, a history
19 of sexual abuse or other traumatic events, heightened body size concerns, excessive dieting, poor self-
20 esteem, perfectionism, and various psychiatric conditions.^{6,10,20,21}
21

22 Research has found that AN and BN have substantial hereditary and genetic components.^{8,10} Specific
23 chromosomes (1p, 10p) and genes (*5HT2A*) are associated with increased susceptibility to AN and
24 BN.^{8,10} In addition, disturbances in neurotransmitter functions, particularly those involving serotonin,
25 have been identified in individuals with AN or BN.¹⁰ Likewise, BED also has a hereditary component,
26 although the research basis for this is less substantial.¹⁰
27

28 Co-occurring anxiety, personality, mood, and substance use disorders are common among individuals
29 with BN and AN. Major depression or dysthymia afflicts 50% to 75% of AN and BN patients.⁸
30 Likewise, obsessive-compulsive disorder and other anxiety disorders, such as social phobia, are
31 common among BN and AN patients.⁸ Substance abuse is particularly common among BN patients
32 and AN patients with the binge eating/purging subtype.⁸
33

34 In addition to genetic susceptibilities and psychiatric comorbidities, social and environmental factors
35 play an important role in the development of eating disorders. Rates of traumatic events, such as adult
36 rape and molestation, aggravated assault, and physical neglect, are higher in individuals with BN.
37 Childhood obesity; having obese parents; parental dieting; criticism about body weight, shape, or eating
38 behaviors; parental psychiatric or alcohol use disorders; and a low level of parental contact combined
39 with high expectations can also increase the likelihood of BN or BED development.^{7,10,21} In middle-
40 aged and older individuals, body image concerns, fear of aging, and adverse life events such as death or
41 divorce may precipitate a late-onset eating disorder.⁸ Additionally, social and cultural environments
42 that value a thin appearance may also increase risk of eating disorders.⁸
43

44 Excessive exercise may also be a risk factor for (as well as a symptom of) eating disorders.⁸
45 Competitive athletes are at greater risk of developing an eating disorder, particularly in fields such as
46 gymnastics, figure skating, ballet, and distance running, in which appearance or a thin physique is
47 valued.⁸ Likewise, body builders and wrestlers are also at increased risk.⁸ The “female athlete triad”
48 refers to women athletes who exhibit disordered eating behavior, amenorrhea, and osteoporosis.⁸ Body
49 dysmorphic disorder (BDD) is a body image disorder related to obsessive-compulsive disorder that is

1 common among AN patients. A type of BDD more commonly seen in men is muscle dysmorphia, in
 2 which individuals are preoccupied with becoming more lean and muscular, and in which abnormal
 3 eating behaviors are also exhibited.⁸

4
 5 Concern exists that efforts to combat overweight and obesity in children and adolescents must be
 6 carefully conducted to avoid unintended consequences. As noted above, criticism about body weight,
 7 shape, or eating behaviors, particularly in these age groups, has been found to increase the risk of eating
 8 disorders in susceptible individuals. Such criticism can lead to excessive dieting, skipping meals, and
 9 excessive exercise, which increase the risk of developing an eating disorder.⁷ By high school,
 10 substantial proportions of adolescents are dieting and engaging in other weight control behaviors. The
 11 2005 Youth Risk Behavior Survey conducted by the Centers for Disease Control and Prevention found
 12 that 30% percent of boys and 62% of girls in US high schools are trying to lose weight, although only
 13 25% of boys and 38% of girls consider themselves overweight.²² Many of these weight control
 14 behaviors are unhealthy and include fasting for 24 hours or longer (12% of adolescents); using diet
 15 pills, powders, or liquids without a doctor's advice (6%); and/or vomiting or using laxatives (5%).²²
 16 Among adolescents, moderate dieters have been found to be 5 times more likely to develop an eating
 17 disorder than nondieters, while severe dieters were 18 times more likely to do so.²³

18
 19 Dieting in children and adolescents is particularly troubling because it can lead to nutrient deficiencies
 20 and suboptimal growth.²⁴ Furthermore, several studies have found that dieting, which often involves
 21 denying hunger cues, increases the risk of overeating and obesity, and does not result in weight loss in
 22 adolescents.^{24,25} Instead of relying on feelings of hunger or fullness to control their eating behaviors,
 23 dieters learn to rely on cognitive control,²⁴ which in turn increases the risk of disordered eating and
 24 eating disorders.²⁵ Chronic dieting and restrained eating may increase the risk of BED in particular,⁹
 25 although the risk appears minimal in those without other risk factors who participate in professionally
 26 supervised weight loss programs.²⁶ It is important for physicians to inquire about the dietary habits not
 27 just of underweight patients, but also of those of normal weight or who are overweight or obese, to
 28 prevent dieting from creating or exacerbating disordered eating behaviors.

