

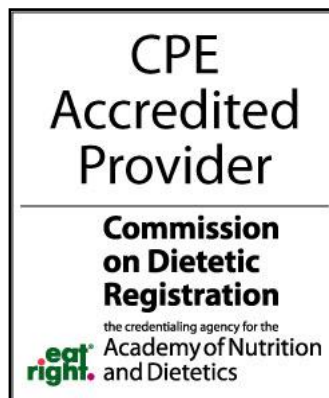
# **Eating Disorders Guide for Dietitians (#094997)**

(Florida CE Provider #: 50-8625)

## **Vantage Professional Education**

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## **Section I: Course Objectives**

### **Introduction**

Increasing interest and concern about eating disorders have been demonstrated in both the public and private sectors. Anorexia nervosa and bulimia nervosa have become familiar household words. According to the Academy of Nutrition and Dietetics more than 5 million Americans suffer from eating disorders and the numbers are growing.<sup>1</sup>

Eating Disorders have a biological basis that is modified and influenced by emotional and cultural factors.<sup>2</sup> The diagnosis codes are categorized under psychiatric diagnoses and for that reason may have stigmatized those who suffer from them. Without treatment of both emotional and physical symptoms of these disorders, malnutrition, heart problems and, unfortunately, death can result. Recovery is possible and the registered dietitian is an important part of the treatment team.

### **Course Objectives**

At the conclusion of this program the dietetics professional will be able to:

1. Identify eating disorder behaviors and prevalence
2. Identify American Psychiatric Association criteria for defining anorexia nervosa
3. Describe the life events that may preclude the beginning of anorexia nervosa
4. Explain the differences between bulimia nervosa and anorexia nervosa
5. Explain why purging and other compensatory behaviors serve to calm bulimics and ease their guilt
6. Describe the common misconceptions used to identify Binge Eating Disorder
7. Identify which patients need a highly structured recovery program
8. Explain the impediments to recovery

## Section II. Eating Disorder Behaviors and Prevalence

### Eating Disorder Behaviors and Screening Parameters

Eating disorders involve serious disturbances in eating behavior, such as extreme and unhealthy reduction of food intake or severe overeating, as well as feelings of distress or extreme concern about body shape or weight. Researchers are investigating how and why initially voluntary behaviors, such as eating smaller or larger amounts of food than usual, at some point move beyond control in some people and develop into an eating disorder.

Eating disorders are categorized under psychiatric diagnoses. The American Psychiatric Association defines eating disorders as illnesses in which the victims suffer severe disturbances in their eating behaviors and related thoughts and emotions.<sup>3</sup>

There are many nutritional and medical-related problems, which can even be life threatening that are linked to eating disorders. The Academy of Nutrition and Dietetics suggests that nutrition, education, and nutrition intervention, by a registered dietitian, is an essential component of the team treatment of patients with eating disorders during assessment and treatment across the continuum of care.<sup>4</sup>

Eating is controlled by many factors, including appetite, food availability, family, peer and cultural practices, and attempts at voluntary control. Dieting to a body weight leaner than needed for health is encouraged by current fashion trends, sales campaigns of special foods, and in some sports activities and professions.

The National Institute of Mental Health reports that eating disorders are not due to a failure of will or behavior; rather, they are real, treatable medical illnesses in which certain maladaptive patterns of eating take on a life of their own.<sup>5</sup> However, with proper medical care, those suffering from eating disorders can resume suitable eating habits, and return to better emotional, psychological, and physical health.

### Eating Disorder Prevalence and Assessment of Target Groups

According to the United States Department of Health and Human Services more than ninety percent of those with eating disorders are women between the ages of 12 through 35, with the average onset between 14 through 18 years. Those with anorexia are often characterized as perfectionists and overachievers who appear to be in control. In reality, they suffer from low self esteem and confidence and overly criticize themselves.

The following statistics were presented were presented at the Eating Disorder Awareness and Prevention (EDAP) conference.<sup>6</sup>

- Anorexia Nervosa
  - 0.25-1 percent among middle-school and high-school girls
- Bulimia Nervosa
  - 1-3 percent among middle-school and high-school girls
  - 1-4 percent among college women
  - 1-2 percent among community samples
- Atypical Eating Disorders
  - 3-6 percent among middle school girls
  - 2-13 percent among high-school girls

Because of the secretive habits of many individuals anorexia nervosa may go undiagnosed for a long period of time even with signs of extreme weight loss. There are however warning signs of the eating disorder that an individual may display:

- Eat only safe foods, those low in calories or fat
- Have odd rituals, such as cutting food into small pieces
- Spend more time playing with food than eating it
- Cook meals for others without eating
- Engage in compulsive exercise
- Dress in layers to hide weight loss
- Spend less time with family and friends, become more isolated, withdrawn, and secretive.<sup>7</sup>

Dr. Marc Darrow, author of *The Eating Disorders Sourcebook*, reports that anorexia nervosa patients spend 70 to 85 percent of each day thinking about food, creating menus, baking, feeding others, worrying about what to eat, binging on food and purging to get rid of food eaten. These individuals may eventually develop a true lack of appetite, but for the most part it is not a lack of appetite but the desire to control it that defines the patient. People with anorexia deny their bodies even when driven by hunger pangs, while they obsess about food. They often study menus, read and concoct recipes, go to bed thinking about food, dream about food, and wake up thinking about food. They just won't allow themselves to have it, and if they do so, they relentlessly pursue any means to rid themselves of it.<sup>8</sup>

Anorexics are afraid of food and afraid of themselves. What may begin as determination to lose weight progresses into a fear of gaining back any lost weight and becomes a pursuit of thinness. They are literally dying to be thin. Being thin, translates into being in control. Self induced starvation goes against normal bodily instincts and can rarely be maintained. This is a reason why many anorexics end up binge eating and purging food to the point where 30 to 50 percent develop bulimia nervosa.<sup>9</sup>

### **Etiology**

What causes eating disorders is not entirely clear, though a combination of psychological, genetic, social and family factors are thought to contribute to the disorder.

Several family and twin studies are suggestive of a high heritability of anorexia and bulimia and researchers are searching for genes that confer susceptibility to these disorders. Scientists suspect that multiple genes may interact with environmental and other factors to increase the risk of developing these illnesses.<sup>10</sup>

The Academy of Nutrition and Dietetics states that risks for developing an eating disorder may stem from predisposing factors such as a family history of mood, anxiety, or substance abuse disorders. A family history of an eating disorder or obesity also increase the risk of developing an eating disorder.<sup>11</sup>

An individual's immediate social environment, including her family and friends, can emphasize the importance of thinness and weight control. "Father Hunger", the emptiness experienced by some women whose fathers were emotionally absent, is a phenomenon that is thought to lead to unrealistic body image, yo-yo dieting, food fears and disordered eating patterns.<sup>12</sup> Regular discussion of weight and dieting may normalize societal pressure to be thin. Weight related teasing by peers and family is related to low body esteem and eating disturbances in young girls. The National Institute of Mental Health (NIMH) reports that girls who live in families that tend to be strict and place strong emphasis on physical attractiveness and weight control are at an increased risk for inappropriate eating behaviors.<sup>13</sup>

### **Population Differences**

Eating Disorders are much more prevalent in females than in males and often perceived to be an affliction of Caucasian girls and young women in middle and upper socio-economic classes. However, increasing numbers of cases are being seen in men and women from all different ethnic, age and cultural groups.

In many other countries, there appears to be an overall increase in eating disorders, even in cultures in which the disorder is rare. Japan appears to be the only non-Western country that has had a substantial and continuing increase in eating disorders, with figures that are comparable to or above those found in the United States. In addition, eating disorder concerns and symptoms appear to be increasing among Chinese women exposed to culture clashes and modernization in cities such as Hong Kong. The prevalence of eating disorders appears to be increasing rapidly in other non-English-speaking countries such as Spain, Argentina, and Fiji.

In the United States, eating disorders appear to be about as common in young Hispanic women as in Caucasians, more common among Native Americans, and less common among blacks and Asians. However, several studies in the Southeastern United States have shown that many eating disorder behaviors are even more common among African American women than others. Black women seem more likely to develop bulimia nervosa than anorexia nervosa and seem more likely to purge with laxatives than by vomiting.<sup>14</sup> All races of girls seem influenced by media images of thinness.