30 Treatment

31
 32 Treatment team members should communicate regularly and develop treatment goals together with the
 33 patient, or in the case of children and adolescents, the patient and family. Treatment is usually
 34 expensive, and insurance coverage for eating disorders is frequently inadequate. However, early
 35 treatment is easier and more effective than treatment at later stages of the illness, at which point
 36 disordered eating behaviors are more ingrained.^{6,8} Early intervention is especially important in children
 37 and adolescents, in whom nutrient deficiencies can result in potentially irreversible physical and
 38 psychological harm, including growth retardation, pubertal delay or arrest, menstrual abnormalities and
 39 reproductive problems, loss of dental enamel, loss of normal bowel function, osteoporosis, structural
 40 brain changes, and premature death.^{1,7,10}

41
 42 *Anorexia Nervosa:* There is no general agreement on the optimal approach for treating AN. Some
 43 evidence exists that cognitive behavioral therapy (CBT) reduces the risk of relapse among adult AN
 44 patients after weight restoration.¹⁰ Likewise, certain types of family-based therapy initially centered on
 45 parental control of the nutrition intervention have been effective in treating adolescents with AN,
 46 resulting in weight gain and psychological improvements.^{10,27} However, the permanency of these gains
 47 is unknown, as is the best type of family therapy to use, particularly in younger patients with a shorter
 48 duration of illness.¹⁰ Antidepressants are not effective in treating AN.^{28,29}

1 Despite the lack of a gold standard, treatment is necessary and important to combat the disease. AN is
2 one of the most lethal psychiatric disorders, due to either medical complications of the disease or
3 suicide.^{6,30} Mortality rates of 20% at 20 years follow-up have been reported.⁶ The estimated rate of
4 mortality is 12 times that of non-AN sufferers and twice that of women with other psychiatric disorders.
5 Risk of suicide is particularly high, about 1.5 times that of individuals suffering from major depression.
6 Relapse is less likely if treatment begins early (within three years of onset) and if the disease starts
7 before age 18 years, although long-term support is needed to prevent recurrence.

8
9 Weight restoration is critical to recovery,⁶ although no pharmacological treatment for AN has been
10 found to significantly improve weight gain.¹⁰ In addition to weight restoration, nutritional
11 rehabilitation of the AN patient includes correcting malnutrition and normalizing eating patterns and
12 perceptions of hunger and satiety.⁸ Less restrictive behavioral interventions are generally more
13 acceptable to patients than intensive re-feeding programs.⁶ Outpatient treatment may be as effective,
14 and more cost-effective, than inpatient treatment, but this may depend on the severity of illness and the
15 patient's willingness to be treated.⁶ Once a safe weight has been attained, healthy exercise should not
16 be discouraged, and with close monitoring may have the added benefit of reducing anxiety.^{8,20,31}
17 However, weight restoration is difficult to achieve and maintain until the patient accepts the need to
18 gain weight and is motivated to comply with the treatment regimens.⁸

19
20 Community- and patient-based studies reveal that generally about half of AN patients recover, but
21 many continue to suffer from other eating disorders, such as BN or EDNOS, or other mental health
22 disorders, including depression, personality disorders, and obsessive-compulsive disorders, as well as a
23 higher-than-expected mortality.¹⁰ AN patients presenting with lower levels of depression and
24 compulsivity are more likely to recover, while those who abuse alcohol or other substances have a
25 higher mortality risk.¹⁰ In the few studies that reported it, relapses (40% to 68%) were common, and
26 the average time to first recovery was long (about 6 years).¹⁰

27
28 *Bulimia Nervosa:* Most cases of BN are treated on an outpatient basis. Psychotherapy is the foundation
29 of treatment, in addition to treating the medical and nutritional complications. In addition, nutritional
30 rehabilitation counseling is recommended to normalize eating behaviors.⁸ Medications may also be
31 used to treat BN, including fluoxetine, which is currently the only medication approved by the Food
32 and Drug Administration for treating any eating disorder.¹⁰ The literature is inconclusive on the
33 efficacy of combining medication with psychotherapy.^{8,10,32}

34
35 CBT is the most studied psychosocial intervention in adults with BN. Overall, the literature supports
36 the use of individual or group CBT in limiting binge eating, purging, and psychological aspects of
37 BN,^{10,33} especially in the treatment of adults with acute BN.⁸ Self-help CBT, particularly highly
38 structured approaches that involve some form of professional guidance, appears promising but further
39 study is needed.^{8,10,33} Other forms of psychotherapy, including interpersonal, psychodynamically
40 oriented, and psychoanalytic therapies, may help in treating coexisting mood, anxiety, personality,
41 interpersonal, and trauma- or abuse-related disorders.⁸ Over the long term, CBT and interpersonal
42 psychotherapy have been equally effective in treating BN.^{8,10,33} The literature is small and inconclusive
43 on other types of behavioral interventions, such as stress management, dialectical behavioral therapy,
44 active light therapy, crisis prevention, and guided imagery.¹⁰ However, support groups such as
45 Overeaters Anonymous may be useful adjuncts to treatment or for secondary prevention.⁸

46
47 Nutritional rehabilitation counseling helps patients establish structured eating patterns, which in turn
48 help reduce hunger, feelings of deprivation, and detrimental attitudes about food and eating.^{8,20}

1 Nutritional intake should be assessed in all patients, including those of normal body weight. Nutritional
2 counseling helps improve dietary variety to ensure adequate intake of nutrients.⁸
3

4 Fluoxetine (60 mg/day) is the only medication approved in the United States for the treatment of BN.
5 However, the optimal length of treatment and the long-term effectiveness of fluoxetine are unknown.
6 Single studies of other antidepressants, the anticonvulsant topiramate, the 5HT₃ antagonist/antiemetic
7 ondansetron, and the monoamine oxidase inhibitor brofaromine suggest that these treatments may also
8 be effective.¹⁰ The antidepressant bupropion is not recommended because it may increase the risk of
9 seizures in BN patients who purge.⁸ Fluoxetine appears to be better tolerated by patients than other
10 antidepressants,³⁴ but may be less well tolerated than psychotherapy.^{10,32}
11

12 More than half of patients in research studies no longer suffered from BN at follow-up, but many still
13 suffered from other eating disorders. In contrast to AN, BN was not related to increased mortality.
14 Depression is the only factor consistently related to poorer outcomes.¹⁰ The best options for treating
15 BN patients who do not respond to CBT or fluoxetine are unknown.¹⁰
16

17 *Eating Disorders Not Otherwise Specified:* Treatment for EDNOS conditions similar to AN or BN is
18 similar to treatment for AN or BN.⁸ Treatments specific to BED and sleep-related eating syndromes
19 are discussed below.
20

21 *Binge Eating Disorder:* As with BN, BED is generally treated on an outpatient basis with psychological
22 and dietary approaches to reduce binge eating and manage weight. These approaches include cognitive
23 behavioral and interpersonal psychotherapy, reduced calorie diets, and behavioral self-management
24 strategies.¹⁰ Some medications also may be used off-label.¹⁰ Research on treatments for BED
25 generally focuses on either weight loss or cessation of binge eating as the primary goal.⁸
26

27 Nutritional rehabilitation and counseling may involve the use of low or very-low-calorie diets, although
28 weight loss is often not sustained and binge eating may resume when weight is regained.⁸ Those with a
29 history of “yo-yo” dieting or onset of binge eating at a young age may be better served by treatments
30 that focus on binge eating rather than weight loss.⁸ However, for weight loss alone, current evidence
31 does not suggest different weight loss treatments are needed for BED patients who are concerned
32 primarily with weight loss and for obese individuals who do not binge.⁸
33

34 Individual or group CBT improves the behavioral (binge eating, measured as the number of binge days
35 or binge episodes) and psychological (hunger, disinhibition, and restraint) symptoms in BED patients,
36 but not weight loss.^{8,10} Other forms of psychotherapy such as interpersonal psychotherapy may also be
37 effective. Self-help and guided self-help CBT may be a useful first step in a sequenced treatment
38 program.⁸ Other therapies that focus on healthier lifestyles such as better nutrition, increased exercise,
39 enhanced body image and self-acceptance, as well as support groups and 12-step programs (eg,
40 Overeaters Anonymous) may be helpful but have not been systematically studied.⁸
41

42 Among medication options, selective serotonin reuptake inhibitors have diminished binge eating
43 behavior, but do not generally help with weight loss.⁸ Sibutramine, an appetite-suppressant, has been
44 found to help with both bingeing and weight loss.⁸ The antiepileptic drugs topiramate and zonisamide
45 may reduce binge eating and improve weight loss, but adverse side effects limit their usefulness in
46 some patients.⁸ Once medications are discontinued, however, aberrant weight and eating behaviors
47 often recur. The addition of medication to CBT or behavioral weight control regimens may help in
48 weight loss and/or improve depressive symptoms.⁸