### **Gender**

The American Journal of Psychiatry reported that eating disorders, such as anorexia and bulimia, are more common in men than previously thought. The study authors also found that men are not as likely to seek treatment for eating disorders.

There has been continued debate as to whether men with eating disorders suffer from the same symptoms as women with the disorder, a question fueled by the fact that few men participate in programs that treat eating disorders. One possible explanation, the study found, is that men are reluctant to come for help because they feel eating disorders fall into the category of “women’s diseases.” This reason is linked to the second possible reason, which is that men may not recognize the symptoms of an eating disorder because eating disorders have long been assumed to plague women only.

Through their comparison of men with eating disorders to men in the general population, the study authors found that men with eating disorders were more likely to have other mental disorders and were less satisfied with their lives.<sup>15</sup>

Currently, there is approximately one male case to every ten female cases. Up to one in four children referred to an eating disorders professional for anorexia is a boy. Males with eating disorders are most commonly seen in specific subgroups. For instance, males that wrestle show a disproportionate increase in eating disorders, rates seven to ten times the normal. Young men who develop anorexia nervosa are usually athletes, dancers, models or performers. Additionally, homosexual males have an increased rate of eating disorders.<sup>16</sup>

### **Age**

The United States Department of Health and Human Services reported that the number of American women affected by eating disorders has doubled to at least five million in the past three decades. Eating disorders are one of the key health issues facing young women. Studies in the last decade show that eating disorders and disordered eating behaviors are related to other health risks behaviors, including tobacco use, alcohol use, marijuana use, delinquency, unprotected sexual activity, and suicide attempts.

Currently, 1-4% of all young women in the United States are affected by eating disorders. Anorexia nervosa ranks as the third most common chronic illness among adolescent females in the United States.<sup>17</sup>

A survey conducted at Duke University Medical Center in Durham, N.C. found that 40% of 9 and 10 year old girls claimed to be on some kind of diet. They found that girls as young as 7 and 8 were concerned about body image and dieting. True eating disorders however, usually emerge at two distinct points, they discovered, both of them times of great stress for girls seeking a sense of identity. The first phase is near the end of puberty, at about 14 and the second is when girls leave high school and enter college.

Although they receive relatively little attention, eating disorders are common in adult women according to La Palestra, Center for Preventative Medicine in New York City. One in five women, they found, forced themselves to vomit after they ate because they felt too full, or too fat, or didn't want their body to absorb the calories. They found that in adult women there is usually an underlying problem that gradually develops into a full-blown illness, or one that was treated when the woman is younger and then recurs. Anorexia nervosa has been reported in elderly patients in their 70s and 80s, in whom the illness has generally been present for 40 or 50 years. In many cases the illness started after age 25 (so-called anorexia tardive). In some case reports, adverse life events such as deaths, major illness, marital crisis, or divorce have been found to trigger these older-onset syndromes. Fear of aging has also been described as a major precipitating factor in some patients.<sup>18</sup>

### **Body Image**

The idealization of thinness has resulted in distorted body images and unrealistic measures of beauty and success. Cultural and media influences such as TV, magazines, and movies reinforce the belief that people should be more concerned with their appearance than with their own ideas or achievements. Body dissatisfaction, feelings of fatness, and drive for thinness has led many people to become overly concerned about their appearance.

Normal weight and even underweight girls are dissatisfied with their body and are choosing inappropriate behaviors to control their appetite and food intake. The American Society of University Women found that adolescent girls believe physical appearance is a major part of their self-esteem and that their body image is a major part of their sense of self.<sup>19</sup>

According to the National Eating Disorders Association, the average American woman is 5 feet, 4 inches tall and weighs 140 pounds. The average American model is 5 feet, 11 inches tall and weighs 117 pounds. All too often, society associates being "thin", with "hard-working, beautiful, strong and self-disciplined." On the other hand, being "fat" is associated with being "lazy, ugly, weak and lacking will-power."<sup>20</sup>

A study conducted by Flinders University of South Australia in Adelaide found that the female ideal has become progressively thinner, so that typical female models are now often as much as 20% underweight (with 15% underweight the diagnostic criterion for anorexia nervosa). The study found that media pressures on young to look thinner (for girls) and more pumped-up (for boys) have never been stronger.

The study of nearly 1,500 8<sup>th</sup>-to-11<sup>th</sup> graders found that girls who watched TV soap operas and music videos not for pure entertainment but for what the study called "social learning"--finding out about trends in behavior or fashion—make adolescent girls desperate to be thin, and boys at a higher risk of developing emerging male version of body-obsession.<sup>21</sup>

### **Psychiatric Disorders**

Most people with eating disorders share certain personality traits:<sup>22</sup>

1. Low Self-esteem
2. Feelings of Helplessness
3. Fear of becoming fat
4. Not able to handle stress

Psychiatric disorders that are frequently seen in eating disorder population include:

1. Mood and anxiety disorders
  - a. Depression
  - b. Obsessive compulsive disorder
2. Personality disorders
3. Substance abuse disorders ( including alcohol, amphetamines, caffeine, inhalants, nicotine, prescription medications that may be abused, opiates, marijuana, cocaine, hallucinogens, and phencyclidine)

### **Section III. Anorexia Nervosa**

#### **Anorexia Nervosa Definition**

Anorexia nervosa has become a familiar household word. Before the 1980's not many people knew the true meaning of the term or realized anyone was suffering from this condition. Today disordered eating is seen as a trendy problem, but the condition has been around for decades... The term anorexia is of Greek origin: an (privation, lack of) and orexis (appetite), thus meaning a lack of desire to eat.

It was originally used to describe the loss of appetite caused by some other ailment such as headaches, depression, or cancer, where the person actually doesn't feel hungry. The term *anorexia* alone is insufficient for labeling the eating disorder known by that name.

The full clinical term, anorexia nervosa (lack of desire to eat due to a mental condition), is attributed to a British physician, Sir William Gull in 1874. He used the term to describe several patients he had seen who exhibited all the familiar signs that are now associated with this disorder: refusal to eat, extreme weight loss, amenorrhea, low pulse rate, constipation, and hyperactivity. Another early French researcher, Pierre Janet, described the condition when he stated that it was a deep psychological disturbance, of which the refusal of food is but an outward expression.<sup>23</sup>

#### **Prevalence**

The American Psychiatric Association states that anorexia nervosa afflicts as many as one in every 100 girls and young women. It is diagnosed when patients weigh at least 15 percent less than normal healthy weight expected for their height.

The Academy of Nutrition and Dietetics recommends that for adults (greater than 20 years of age) a BMI of 18.5 or less is considered underweight and a BMI of less than 17.5 is diagnostic for Anorexia Nervosa.

Postmenarchal adolescents and adults can use a standard formula to determine average body weight. When using height, add 100 lb for 5 ft of height plus 5 lb for every inch over 5 ft tall for women and 106 lb for 5 ft of height plus 6 lb for each additional inch for males.

Since children and young adults are still growing the actual BMI number should not be considered but percentiles must be used. Individuals with BMIs less than the 10<sup>th</sup> percentile are considered underweight and BMIs of less than 5 percent are at risk for Anorexia Nervosa. The patient's body build, weight history, and stage of development should always be considered.<sup>24</sup>

## Medical Symptoms

People with this disorder eat very little even though they are already thin. They have an intense and overpowering fear of body fat and weight gain, repeated dieting attempts, and excessive weight loss. Anorexia is identified in part by a refusal to eat, an intense desire to be thin, repeated dieting attempts, and excessive weight loss. To maintain an abnormally low weight, people with anorexia may diet, fast, or over exercise. They often engage in behaviors such as self-induced vomiting or the misuse of laxatives, diuretics or enemas. They believe they are overweight even when they are extremely thin. Often, the beginning of the illness will occur after a stressful life event such as initiation of puberty or moving out of the parent's home.