1 *Sleep-Related Eating Syndromes:* Some sleep-related eating syndromes may be induced by
 2 medications, such as risperidone, olanzapine, bupropion,⁸ and even the sleeping aid zolpidem tartrate.³⁵
 3 In general, there are no accepted treatments for NES and other sleep-related eating syndromes.
 4 Preliminary research indicates that progressive muscle relaxation or the antidepressant sertraline may
 5 be useful, but more research is needed to better understand these disorders and the best treatment
 6 options.⁸

7 Resources and Positions of Key Stakeholders

8
 9
 10 The American Academy of Pediatrics (AAP), the Society for Adolescent Medicine (SAM), and the
 11 American Dietetic Association (ADA) have published position papers on eating disorders.^{1,2,5} The
 12 American Psychiatric Association (APA) has published treatment guidelines.⁸ The American College
 13 of Obstetricians and Gynecologists (ACOG) has published a book on “Health Care for Adolescents”
 14 with a chapter on eating disorders,⁹ as well as a patient education pamphlet³⁶ and a patient “tool kit for
 15 teen care” that addresses weight concerns in adolescent females.³⁷ In general, these organizations seek
 16 to increase awareness of the prevalence, symptoms, and serious sequelae of eating disorders, and
 17 thereby improve early detection and early intervention. These organizations also stress the need for
 18 more research on prevention and treatment of eating disorders.

19
 20 Early intervention is recommended and should involve a team of specialists in mental health and
 21 nutrition. Additionally, SAM suggests that an eating disorder can exist even if the patient does not
 22 fulfill currently established diagnostic criteria.¹ SAM also recommends working with insurance
 23 companies to define appropriate strategies for managing patients with eating disorders.¹ Similarly, the
 24 AAP recommends that physicians advocate for legislation and regulations that guarantee appropriate
 25 coverage for necessary medical, nutritional, and mental health interventions.² When advising
 26 overweight children and adolescents on healthy eating, the AAP also recommends that physicians be
 27 careful not to encourage aggressive dieting or otherwise diminish the patient’s self-esteem.² In
 28 addition, the American Diabetes Association specifically addresses eating disorders as a possible
 29 comorbid condition in adolescent diabetic patients in its statement on the care of children and
 30 adolescents with type 1 diabetes.³⁸

31
 32 Similarly, many advocacy organizations seek to increase awareness of eating disorders among
 33 legislators, insurance companies, health care providers, teachers, coaches, parents, and the general
 34 public in order to reduce the stigma associated with these disorders and enhance prevention and
 35 treatment efforts. Such organizations include the Academy for Eating Disorders (AED); National
 36 Association of Anorexia Nervosa and Associated Disorders (ANAD); National Eating Disorders
 37 Association (NEDA); Eating Disorders Coalition for Research, Policy, and Action; National Alliance
 38 on Mental Illness; and the National Mental Health Association (NMHA). Other groups that work with
 39 young people, such as the Girl Scouts of the USA and the corporately sponsored Dove Self-Esteem
 40 Fund, address body image issues in girls and women, as does the US Department of Health and Human
 41 Services’ National Women’s Health Information Center. Acceptance of different body sizes and
 42 shapes, combined with healthy eating and exercise behaviors, is emphasized. Other stakeholders
 43 include individuals with eating disorders and their families, school teachers, counselors, athletic
 44 coaches, trainers, and third-party payers, although, in general, these groups and government agencies
 45 that may fund or otherwise support research on eating disorders do not have formal policy positions on
 46 these disorders.

1 Areas Requiring Further Research or Attention

2
3 Several areas requiring further research or attention have been identified.^{1,2,7,8,10} These involve
4 improving the diagnostic criteria to delineate the stages of eating disorders, clarifying the causes of and
5 risk factors for eating disorders, determining the best means of prevention and treatment, and
6 improving access to treatment. In addition, more research is needed on EDNOS conditions, such as
7 BED and NES, as well as other behaviors associated with a negative body image, such as BDD.

8
9 In general, current evidence on the efficacy of most treatments for eating disorders is limited.
10 Insufficient statistical power and varying definitions of “usual” treatment, remission, recovery, and
11 relapse, as well as high drop-out rates, have limited the utility of many studies.¹⁰ Treatment trials
12 should report factors associated with treatment efficacy. In addition, more long-term follow-up studies
13 are needed to provide information on the optimal duration and intensity of treatments or combinations
14 of treatments, or long-term recovery rates.¹⁰

15
16 Data are required on the potential variations in etiology, presentation, and treatment efficacy across sex,
17 age, racial, ethnic, or cultural groups. Generally, there were too few men or ethnic minorities in most
18 studies to stratify results. Likewise, few studies include children or young adolescents.¹⁰ More
19 research is also needed on the potential variations in treatment by presence of co-occurring mental
20 health conditions.⁸

21
22 Further research is necessary on primary prevention programs, particularly in children and adolescents.
23 It is noteworthy that there are no studies on the efficacy of school-based primary prevention programs
24 for pre-adolescent children and their parents. Currently, interventions aimed at high-risk populations
25 appear to be most effective, as well as interactive (rather than didactic) and multi-session programs,
26 especially those targeting girls and women over age 15 years.³⁹ However, others have not found
27 sufficient evidence to support any particular type of prevention programs.²¹ In addition, there is
28 concern that some types of prevention programs, such as those involving only one teaching encounter,
29 may actually increase risk of eating disorders,² although there is currently insufficient evidence on the
30 harmfulness of specific programs.²¹ More research is also needed to determine the value of screening
31 programs and risk factor-based early interventions.⁸

32
33 Despite the consensus that early detection and treatment results in the most successful outcomes,
34 insurance coverage for treatment of early stages of eating disorders is frequently limited. Even at later
35 stages of illness, insurance coverage is often restricted to shorter treatment periods than clinicians may
36 recommend. Treatment for eating disorders can be expensive, comparable to the cost of treating
37 schizophrenia.¹⁰ Some eating disorder patients use the limitations in insurance coverage to their
38 advantage, purposely prolonging treatment until the insurance coverage expires, at which point they can
39 resume their behaviors without interference from health professionals.⁷ Research is needed on
40 treatment outcomes among different systems and settings of care, such as fee-for-service versus
41 managed care systems and in the offices of primary care providers versus mental health professionals.⁸

42
43 Additionally, many adolescents and young adults lack insurance coverage and have limited incomes,
44 further restricting their access to care.⁷ Further research on self-administered and distance-based
45 treatments (Web or telephone), as well as on complementary and alternative therapies may help
46 improve access and treatment for early stages of eating disorders.⁸ However, Web-based or generic
47 resources should be developed and monitored with care, as some pro-recovery Web sites have been
48 found to teach adolescents new methods of weight-loss, purging, and other high-risk eating behaviors.⁴⁰

1 Summary and Conclusion
2

3 Eating disorders are serious, difficult-to-treat conditions that can affect people of any age, sex, ethnic,
4 or socioeconomic group. Eating disorders run in families and have a strong genetic component. Other
5 anxiety, personality, mood, and substance use disorders commonly affect individuals with eating
6 disorders. However, social and environmental factors also are implicated in the etiology of these
7 disorders, ranging from traumatic events such as rape and assault to childhood and parental obesity,
8 criticism about body size and shape, poor self-esteem, and dieting behaviors. The association with
9 dieting is particularly concerning given the current obesity epidemic. Efforts to combat overweight and
10 obesity, particularly in children and adolescents, must avoid inadvertently encouraging unhealthful
11 dieting and weight loss behaviors, which can increase risk for nutrient deficiencies, suboptimal growth,
12 and eating disorders.
13

14 Treatment of eating disorders can be lengthy, complex, and expensive, involving multiple health
15 specialists and several different treatments. Relapses are common, and many of those who recover
16 continue to suffer from other eating disorders or mental health issues. AN is particularly difficult to
17 treat, involving a team of health care providers and multiple attempts at treatment that can last years;
18 however, treatment is essential given the high mortality rate. More research is needed on the etiology,
19 prevention, and treatment of all eating disorders, including BN and the variety of conditions currently
20 classified under EDNOS. Research on primary prevention, particularly in pre-adolescent children and
21 their parents, is noticeably lacking. Increased awareness of the signs, symptoms, and seriousness of
22 eating disorders may improve rates of early intervention and treatment. However, more work is needed
23 to improve access to care for individuals at all stages of illness and economic status.
24

25 RECOMMENDATIONS
26

27 The Council on Science and Public Health recommends that the following be adopted in lieu of
28 Resolutions 420 and 423 (A-06) and the remainder of this report be filed:
29

- 30 1. That this report be widely disseminated to assist primary care physicians and other healthcare
31 professionals in the early recognition and treatment of eating disorders. (Directive to Take
32 Action)
33
- 34 2. That our American Medical Association (AMA) support increased funding for research on the
35 epidemiology, etiology, diagnosis, prevention, and treatment of eating disorders, including
36 research on the effectiveness of school-based primary prevention programs for pre-adolescent
37 children and their parents, in order to prevent the onset of eating disorders and other behaviors
38 associated with a negative body image. (Directive to Take Action)

Fiscal Note: \$1500

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APPENDIX A.