The American Psychiatric Association uses the following diagnostic criteria:

- Refusal to maintain body weight at or above a minimally normal weight for age and height (for example, weight loss leading to maintenance of body weight less than 85 percent of that expected, or failure to make expected weight gain during period growth leading to body weight less than 85 percent of that expected).
- Intense fear of gaining weight or becoming fat, even when underweight.
- 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.
- In postmenarcheal females, amenorrhea if her periods occur only following hormone (for example, estrogen) administration.

*Restricting Type:* During the current episode of anorexia nervosa, the person has not regularly engaged in binge eating or purging behavior (for example, 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 (for example, self-induced vomiting or the misuse of laxatives, diuretics, or enemas).<sup>25</sup>

Over time, the following symptoms may develop as the body goes into starvation:

- Menstrual periods cease
- Osteopenia or osteoporosis (thinning of the bones) through loss of calcium
- Hair / nails become brittle
- Skin dries and can take on a yellowish cast
- Mild anemia and muscles, including the heart muscle, waste away
- Severe constipation
- Drop in blood pressure, slowed breathing and pulse rates
- Internal body temperature falls, causing person to feel cold all the time
- Depression, and lethargy

Despite dietary inadequacies, vitamin and mineral deficiencies are rarely seen in anorexia nervosa patients. This has been linked to the decreased metabolic need for micronutrients in a catabolic state. Many patients also take vitamin and mineral supplements which mask dietary inadequacies.

Laboratory values usually remain in the normal range until the illness is far advanced.<sup>26</sup>

**Table 1: Physical complications of anorexia nervosa**

Organ System	Symptoms	Signs	Laboratory Test Results
Whole body	Weakness, lassitude	Malnutrition	Low weight/body mass index, low body fat percentage per anthropometrics or underwater weighing
Central nervous system	Apathy, poor concentration	Cognitive impairment; depressed, irritable mood	CT scan: ventricular enlargement; MRI: decreased gray and white matter
Cardiovascular and peripheral vascular	Palpitations, weakness, dizziness, shortness of breath, chest pain, coldness of extremities	Irregular, weak, slow pulse; marked orthostatic blood pressure changes; peripheral vasoconstriction with acrocyanosis	ECG: bradycardia, arrhythmias; Q-Tc prolongation (dangerous sign)
Skeletal	Bone pain with exercise	Point tenderness; short stature/arrested skeletal growth	X-rays or bone scan for pathological stress fractures; bone densitometry for bone mineral density assessment for osteopenia or osteoporosis
Muscular	Weakness, muscle aches	Muscle wasting	Muscle enzyme abnormalities in severe malnutrition
Reproductive	Arrested psychosexual maturation or interest; loss of libido	Loss of menses or primary amenorrhea; arrested sexual development or regression of secondary sex characteristics; fertility problems; higher rates of pregnancy and neonatal complications	Hypoestrogenemia; prepubertal patterns of LH, FSH secretion; lack of follicular development/ dominant follicle on pelvic ultrasound
Endocrine, metabolic	Fatigue; cold intolerance; diuresis; vomiting	Low body temperature (hypothermia)	Elevated serum cortisol; increase in rT3 ("reverse" T3); dehydration; electrolyte abnormalities; hypophosphatemia (especially on refeeding); hypoglycemia (rare)
Hematologic	Fatigue; cold intolerance	Rare bruising/clotting abnormalities	Anemia; neutropenia with relative lymphocytosis; thrombocytopenia; low erythrocyte sedimentation rate; rarely clotting factor

			abnormalities
Gastrointestinal	Vomiting; abdominal pain; bloating; obstipation; constipation	Abdominal distension with meals; abnormal bowel sounds	Delayed gastric emptying; occasionally abnormal liver function test results
Genitourinary		Pitting edema	Elevated BUN; low glomerular filtration rate; greater formation of renal calculi; hypovolemic nephropathy
Integument	Change in hair	Lanugo	

The most serious physical complications occur in patients with chronic and severe patterns of binge eating and purging and are most concerning in very-low-weight patients.

Laboratory abnormalities in anorexia nervosa may include neutropenia with relative lymphocytosis, abnormal liver function, hypoglycemia, hypercortisolemia, hypercholesterolemia, hypercarotenemia, low serum zinc levels, electrolyte disturbances, and widespread disturbances in endocrine function. Thyroid abnormalities may include low T 3 and T 4 levels, which are reversible with weight restoration. Normal serum phosphorus values may be misleading, since they do not reflect total body phosphorus depletion (which is usually reflected in serum phosphorus only after refeeding has begun). In very severe cases of malnutrition, elevated serum levels of muscle enzymes associated with catabolism may be seen in more than one-half of the patients with anorexia nervosa.

MRI abnormalities reflect changes in the brain. White matter and cerebrospinal fluid volumes appear to return to the normal range following weight restoration. However, gray matter volume deficits, which correlate with the patient's lowest recorded body mass indices, may persist even after weight restoration. Some patients show persistent deficits in their neuropsychological testing results, which has been shown to be associated with poorer outcomes.

## Section IV. Bulimia Nervosa

### Bulimia Nervosa Definition

Individuals suffering from Bulimia Nervosa follow a routine of secretive, uncontrolled or binge eating (ingesting an abnormally large amount of food within a set period of time) followed by behaviors to rid the body of food consumed.

An estimated 1.1 percent to 4.2 percent of females have bulimia nervosa in their lifetime.<sup>27</sup> Most patients with bulimia nervosa tend to be of normal weight or moderately overweight and so are able to hide their condition for years as they binge and purge in secret. Binges can range from once or twice a week to several times a day and can be triggered by a variety of emotions such as depression, boredom, or anger. The illness may be constant or occasional, with periods of remission alternating with recurrences of binge eating.<sup>28</sup>

The term *bulimia* is derived from Latin and means “hunger of an ox.” It is well known that the Romans engaged in binge eating and vomiting rituals as the orator Cicero, in *Pro Rege Deiotaro*, says matter-of-factly that Julius Caesar “expressed a desire to vomit after dinner”(vomere post cenam te velle dixisses), and elsewhere suggests that the dictator took emetics for this purpose. It was not described medically

however until 1903 in *Obsessions et la Psychasthenie*, where the author, Pierre Janet writes about a woman who engaged in secret compulsive binges.<sup>29</sup>

## Medical Symptoms

Patients with bulimia nervosa binge eat frequently, and during these times sufferers may eat an astounding amount of food in a short time, often consuming thousand of calories that are high in sugars, carbohydrates, and fat. They can eat rapidly, sometimes gulping down food without even t tasting it. Their binges often end only when they are interrupted by another person, or they fall asleep, or their stomach hurts from being stretched beyond normal capacity. During an eating binge sufferers feel out of control. After a binge, stomach pains and the fear of weight gain are common reasons that those with bulimia nervosa purge themselves by throwing up or using laxatives. The cycle is usually repeated at least several times a week, or in serious cases, several times a day.

The American Psychiatric Association uses the following diagnostic criteria:

- A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
  1. Eating, in a discreet period of time (for example, within any two-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 (for example, 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 other compensatory behaviors both occur, on the average, at least twice a week for three months.
- D. Self-evaluation is unduly influenced by body shape and weight.
- E. The disturbance does not occur exclusively during episodes of anorexia nervosa.

*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.<sup>30</sup>

Many people don't know when a family member or friend has bulimia nervosa because the sufferers hide their binges. Since they don't become drastically thin, their behaviors may go unnoticed by those closest to them.

The National Institute of Mental Health suggests that these symptoms should raise red flags:

- Chronically inflamed and sore throat
- Salivary glands in the neck and below the jaw become swollen. Cheeks and face often become puffy; causing suffers to develop a "chipmunk" looking face.
- Tooth enamel wears off; teeth begin to decay from exposure to stomach acids.

- Constant vomiting causes gastroesophageal reflux disorder.
- Laxative abuse causes an irritation, leading to intestinal problems
- Diuretics cause kidney problems
- Severe dehydration from purging of fluids<sup>31</sup>

The Academy of Nutrition and Dietetics reports that nutritional abnormalities for patients with bulimia nervosa depend on the amount of restriction during the non-binge episodes. Purging does not completely prevent the utilization of calories from the binge: an average of 1200 calories occurs from binges of various sizes and contents.<sup>32</sup>

Muscle weakness, fatigue, cardiac arrhythmias, dehydration, and electrolyte imbalance can be caused by purging, especially self-induced vomiting and laxative abuse. Chronic ipecac (emetic) use has been shown to cause skeletal myopathy, electrocardiographic changes, and cardiomyopathy with consequent congestive heart failure, arrhythmia and sudden death.<sup>33</sup>

**Table 2: Physical complications of bulimia nervosa**

Organ System	Symptoms	Signs	Laboratory Test Results
Metabolic	Weakness; irritability	Poor skin turgor	Dehydration (urine specific gravity; osmolality); serum electrolytes: hypokalemic, hypochloremic alkalosis in those who vomit; hypomagnesemia and hypophosphatemia in laxative abusers
Gastrointestinal	Abdominal pain and discomfort in vomiters; occasionally automatic vomiting; obstipation; constipation; bowel irregularities and bloating in laxative abusers	Occasionally blood-streaked vomitus; vomiters may occasionally have gastritis, esophagitis, gastroesophageal erosions, esophageal dysmotility patterns (including gastroesophageal reflux, and, very rarely, Mallory-Weiss [esophageal] or gastric tears); may have increased rates of pancreatitis; chronic laxative abusers may show colonic dysmotility or melanosis coli	
Reproductive	Fertility problems	Spotty/scanty menstrual periods	May be hypoestrogenemic
Oropharyngeal	Dental decay; pain in pharynx; swollen cheeks and neck (painless)	Dental caries with erosion of dental enamel, particularly lingular surface of incisors; erythema of pharynx; enlarged salivary glands	X-rays confirm erosion of dental enamel; elevated serum amylase associated with benign parotid hyperplasia
Integument		Scarring on dorsum of hand	

		(Russell's sign)	
Cardiomuscular (in ipecac abusers)	Weakness; palpitations	Cardiac abnormalities; muscle weakness	Cardiomyopathy and peripheral myopathy

Laboratory abnormalities in bulimia nervosa may include electrolyte imbalances such as hypokalemia, hypochloremic alkalosis, mild elevations of serum amylase, and hypomagnesemia and hypophosphatemia, especially in laxative abusers.

It is the frequency and intensity of the bingeing that separates anorexics from bulimics, even though both will restrict food consumption and many anorexics also binge and purge. Anorexics who purge and normal weight individuals who do not binge but vomit whenever they eat food they consider as too fattening are often improperly diagnosed with bulimia nervosa. Without binge eating the diagnosis of bulimia is incorrect. However the disorders do cross over into each other.

Dr. Marc Darrow, believes that most people with bulimia have thought patterns and experience symptoms similar to those with anorexia. The drive for thinness and the fear of being fat appear in both disorders, and while body image distortion is present in bulimia, it is usually not to the same degree as in anorexia nervosa.<sup>34</sup>

Most people with bulimia restrict caloric intake such that they try to keep a weight that is too low for them to maintain without experiencing many of the symptoms of semi-starvation. Some bulimics are at or above normal weight but nevertheless experience starvation symptoms due to their continual efforts to restrict food intake. Individuals with bulimia nervosa live in a world between compulsive, or binge eating, and starving, pulled in both directions. Bulimics are often referred to as "failed anorexics"—they have repeatedly tried to control their weight by restricting intake and have been unable to do so. These individuals end up bingeing and then, out of anxiety and desperation, purge through self-induced vomiting, laxatives, or diuretics, or use other compensatory behaviors to make up for their binges, such as fasting, exercise, saunas, or other similar means. On the other hand, many individuals with bulimia describe themselves as binge eaters first who then resort to purging after dieting fails.

Purging and other compensatory behaviors often serve to calm down bulimics and ease their guilt and anxiousness about having consumed too much food or gained weight. As the disorder progresses, bulimics will purge or compensate for eating even normal or small amounts of anything they consider "bad" or "fattening" and, eventually, any food at all. Binges can eventually be quite extreme. Binges of up to 50,000 calories a day have been recorded.

Overall, it is important to understand that bulimia nervosa, which appears in the beginning to be related to dieting and weight control, eventually becomes a means of mood regulation in general. A bulimic finds solace in food and often in the purging itself. The act of purging becomes powerfully addictive, not just because it controls weight, but because it is calming, or serves as a way of expressing anger, or in some other way helps the individual cope.

Bulimics seem to be individuals who need help regulating or modulating mood states and therefore are more prone to use a variety of coping mechanisms such as drugs, alcohol, and even sex.

Social functioning and adjustment among individuals with bulimia vary. For one thing, unlike anorexics, bulimics are not easily identified by their unusually low weight and are able to be successful at work, in school, and in relationships, while keeping the bulimia a secret. Patients have disclosed their bulimia to therapists after successfully hiding it from everyone, including their spouses, sometimes for as long as twenty years. Some bulimics however become so entrenched in the disorder, bingeing and purging

eighteen or more times per day, that they have little or no ability to perform on the job or in school and have marked difficulty with relationships.

## **Section V. Eating Disorders Not Otherwise Specified**

### **Eating Disorder Not Otherwise Specified**

The Eating Disorder Not Otherwise Specified (EDNOS) category is for disorders of eating that do not meet the criteria for any specific eating disorder. In EDNOS, individuals engage in some form of abnormal eating, but do not exhibit all the specific symptoms required to diagnose an eating disorder. An individual with EDNOS may meet all the criteria of anorexia nervosa but manage to maintain normal weight while someone else may engage in purging behavior with less frequency or intensity than a diagnosed bulimic.

The Eating Disorder Not Otherwise Specified category is for disorders of eating that do not meet the criteria for any specific Eating Disorder. The American Psychiatric Association uses the following clinical descriptions:

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 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 (for example, 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.<sup>35</sup>

## **Section VI. Binge Eating Disorder**

### **Binge Eating Disorder Categories**

Binge eating disorder (BED) is the newest clinically recognized eating disorder. The term was developed to describe individuals who binge eat but do not use extreme compensatory behaviors such as fasting or purging to lose weight. In the past, these individuals were often referred to as compulsive overeaters, emotional overeaters, or food addicts. Many of these individuals suffer from debilitating patterns of eating for self-soothing rather than following physiological cues to eat. This nonhunger eating, when done on a regular basis, produces weight gain and even obesity.

Some professionals are of the opinion that there are two distinct subcategories of binge eating: deprivation-sensitive binge eating and addictive or dissociative binge eating. Deprivation-sensitive binge eating appears to be the result of weight loss diets or periods of restrictive eating, both of which result in binge eating episodes. Addictive or dissociative binge eating is the practice of self-medicating or self-soothing with food unrelated to prior restricting. Many individuals report feelings of numbness, dissociation, calmness, or regaining of inner equilibrium after binge eating.

The American Psychiatric Association uses the following diagnostic research criteria:

- A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
  - a. Eating, in a discrete period of time (for example, within any two-hour period), an amount of food that is definitely larger than most people would eat in a similar period of time under similar circumstances; and
  - b. A sense of lack of control over eating during the episode (for example, 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:
  - a. eating much more rapidly than normal,
  - b. eating until feeling uncomfortably full,
  - c. eating large amounts of food when not feeling physically hungry,
  - d. eating alone because of being embarrassed by how much one is eating,
  - e. 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 two days a week for six 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 (for example, purging, fasting, excessive exercise) and does not occur exclusively during the course of anorexia nervosa or bulimia nervosa.

## Misconceptions

It is a common misconception that all people who are overweight or obese have binge eating disorder, but being overweight or obese does not imply the existence of binge eating disorder. To distinguish simple overeating from binge eating, it is important to understand the use of the word “binge”. According to the *Webster's Collegiate Dictionary*, tenth edition, the word *binge* can be applied to anything where there is “an unrestrained or excessive indulgence.” In binge eating disorder, the food is binged on in a discrete period of time with the individual reporting an inability to stop or to control the behavior.