Current AMA policy on eating disorders and disease prevention

Policy H-150.965 Eating Disorders

The AMA (1) adopts the position that overemphasis of bodily thinness is as deleterious to one's physical and mental health as is obesity; (2) asks its members to help their patients avoid obsessions with dieting and to develop balanced, individualized approaches to finding the body weight that is best for each of them; (3) encourages training of all school-based physicians, counselors, coaches, trainers, teachers and nurses to recognize unhealthy eating, dieting, and weight restrictive behaviors in adolescents and to offer education and appropriate referral of adolescents and their families for interventional counseling; and (4) participates in this effort by consulting with appropriate specialty societies and by assisting in the dissemination of available educational and counseling materials pertaining to unhealthy eating, dieting, and weight restrictive behaviors. (Res. 417, A-92; Appended by Res. 503, A-98)

Policy H-425.993 Health Promotion and Disease Prevention

The AMA (1) reaffirms its current policy pertaining to the health hazards of tobacco, alcohol, accidental injuries, unhealthy lifestyles, and all forms of preventable illness; (2) advocates intensified leadership to promote better health through prevention; (3) believes that preventable illness is a major deterrent to good health and accounts for a major portion of our country's total health care expenditures; (4) actively supports appropriate scientific, educational and legislative activities that have as their goals: (a) prevention of smoking and its associated health hazards; (b) avoidance of alcohol abuse, particularly that which leads to accidental injury and death; (c) reduction of death and injury from vehicular and other accidents; and (d) encouragement of healthful lifestyles and personal living habits; and (5) strongly emphasizes the important opportunity for savings in health care expenditures through prevention. (Presidential Address, A-82; Reaffirmed: CLRPD Rep. A, I-92; Reaffirmed: CSA Rep. 8, A-03)

APPENDIX B.
Diagnostic and research criteria for eating disorders

Diagnostic Criteria

Anorexia Nervosa

- A. Refusal to maintain body weight at or above a minimally normal weight for age and height (e.g., weight loss leading to maintenance of body weight less than 85% of that expected; or failure to make expected weight gain during period of growth, leading to body weight less than 85% of that expected).
- B. Intense fear of gaining weight or becoming fat, even though underweight.
- C. Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or denial of the seriousness of the current low body weight.
- D. In postmenarcheal females, amenorrhea, i.e., the absence of at least three consecutive menstrual cycles. (A woman is considered to have amenorrhea if her periods occur only following hormone, e.g., estrogen, administration.)

Specify type:

Restricting Type: during the current episode of Anorexia Nervosa, the person has not regularly engaged in binge-eating or purging behavior (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas)

Binge-Eating/Purging Type: during the current episode of Anorexia Nervosa, the person has regularly engaged in binge-eating or purging behavior (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas)

Bulimia Nervosa

- A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
 - 1. Eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances
 - 2. A sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating)
- B. Recurrent inappropriate compensatory behavior in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, enemas, or other medications; fasting; or excessive exercise.
- C. The binge eating and inappropriate compensatory behaviors both occur, on average, at least twice a week for 3 months.
- D. Self-evaluation is unduly influenced by body shape and weight.
- E. The disturbance does not occur exclusively during episodes of Anorexia Nervosa.

Specify type:

Purging Type: during the current episode of Bulimia Nervosa, the person has regularly engaged in self-induced vomiting or the misuse of laxatives, diuretics, or enemas

Nonpurging Type: during the current episode of Bulimia Nervosa, the person has used other 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.