Binge eating was first observed and reported in studies on obesity in the late 1950s. In the 1980s, additional studies on obesity and bulimia nervosa showed that many people in both populations have binge eating problems without the other criteria for bulimia nervosa. Then, in 1992, the term *binge eating disorder* was adopted at the International Eating Disorders Conference.<sup>36</sup>

## Section VII. Treatment and Recovery

### Treatment and Levels of Care

The services available for the treatment of eating disorders can range from intensive inpatient settings, partial hospital and residential programs, to varying levels of outpatient care, the patient can receive general medical treatment, nutritional counseling, and/or individual, group, and family psychotherapy. The American Psychiatric Association recommends that pretreatment evaluation of the patient is essential for determining the appropriate setting of treatment. Weight and cardiac and metabolic status are the most important physical parameters for determining choice of setting. Generally, patients who weigh less than

approximately 85% of their individually estimated healthy weights have considerable difficulty gaining weight in the absence of a highly structured program. Those weighing less than about 75% of their individually estimated healthy weights are likely to require a 24-hour hospital program.

Once weight loss is severe enough to cause the indications for immediate medical hospitalization, treatment may be less effective, refeeding may entail greater risks, and prognosis may be more problematic than when intervention is provided earlier. Knowledge about gray matter deficits that result from malnutrition and persist following refeeding also point to the need for earlier rather than later effective interventions. Therefore, hospitalization should occur before the onset of medical instability as manifested by abnormal vital signs.

The decision to hospitalize should be based on psychiatric and behavioral grounds, including rapid or persistent decline in oral intake; decline in weight despite maximally intensive outpatient or partial hospitalization interventions; the presence of additional stressors--such as intercurrent viral illnesses--that may additionally interfere with the patient's ability to eat; prior knowledge of weight at which instability is likely to occur; and comorbid psychiatric problems that merit hospitalization.<sup>37</sup>

Indications for immediate medical hospitalization include marked orthostatic hypotension with an increase in pulse of >20 bpm or a drop in blood pressure of >20 mm Hg/minute standing, bradycardia below 40 bpm, tachycardia over 110 bpm, or inability to sustain body core temperature (e.g., temperatures below 97.0;ÆF). Most severely underweight patients, those with physiological instability, and many children and adolescents whose weight loss, while rapid, has not been as severe as in adult patients nonetheless require inpatient medical management and comprehensive treatment for support of weight gain.

**Table 3: Level of Care Criteria for Patients with Eating Disorders**

Level of Care					
Characteristic	Level 1: Outpatient	Level 2: Intensive Outpatient	Level 3: Partial Hospitalization (Full-Day Outpatient Care)	Level 4: Residential Treatment Center	Level 5: Inpatient Hospitalization
Medical complications	Medically stable to the extent that more extensive medical monitoring, as defined in levels 4 and 5, is not required			Medically stable to the extent that intravenous fluids, nasogastric tube feedings, or multiple daily laboratory tests are not needed	For adults: heart rate <40 bpm; blood pressure <90/60 mm Hg; glucose <60 mg/dl; potassium <3 meq/liter; electrolyte imbalance; temperature <97.0 ;ÆF; dehydration; or hepatic, renal, or cardiovascular organ compromise requiring acute treatment. For children and adolescents: heart rate in the 40s;

					orthostatic blood pressure changes (<20-bpm increase in heart rate or >10-20-mm Hg drop); blood pressure below 80/50 mm Hg; hypokalemia or hypophosphatemia
Suicidality	No intent or plan			Possible plan but no intent	Intent and plan
Weight as % of healthy body weight (for children, determining factor is rate of weight loss) <sub>3</sub>	>85%	>80%	>75%	<85%	<75% (for children and adolescents: acute weight decline with food refusal even if not <75% below healthy body weight)
Motivation to recover, including cooperativeness, insight, and ability to control obsessive thoughts	Fair to good	Fair	Partial; preoccupied with ego-syntonic thoughts more than 3 hours a day; cooperative	Poor to fair; preoccupied with ego-syntonic thoughts 4-6 hours a day; cooperative with highly structured treatment	Very poor to poor; preoccupied with ego-syntonic thoughts; uncooperative with treatment or cooperative only in highly structured environment
Comorbid disorders (substance abuse, depression, anxiety)	Presence of comorbid condition may influence choice of level of care				Any existing psychiatric disorder that would require hospitalization
Structure needed for eating/ gaining weight	Self-sufficient		Needs some structure to gain weight	Needs supervision at all meals or will restrict eating	Needs supervision during and after all meals or nasogastric/special feeding
Impairment and ability to care for self; ability to control exercise	Able to exercise for fitness, but able to control compulsive exercising		Structure required to prevent patient from compulsive exercising	Complete role impairment, cannot eat and gain weight by self; structure required to prevent patient from compulsive exercising	

Purging behavior (laxatives and diuretics)	Can greatly reduce purging in non-structured settings; no significant medical complications such as ECG abnormalities or others suggesting the need for hospitalization		Can ask for and use support or use skills if desires to purge	Needs supervision during and after all meals and in bathrooms
Environmental stress	Others able to provide adequate emotional and practical support and structure	Others able to provide at least limited support and structure	Severe family conflict, problems, or absence so as unable to provide structured treatment in home, or lives alone without adequate support system	
Treatment availability/ living situation	Lives near treatment setting		Too distant to live at home	

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

Legal interventions, including involuntary hospitalization and legal guardianship, may be necessary to ensure the safety of treatment-reluctant patients whose general medical conditions are life-threatening. Decisions to hospitalize on a psychiatric versus general medical or adolescent/pediatric unit depend on the patient's general medical status, the skills and abilities of local psychiatric and general medical staffs, and the availability of suitable programs to care for the patient's general medical and psychiatric problems. Some evidence suggests that patients treated in eating disorders inpatient specialty units have better outcomes than patients treated in general inpatient settings that lack expertise and experience in treating patients with eating disorders.

Partial hospitalization and day hospital programs are being increasingly used in attempts to decrease the length of some inpatient hospitalizations; for milder cases, these programs are being increasingly used in place of hospitalization. However, such programs may not be appropriate for patients with lower initial weights (e.g., those who are  $\leq 75\%$  of average weight for height). In clinical practice, failure of outpatient treatment is one of the most frequent indications for more intensive treatment, either day/partial hospital or inpatient. In deciding whether to treat in a partial hospitalization program, the patient's level of motivation to participate in treatment and ability to work in a group setting should be considered.

Patients with high motivation to comply with treatment, cooperative families, brief symptom duration, and who are less than 20% below healthy body weight 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 (8-10). Careful monitoring includes at least weekly (and often two to three times a week) postvoiding gownned weighings, which may also include measurement of urine specific gravity together with orthostatic vital signs and temperatures. While patients treated in the outpatient setting can remain with their families and continue to attend school or work, these advantages must be balanced against the risks of failure to progress in recovery.

### **Anorexia Nervosa Recovery**

A recent study by Drs. Strober, Freeman and Morrell, to assess the long-term course of recovery and relapse as well as predictors of outcome in anorexia nervosa tracked ninety-five participants, ages twelve to seventeen. They were selected from a specialized university treatment program, were assessed semiannually for five years, and were assessed annually thereafter over a period of ten to fifteen years. Recovery was defined in terms of varying levels of symptom remission maintained for no fewer than eight consecutive weeks. In this study:<sup>38</sup>

- Full recovery was achieved in 75.8 percent;
- Partial recovery was achieved in 10.5 percent; and
- Chronicity, or no recovery, was evidenced in 13.7 percent.

By the end of the follow-up, most patients were weight-recovered and menstruating regularly. Nearly 86 percent of the patients met the study's criteria for partial, if not full, recovery, and roughly 76 percent achieved full recovery. Furthermore, none of the patients died from anorexia nervosa during the course of the study. It is important to note that relapse after recovery was relatively uncommon, while nearly 30 percent of the patients discharged from the treatment program prior to clinical recovery had relapses. It is also important to note that recovery took a substantial amount of time, ranging from fifty-seven to seventy-nine months. Other findings include:

- Among restrictors at intake, nearly 30 percent developed binge eating within five years of intake.
- No correlation between poorer outcome and longer duration of illness, lower minimum body weight, binge eating, vomiting, or prior treatment failure.
- Recovery time was lengthened significantly among patients with disturbances in family relationships.
- A compulsive drive to exercise present at the time of discharge was found to be a predictor of chronic outcome.
- Being asocial prior to the eating disorder was a statistically significant predictor of chronic outcome.

### **Bulimia Nervosa Recovery**

A recent study conducted by Drs Fichter and Quadfling assessed the two- and six-year course and outcome of 196 consecutively treated females with bulimia nervosa—purging type (BNP). Results showed that at the six-year follow-up, 59.9 percent achieved a good outcome, 29.4 percent an intermediate outcome, and 9.6 percent a poor outcome. Two persons were deceased, accounting for the remaining 1.1 percent. Over time, the general pattern of results showed substantial improvement during therapy, a slight decline during the first two years after treatment, and further improvement and stabilization from three to six years after treatment.<sup>39</sup>

Other interesting findings from the six-year follow-up include:

- 20.9 percent had bulimia nervosa—purging type BN-P.
- 0.5 percent had bulimia nervosa—nonpurging type BN-NP.
- 1.1 percent shifted from bulimia nervosa to binge-eating disorder.
- 3.7 percent had anorexia nervosa.
- 1.6 percent were classified as eating disorder not otherwise specified (EDNOS).
- 2 patients died.
- 6 percent had a body mass index (BMI) of greater than 30.
- The majority (71.1 percent) showed no major DSM-IV eating disorder.

### **Impediments to Recovery**

Pro-eating-disorder Web sites have proliferated on the Internet and encourage their users to view eating disorders as a “lifestyle choice” rather than an illness. These sites now outnumber pro-recovery sites five to one. Research conducted at Stanford University and Lucile Packard Children’s Hospital in Palo Alto, Ca show that over 40% of patients that had been diagnosed with an eating disorder had visited such sites. Teens who frequent these sites were hospitalized three times more than nonusers, and nearly two-thirds of visitors to these sites used new weight loss or purging techniques they learned about through the sites.<sup>40</sup>

The study reported that a typical “pro-Ana” (code for anorexia) or “pro Mia” (code for Bulimia) Web site personified the illness into a perfect person, “Ana,” and provides their viewers with new methods of hiding their eating disorder behaviors, cheating on weigh-ins at the doctors office, and providing what the sites call “thinspiration”—glamour shots of thin women and celebrities, and specially designed goal-weight charts where they can report their “cw” and “gw” –current weight and goal weight.

Some sites even include a special food pyramid, with food placed at the narrow tip to be used sparingly while the bulk of the structure promotes large rations of water, diet soda, black coffee and cigarettes. Many sites sell merchandise such as red Ana bracelets, jewelry, t-shirts and other products. Carmen Mikhail, director of the eating disorders clinic at Texas Children’s Hospital in Houston, Tx believes that the Ana movement plays on the tendency that people with eating disorders have toward “all or nothing at all.” Ana is a role model to some, a goddess to others, the subject of drawings, prayers and even a creed. “She” tells them what to eat and mocks them when they don’t lose weight. Some Web-sites encourage followers to make a vow to Ana and sign it in blood.<sup>41</sup>

Dr. Martin Fisher, chief of the division of adolescent medicine at Schneider Children’s Hospital in Manhasset, N.Y. fears that teens in recovery that have their parents and health professionals pushing against their disorder, that these sites support the side of the brain that says “yes” to the eating disorder. Those with an undiagnosed and untreated eating disorder may feel a sense of community with other victims which could spur the illness on.<sup>42</sup>

Treatment can include writing goodbye letters to Ana or Mia to gain control over them. However it is easy for patients to fall back into the online world of Ana after they leave treatment.

### **Role of the Registered Dietitian**

The Academy of Nutrition and Dietetics recommends that the Registered Dietitian assess the nutritional status, knowledge base, motivation, and current eating and behavioral status of the patient, develops the nutrition section of the treatment plan and supports the patient throughout the course of treatment. The registered dietitian addresses the food and nutrition issues, the behavior associated with these issues, and assist the medical team with monitoring lab values, vital signs, and physical symptoms associated with malnutrition. The psychotherapeutic issues are the focus of the psychotherapist or mental health worker.<sup>43</sup>

Because of the complex biopsychosocial aspects of eating disorders, the AND recommends that the optimal assessment and ongoing management of these conditions appears to be with an interdisciplinary team consisting of professionals from medical, nursing, nutritional and mental health disciplines (1). Medical Nutrition Therapy provided by a registered dietitian trained in the area of eating disorders plays a significant role in the treatment and management of eating disorders. The registered dietitian, however, must understand the complexities of eating disorders such as comorbid illness, medical and psychological complications, and boundary issues. The registered dietitian needs to be aware of the specific populations at risk for eating disorders and the special considerations when dealing with these individuals.<sup>44</sup>

The American Psychiatric Association guidelines recommend nutritional rehabilitation as a first goal in the treatment of anorexia and bulimia.

For patients diagnosed with an eating disorder there are two phases of the nutritional aspect of treatment.

1. The education phases, in which nutrition information is provided in a factual manner with little or no emphasis on the emotional issues.
2. The experimental phase, where the registered dietitian works in conjunction with other members of a treatment team and builds a long-term, relationship-based counseling.

When working with eating disordered individuals, a treatment team is important because the psychological issues involved in the patient's eating and exercise patterns are so intertwined. The registered dietitian needs therapeutic backup and must be in regular contact with the therapist and other members of the team.

Dietitians should involve the patient in a discussion of the following topics:

- What kind and how much food the client's body needs
- Symptoms of starvation and of refeeding (the process of beginning to eat normally after a period of starvation)
- Effects of fat and protein deficiency
- Effects of laxative and diuretic abuse
- Metabolic rate and the effect of restricting, bingeing, purging, and yo-yo dieting
- Food facts and fallacies
- How restricting, bingeing, and taking laxatives or diuretics influence hydration (water) shifts in the body and thus body weight on the scale
- The relationship between diet and exercise
- The relationship of diet to osteoporosis and other medical conditions
- The extra nutritional needs during certain conditions such as pregnancy or illness
- The difference between "physical" and "emotional" hunger
- Hunger and fullness signals
- How to maintain weight
- Establishing a goal weight range
- How to feel comfortable eating in social settings
- How to shop and cook for self and/or significant others
- Nutritional supplement requirements

## Case Studies

### 1. Gina is a 14 year-old 9<sup>th</sup> grade student in a large suburban high school.

When she started there 6 months ago, she had come from a small school where she had spent the previous 8 years. It has been a major challenge for her and she has had a hard time figuring out how to fit in. The few people she knew before starting there are not in any of her classes. The classroom work is also challenging and although she is generally keeping up, she has to work hard. She comes home every evening and spends most of the time in her bedroom, choosing to focus on her grades until she feels confident enough to try an extracurricular activity. Though she was quiet before, she seems to have become withdrawn as the year has progressed.

Her mother became very concerned about Gina's behavior when she noticed she was always napping during the dinner hour and she observed her eating only a few grapes for breakfast, cutting them in half

with a knife before eating them. Gina's favorite clothes were looking baggy on her. When she went to her pediatrician, she found Gina had lost 20 pounds in the past year, had not changed in height, and Gina admitted her periods had stopped. Gina was given a diagnosis of anorexia.

Because her weight was 90% of a healthy body weight, the doctor recommended outpatient care including weekly visits with a psychotherapist and a registered dietitian who collaborate with the doctor to help Gina understand effective ways to deal with the dynamic changes often experienced in this phase of adolescence. Gina met with the dietitian weekly to understand her nutritional needs and how to eat to meet these needs. Establishing a trusting relationship between the professionals and Gina was key. Once this occurred, she talked easily with the dietitian. The dietitian worked with her to increase calories to an appropriate level for weight maintenance and gain, described the variety and portions of foods needed, helped her understand the symptoms of starvation and nutritional deficiencies, helped her to understand fluid shifts.

They worked on dispelling food myths and misinformation, did role play for eating meals out and meal preparation at home. Gina's meal plan consisted of 3 meals and 2 snacks daily; she was not to vary from the plan. Her family was also intimately involved in her therapy and observing for accountability with the meal plan. Deviations with the meal plan observed by the family were handled by the dietitian to reduce conflict at mealtimes in the home. Gina eventually regained the weight she had lost and grew in stature though the process was long term with relapses.