Eating Disorder Not Otherwise Specified

The Eating Disorder Not Otherwise Specified category is for disorders of eating that do not meet the criteria for any specific Eating Disorder. Examples include:

1. For females, all of the criteria for Anorexia Nervosa are met except that the individual has regular menses.
2. All of the criteria for Anorexia Nervosa are met except that, despite significant weight loss, the individual's current weight is in the normal range.
3. All of the criteria for Bulimia Nervosa are met except that the binge eating and inappropriate compensatory mechanisms occur at a frequency of less than twice a week or for a duration of less than 3 months.
4. The regular use of inappropriate compensatory behavior by an individual of normal body weight after eating small amounts of food (e.g., self-induced vomiting after the consumption of two cookies).
5. Repeatedly chewing and spitting out, but not swallowing, large amounts of food.
6. Binge Eating Disorder: recurrent episodes of binge eating in the absence of the regular use of inappropriate compensatory behaviors characteristic of Bulimia Nervosa

Research Criteria

Binge Eating Disorder

- A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
 1. Eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances
 2. A sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating)
- B. The binge-eating episodes are associated with three (or more) of the following:
 1. Eating much more rapidly than normal
 2. Eating until feeling uncomfortably full
 3. Eating large amounts of food when not feeling physically hungry
 4. Eating alone because of being embarrassed by how much one is eating
 5. Feeling disgusted with oneself, depressed, or very guilty after overeating
- C. Marked distress regarding binge eating is present
- D. The binge eating occurs, on average, at least 2 days a week for 6 months
Note: The method of determining frequency differs from that used for Bulimia Nervosa; future research should address whether the preferred method of setting a frequency threshold is counting the number of days on which binges occur or counting the number of episodes of binge eating.
- E. The binge eating is not associated with the regular use of inappropriate compensatory behaviors (e.g., purging, fasting, excessive exercise) and does not occur exclusively during the course of Anorexia Nervosa or Bulimia Nervosa.

Reprinted from the *Diagnostic and Statistical Manual of Mental Disorders*, 4th Edition, Text Revision.¹¹

APPENDIX C.

Possible signs and symptoms of eating disorders

Common Presentations

- Gynecologic: amenorrhea, menstrual irregularity, pelvic pain, atrophic vaginitis, breast atrophy
- Gastrointestinal: constipation, abdominal pain, bloody diarrhea, heartburn
- Injuries: sports injuries, fractures, pharyngeal trauma, easy bruising, muscle cramps
- Other: depression, weakness, fainting, mouth sores, chest pain, dental caries, sexually transmitted diseases, other illnesses, concern from parent regarding mood changes, unusual eating behaviors or weight changes
- Routine Health Care: physical or dental exams, contraceptive needs

Physical Exam Findings

- General Appearance: emaciated (may try to hide with oversized clothing), with sunken cheeks, sallow skin, and flat affect, but may be normal weight or overweight in cases of BN or EDNOS; deviation from growth curve and/or delayed sexual development in children and adolescents
- Vital Signs: bradycardia, hypotension, hypothermia, orthostasis
- Skin: dry skin, lanugo, dull, brittle, and/or thinning scalp hair, nail changes, subconjunctival hemorrhage (from vomiting)
- Head, ears, eyes, nose, and throat: sunken eyes, dry lips, gingivitis, loss of tooth enamel on lingual and occlusal surfaces, mouth sores, palatal scratches, caries, parotitis
- Gynecologic: breast atrophy, atrophic vaginitis, amenorrhea
- Cardiac: mitral valve prolapse click and/or murmur, arrhythmias
- Abdomen: scaphoid, palpable loops of stool, tender epigastrium if vomiting
- Extremities: edema, calluses on knuckles (Russell's sign), acrocyanosis, Raynaud's phenomenon
- Neurologic: Trousseau's sign, diminished deep tendon reflexes

Behavioral Signs

- Eating Patterns: diets constantly, even when thin; strict diets; frequent fasting; prefers to eat alone; frequently uses bathroom after meals
- Activity Patterns: excessive exercise, or weakness and tiredness
- Emotional: withdrawn, irritable, mood swings, frequent feelings of being out of control
- Weight: frequent cycles of weight gain and loss

Adapted from American Academy of Pediatrics,² American College of Obstetricians and Gynecologists,^{9,36} and other^{7,8} materials

APPENDIX D.

Screening questions to identify children, adolescents, or young adults with eating disorders

Key screening questions

- How much would you like to weigh?
- How do you feel about your present weight?
- Do you or anyone else have any concerns about your eating or exercise behaviors/practices?

Detailed screening questions

History of present illness

Weight History

- Maximum weight and when? Desired weight?
- How does patient feel about his/her current weight?
- How frequently does the patient weigh him/herself?
- When did the patient begin to lose weight?
- What weight control methods have been tried?

Diet History

- Current dietary practices – ask for specifics, amounts, food groups, fluids, restrictions
- Any binges? Frequency, amount, triggers?
- Any purges/vomiting? Frequency, amount, triggers? How long after meals?
- Use of diuretics, laxatives, diet pills, ipecac?

Exercise

- Types, frequency, duration, intensity?
- How stressed if miss a workout?

Menstrual History

- Age at menarche?
- Regularity of cycles?
- Last normal menstrual period?
- Use of oral contraceptives?

Review Symptoms

- Dizziness, blackouts, weakness, fatigue?
- Pallor, easy bruising or bleeding?
- Cold intolerance?
- Hair loss, lanugo, dry skin?
- Vomiting, diarrhea, constipation?
- Fullness, bloating, abdominal pain, epigastric burning?
- Muscle cramps, joint pains, palpitations, chest pain?
- Symptoms of hyperthyroidism, diabetes, malignancy, infection, inflammatory bowel disease?
- Psychological symptoms/history
 - Adjustment to pubertal development
 - Body image/self-esteem
 - Anxiety, depression, obsessive-compulsive disorder, other psychiatric conditions

Medical History

- Family history of obesity, eating disorders, depression, other mental illness, substance abuse/alcoholism
- Social history – home, school, activities, substance use, sexual history, physical or sexual abuse
- Medication use – current, past, and complementary and alternative medications or supplements

Adapted from screening questions by the American Academy of Pediatrics and others^{2,7}

APPENDIX E.

Resources on Eating Disorders

Cognitive Behavior Therapy Workbooks

- Agras WS, Apple RF: *Overcoming Eating Disorders: A Cognitive-Behavioral Treatment for Bulimia Nervosa and Bing-Eating Disorder*. New York, Oxford University Press, 1997 (client workbook)
- Agras WS, Apple RF: *Overcoming Eating Disorders: A Cognitive-Behavioral Treatment for Bulimia Nervosa and Bing-Eating Disorder*. New York, Oxford University Press, 1997 (therapist workbook)
- Cash TF: *The Body Image Workbook: An 8-Step Program for Learning to Like Your Looks*. Oakland, CA, New Harbinger, 1997
- Fairburn C: *Overcoming Binge Eating*. New York, Guilford, 1995
- Goodman LJ, Villapiano M: *Eating Disorders: The Journey to Recovery Workbook*. New York, Brunner-Routledge, 2001 (client workbook)
- Goodman LJ, Villapiano M: *Eating Disorders: Time for Change. Plans, Strategies, and Worksheets*. New York, Brunner-Routledge, 2001 (therapist workbook)
- Schmidt U, Treasure J: *Getting Better Bit(e) by Bit(e): A Survival Kit for Sufferers of Bulimia Nervosa and Binge Eating Disorder*. East Sussex, UK, Psychology Press, 1993.

Books Reported to be Helpful by Patients and/or their Families

- Bulik CM, Taylor N: *Runaway Eating: The 8-Point Plan to Conquer Adult Food and Weight Obsessions*. New York, Rodale Books, 2005
- Ellis A, Abrams M, Dengelegi L: *The Art and Science of Rational Eating*. Fort Lee, NJ, Barricade Books, 1992
- Goodman LJ, Villapiano M: *Eating Disorders: The Journey to Recovery Workbook*. New York, Brunner-Routledge, 2001 (client workbook)
- Hall L: *Full Lives: Women Who Have Freed Themselves From Food and Weight Obsessions*. Carlsbad, CA, Gürze Books, 1993
- Lock J, le Grange D: *Help Your Teenager Beat an Eating Disorder*. New York, Guilford, 2005
- Michel DM, Willard SG: *When Dieting Becomes Dangerous*. New Haven, CT, Yale University Press, 2003
- Walsh BT, Cameron VL: *If Your Child Has an Eating Disorder: An Essential Resource for Parents*. New York, Guilford, 2005
- Zerbe K: *The Body Betrayed: A Deeper Understanding of Women, Eating Disorders, and Treatment*. Carlsbad, CA, Gürze Books, 1995

Books Reported to be Helpful for Male Patients,

- Anderson AE, Cohn L, Holbrook T: *Making Weight: Men's Conflicts with Food, Weight, Shape and Appearance*. Carlsbad, CA, Gürze Books, 2000

Internet Resources for Patients, Families, and Professionals

- National Eating Disorders Association (<http://www.nationaleatingdisorders.org>)
- National Association of Anorexia Nervosa and Associated Disorders (<http://www.anad.org/site/anadweb/>)
- Academy for Eating Disorders (<http://www.aedweb.org/>)
- International Association of Eating Disorders Professionals (<http://www.iaedp.com/>)
- Eating Disorder Referral and Information Center (<http://www.edreferral.com/>)
- Something Fishy (<http://www.something-fishy.org/>)

Adapted from American Psychiatric Association Practice Guidelines, 3rd Edition⁸