## **2. Sheila is a 22-year-old overweight (BMI=29), recent college graduate working as a preschool teacher.**

She excelled in college earning honors in her program and great letters of recommendation from professors. She has a boyfriend who is very enamored of her, anticipating her needs, driving her from place to place. She is soft-spoken and very well liked by most who encounter her. She asked her primary care doctor for a referral to see a registered dietitian because she wanted to lose weight. When she met with the dietitian, just before the initial interview was finished, she asked to share something very private. She admitted that she had been bingeing and purging by vomiting for the past 3 years.

The dietitian worked with her to inform her of the benefit of letting the primary care doctor know about this. The dietitian gave her a meal plan with 3 meals and 3 snacks at an appropriate level for weight maintenance. The dietitian shared with her the observation that nutrition counseling and physician care is not usually enough for maximum patient benefit. Sheila did not keep her third scheduled appointment, did not return a phone call, and did not come back for care.

## **3. Janet is a 55-year-old, obese (BMI=35), female with type 2 diabetes, hypertension, and hyperlipidemia, all of which are poorly controlled.**

She has lived with her elderly, infirmed parents for the past 5 years since a divorce. She works the night shift as a nurse's aid in a nursing home. Her days are spent taking care of her parents. She feels like her work never ends because her life at home is so similar to her job. Janet knows she is gaining weight but she ignores this fact. She has much pride in behavior she changed ten years before when she attended Alcoholics Anonymous and overcame her alcohol dependence.

She knows she struggles with eating but it sometimes seems to be the only activity that gives her pleasure. Her parents do not help the situation by continually making derogatory remarks about her weight and size, the kind they have made throughout her life. She cooks and eats with her parents, being careful to have small meals. When she eats at work however and other times when she is alone, she eats large quantities of food.

A few times a week she goes to 3 or 4 drive thru restaurants for the inexpensive breakfast foods, which she eats quickly but then feels terrible about after she finishes. After these fast food binges, she goes to a ladies room and brushes her teeth and washes her hands before heading home to prepare and eat breakfast with her parents. Janet knows her eating is out of control but she is not sure how to stop. An incident of blurred vision secondary to a high blood sugar level got her attention and caused her to see her physician, who adjusted her diabetes medication and suggested she work with a therapist and a registered dietitian.

Janet's dietitian realized from her assessment that Janet had binge eating disorder (Total calories on a binge day-3500 with 2000 from fast food bingeing), confirming this with the therapist. She worked to stabilize Janet's weight, blood sugar, blood pressure and cholesterol levels.

- She gave Janet a meal plan at a realistic calorie level given her medications and activities.
- She encouraged Janet to believe that all foods can fit into a healthful eating plan so that stigmas about "good" and "bad" foods could be dispelled.
- She encouraged Janet to pay attention to her hunger and fullness before and after meals.
- Janet identified activities she enjoyed that she could do for pleasure other than eating which included some walking for exercise.

Janet's episodes of binges diminished substantially, her physical health improved as did her mood.

### Summary

The more that is learned about eating disorders the more it is realized that there are certain individuals predisposed to develop them. There are far more people with eating or body image problems than those with full-blown eating disorders. The registered dietitian must be aware of specific populations at risk for eating disorders and specific considerations when treating these patients. The registered dietitian plays a significant role in the treatment and management of eating disorders.

## Section VIII. Bibliography and Additional Information Sources

### National Organizations

For general information on National Support Organizations for eating disorders.

#### Academy for Eating Disorders (AED)

6728 Old McLean Dr.  
McLean, VA 22101  
(703) 556-9222

<http://www.aedweb.org>

Promotes effective treatments and prevention initiatives; stimulates research. Sponsors international conferences.

#### Academy of Nutrition and Dietetics (AND)

216 W. Jackson Blvd.  
Chicago, IL 60606  
(312) 899-0040

<http://www.eatright.org>

Promotes sound information about nutrition to the public. Sponsors publications, national events, and

media/marketing programs.

#### Anorexia Nervosa and Related Eating Disorders, Inc. (ANRED)

P.O. Box 5102  
Eugene, OR 97401  
(503) 344-1144

<http://www.anred.com>

Nonprofit organization. Web site provides valuable information about eating disorders: definitions, statistics, warning signs, etiology, complications, and more.

#### American Society of Bariatric Physicians

5600 South Quebec St.  
Suite 109A  
Englewood, CO 80111  
(303) 770-2526 ext. 17  
(303) 779-4834 fax

<http://www.asbp.org>

National professional medical specialty society of

licensed physicians who offer specialty programs in medical treatment of obesity and associated conditions.

**Dads and Daughters (DADS)**

P.O. Box 3458  
Duluth, MN 55803  
(888 ) 824-DADS  
(218) 722-4058 fax

**<http://www.dadsanddaughters.org>**

National nonprofit organization. Tools to strengthen relationships with daughters and transform the persuasive messages that value daughters more for how they look than for who they are.

**Eating Disorders Coalition for Research, Policy & Action**

611 Pennsylvania Avenue SE #423  
Washington, DC 20003-4303  
(202) 543-9570

**<http://www.eatingdisorderscoalition.org/>**

Active on Capitol Hill since 2000, the Eating Disorders Coalition for Research, Policy & Action (EDC) is a group of professional and advocacy-based organizations. The EDC is committed to raising national awareness of eating disorders, improving access to care, and promoting prevention strategies, parity and research.

**Family Resources for Education on Eating Disorders (FREED)**

9611 Page Ave.  
Bethesda, MD 20814  
(301) 493-4568

**<http://www.cpcug.org/user/rpike/freed.html>**

Parent-founded nonprofit organization. Committed to providing education, treatment, and resources to sufferers of eating disorders and their families and friends.

**International Association of Eating Disorders Professionals (IAEDP)**

427 Wooping Lop #1819  
Alta Monte Springs, FL 32701  
(800) 800-8126  
(407) 831-2661 fax

**<http://www.iaedp.com>**

Membership organization for professionals; provides certification, education, local chapters, a newsletter, and annual symposium.

**National Association of Anorexia Nervosa and Associated Disorders (ANAD)**

Box 7  
Highland Park, IL 60036  
(847) 831-3438

**<http://www.anad.org>**

Distributes listing of therapists, hospitals, and informative materials; sponsors support groups, conferences, advocacy, campaigns, research, and a crisis hotline.

**National Association to Advance Fat Acceptance (NAAFA)**

P.O. Box 188620  
Sacramento, CA 95818  
(916) 558-6880

(916) 558-6881 fax

**<http://www.naafa.org>**

Nonprofit organization. Advocacy group. Membership newsletter, educational materials, regional chapters, annual convention.

**National Center for Overcoming Overeating (NCOO)**

P.O. Box 1257  
Old Chelsea Station  
New York, NY 10113-0920  
(212) 875-0442

**<http://www.overcomingovereating.com>**

Women's campaign to end body hatred and dieting.

**National Eating Disorders Association**

603 Stewart St., Suite 803  
Seattle, WA 98101  
(206) 382-3587

(206) 292-9890 fax

**<http://www.nationaleatingdisorders.org>**

National nonprofit organization. Provides prevention and outreach programs, educational materials and a toll-free information and treatment referral hotline.

**National Eating Disorders Screening Program (NEDSP)**

One Washington St. Suite 304  
Wellesley Hills, MA 02181  
(781) 239-0071

**<http://www.nmisp.org/eat.htm>**

Free and anonymous public outreach and education program offering people the opportunity to get information, take a written self-test, meet

one-on-one with a health professional, and get a referral for further evaluation.

**National Institute of Mental Health (NIMH)**

6001 Executive Blvd.  
Rm. 8184 MSC 9663  
Bethesda, MD 20892  
(301) 443-4513  
(301) 443-4279 fax

**<http://www.nimh.nih.gov/publicat/eatingdisorder.cfm#ed5>**

NIMH is a government agency helping people to better understand mental health and mental disorders.

NIMH Eating Disorder Fact Sheets provide helpful general information for families and loved ones.

**Overeaters Anonymous (OA)**

P.O. Box 44020  
Rio Rancho, NM 87124  
(505) 891-2664  
(505) 891-4320 fax

**<http://www.overeatersanonymous.org>**

Addresses issues of compulsive overeating. Free

local meetings.

**River Oaks Hospital**

1525 River Oaks Road West  
New Orleans, Louisiana 70123  
(504) 734-1740

**<http://www.riveroakshospital.com>**

There is a separate male only eating disorder treatment program.

**SAMHSA National Mental Health Information Center**

c/o Box 42490  
Washington D.C. 20015  
1-800-789-2647

**<http://www.mentalhealth.samhsa.gov/highlights/February2004/eating/>**

The National Mental Health Information Center is a service of the Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services. The Web site offers general information about eating disorders.

## Section IX. Continuing Education Answer Sheet & Test Questions

**Dietitians: RD, CDE, LDN, DTR.** Approved for **2 CPE credits.** VPE (Provider Number VA002) is a CPE Accredited Provider with the CDR. **We will mail you a Certificate of Completion for your Activity Log for the CDR reporting. Course Expiration Date: 4/24/13.**

### (#094997) Eating Disorders Guide for Dietitians

Guarantee: We guarantee our Continuing Education Certificates. If for any reason your state does not accept our Continuing Education Credits, we will refund the amount paid by the student for the Certificate. A grade of 70% or better is required to pass this test.

Payment		Total
Credits	Per Credit	
<b>2 x</b>	<b>\$9.50</b>	<b>\$ 19.00</b>
Make Check Payable to: VPE		

#### Mail Answer Sheet & Payment:

Ms. Angela Turton, Registrar  
 Vantage Professional Education  
 P.O. Box 172835  
 Tampa, FL 33672

ANSWER SECTION									
	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>		<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>
1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	9	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	11	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	13	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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7	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	15	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	16	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Print Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_  
 State \_\_\_\_\_ Zip \_\_\_\_\_  
 Name of Employer \_\_\_\_\_  
 Phone Day (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_  
 E-mail \_\_\_\_\_  
 AND/CDR Lic# (Required) \_\_\_\_\_ State # \_\_\_\_\_  
 Dietitian: O RD O DTR O LDN Other \_\_\_\_\_  
 Time Required to Complete this Course? \_\_\_\_\_

#### Content Evaluation

	Disagree	Agree
1. Relationship of objectives appropriate to meet the goals of activity?	1 2 3 4 5	
2. Effective as a learning resource?	1 2 3 4 5	
3. Extended my knowledge on the topic?	1 2 3 4 5	
4. Was consistent with the objectives?	1 2 3 4 5	
5. Was related to my job?	1 2 3 4 5	

#### Course Objectives Evaluation: Did the course content meet the stated objectives?

	Disagree	Agree
1. Identify eating disorder behaviors and prevalence.....	1 2 3 4 5	
2. Identify American Psychiatric Association criteria for defining anorexia nervosa.....	1 2 3 4 5	
3. Describe the life events that may preclude the beginning of anorexia nervosa.....	1 2 3 4 5	
4. Explain the differences between bulimia nervosa and anorexia nervosa.....	1 2 3 4 5	
5. Explain why purging and other compensatory behaviors serve to calm bulimics and ease their guilt .....	1 2 3 4 5	
6. Describe the common misconceptions used to identify Binge Eating Disorder.....	1 2 3 4 5	
7. Identify which patients need a highly structured recovery program .....	1 2 3 4 5	
8. Explain the impediments to recovery .....	1 2 3 4 5	

## Eating Disorders Guide for Dietitians (#094997)

### 16 Test Questions: Please use the Answer Sheet

#### Dietitians: RD, CDE, LD/LCN, DTR.

This offering is approved for 2 Continuing Professional Education Credits by the Commission on Dietetic Registration (CDR).

1. Which of the following eating behaviors involves serious eating disturbances?
  - a) Extreme and unhealthy reduction of food intake
  - b) Severe overeating
  - c) Feelings of distress or extreme concern about body shape or weight
  - d) All of the above
2. According to the US Department of Health and Human Services the average onset of eating disorders occurs between what age groups?
  - a) 10 – 12 years of age
  - b) 14 – 18 years of age
  - c) 18 - 20 years of age
  - d) 20 – 25 years of age
3. Identify the percentage of anorexics that end up binge eating and purging food to the point where they develop bulimia nervosa?
  - a) 5 – 10%
  - b) 10 – 20%
  - c) 30 – 50%
  - d) 75 – 90%
4. Which of the following correctly describes the reason(s) that men are reluctant to participate in programs that treat eating disorders?
  - a) Men are reluctant to ask for help
  - b) Men feel “eating disorders” fall into the category of “women’s” diseases
  - c) Men may not recognize symptoms of an eating disorder
  - d) All of the above
5. Which of the following best summarizes the recent Australian University study concerning the female ideal?
  - a) Female ideal has become progressively heavier
  - b) Female ideal has not changed
  - c) Female ideal has become progressively thinner
  - e) Female ideal has become more muscular
6. The American Psychiatric Association defines anorexia nervosa as when the patient’s body weight is of what percentage less than normal healthy weight expected for the their height?
  - a) 15%
  - b) 18%
  - c) 20%
  - d) 25%
7. Which of the following life events may preclude the beginning of anorexia nervosa?
  - a) A birthday
  - b) Death or divorce of a parent
  - c) Initiation of puberty or moving out of the parent’s home
  - d) Bullying or teasing in school
8. Identify the reason(s) that explains why nutrition deficiencies are rarely seen in anorexics nervosa patients?
  - a) There is a decreased metabolic need for micro nutrients in a catabolic state
  - b) Patients may take vitamin supplements
  - c) Patients may take mineral supplements
  - d) All of the above
9. Identify the laboratory abnormalities in anorexia nervosa patients that may not be reversible with weight restoration?
  - a) Gray matter volume deficits
  - b) Thyroid abnormalities
  - c) Low serum zin levels
  - d) Electrolyte disturbances

10. Which of the following diagnostic criteria is used by the American Psychiatric Association to identify bulimia nervosa?

- a) Binge eating twice a day for a month
- b) Binge eating and other compensatory behavior both occur, on the average, at least a twice week for three months
- c) Binge eating and purging during times of stress
- d) Binge eating and other compensatory behavior both occur, on the average, of at least once a week for one month

11. The Academy of Nutrition and Dietetics reports that purging does not completely prevent the utilization of calories for a binge. What is the average number of calories that are absorbed from binges of various sizes and contents?

- a) 1200
- b) 1000
- c) 500
- d) 250

12. Which of the following diagnosis separates anorexics from bulimics?

- a) Laxative abuse
- b) Binge eating
- c) Self induced vomiting
- d) Fasting

13. Identify why the act of purging maybe become powerfully addictive?

- a) It controls weight
- b) It is calming
- c) It serves as a way of expressing anger and helps the individual to cope
- d) All of the above

14. Identify the common misconception that describes Binge Eating Disorder?

- a) The patient is underweight
- b) The patient is always overweight
- c) The patient always exercises compulsively
- d) The patient's weight is in the normal range

15. According to the American Psychiatric Association, patients who weigh less than what percentage of their individually estimated healthy weights are likely to require a 24 hour hospital program?

- a) Less than 75%
- b) Less than 80%
- c) Less than 85%
- d) Less than 90%

16. Which of the following best describes how pro-eating disorder web sites encourage their users to view eating disorders?

- a) An illness
- b) An illusion
- c) Lifestyle choice
- d) All of the above

## Section X: Footnotes

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- <sup>14</sup> American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Health Disorders*, Fourth Edition, Washington, DC, American Psychiatric Association 1994
- <sup>15</sup> American Psychiatric Association *Men Less Likely to Seek Help for Eating Disorders* (Website) March 9, 2010 <http://www.healthyminds.org/Main-Topic/Eating-Disorders.aspx> [http://www.medem.com/search/article\\_display.cfm?path=\\TANQUERAY\M\\_ContentItem&mstr=M\\_ContentItem\ZZZ0626R6LC.html&soc=APA&srch\\_typ=NAV\\_SERCH](http://www.medem.com/search/article_display.cfm?path=\\TANQUERAY\M_ContentItem&mstr=M_ContentItem\ZZZ0626R6LC.html&soc=APA&srch_typ=NAV_SERCH)
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