CHAPTER 9

Eating Disorders and Obesity

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Credit:
In February 1983, fans of the 1970s pop/soft rock group The Carpenters were shocked to learn that lead singer and sometime drummer Karen Carpenter had died at the age of 32. The cause of death was listed as cardiac arrest, secondary to chronic starvation—the result of an eating disorder known as anorexia nervosa. Karen had struggled with anorexia for nearly a decade, mostly in secrecy, before its effects became obvious in her appearance and ultimately led to her death. And although The Carpenters’ once-famous hits such as “Close to You” and “We’ve Only Just Begun” have long since faded from radio play lists, Karen’s death and the circumstances surrounding it contributed to a public awareness about eating disorders that remains high to this day.

The late Princess Diana of the United Kingdom also developed an eating disorder. It began at age 20, virtually from the outset of her difficult and unhappy marriage to Prince Charles, who had made critical remarks about her weight during their engagement and who, over time, increasingly distanced himself from her. Diana’s binging and purging (mostly self-induced vomiting) continued, with variations in intensity, at least until the couple formally separated. Like many who adopt an eating-disordered lifestyle, the princess was able to contain or ignore speculation about her problems until she decided to make them public, some years before her death in a car accident in 1997. Diana’s type of eating disorder is called bulimia nervosa (for more details of these two cases, see Meyer & Osborne, 1996, ch. 10).

Anorexia nervosa and bulimia nervosa, which are considered separate syndromes, are coded as adult eating disorders in DSM-IV-TR. However, disordered eating is not their most striking feature. At the heart of both disorders is an intense and pathological fear of becoming overweight and fat, and an accompanying pursuit of thinness that is relentless and sometimes deadly. In this chapter we focus on both of these disorders. We also examine obesity. Obesity is not considered an eating disorder or a psychopathological condition in the DSM. However, because it is the second most preventable cause of death and because it clearly does involve disordered eating patterns, we include it here. Its prevalence is rising at an alarming rate. It also accounts for more morbidity and mortality than all other eating disorders combined.

CLINICAL ASPECTS OF EATING DISORDERS

Age of Onset and Gender Differences

Anorexia nervosa and bulimia nervosa are often considered “modern” disorders, yet pathological patterns of eating date back several centuries (Silverman, 1997). It was not until the 1970s and 1980s, however, that eating disorders began to attract a great deal of attention. Clinicians began seeing more and more patients with pathological eating patterns, and it soon became apparent that this was a problem of considerable magnitude.

Neither anorexia nervosa nor bulimia nervosa occurs in appreciable numbers before adolescence, although children as young as 7 have been known to develop eating disorders, especially anorexia nervosa (Bryant-Waugh & Lask, 2002). The incidence of eating disorders also seems to decline after about age 25, although good epidemiological data on this point are lacking. As is widely known, the period of greatest risk for eating disorders is the teenage years and early adulthood (perhaps because this is the time of life when people are most susceptible to some risk factors that we will describe later). We need to keep in mind, however, that there are always exceptions to statistical trends. For example, there is a case report of a woman who developed an eating disorder for the first time when she was 92! (Mermelstein & Basu, 2001). Eating disorders in the elderly are easily missed or attributed to other problems, because clinicians mistakenly assume that eating disorders are always disorders of the young.
Eating Disorders in Men

From a clinical perspective, men with eating disorders look very similar to women with eating disorders (Carlat et al., 1997). However, doctors are not especially likely to think of anorexia nervosa when they see male patients. A growing awareness that anorexia nervosa is not just a “young women’s disorder” is slowly leading to better detection of cases of anorexia nervosa in men and is resulting in a slight increase in the prevalence of anorexia nervosa in men. Male cases of bulimia, however, are quite uncommon (Andersen, 2002). Although very little is currently known about binge-eating disorder, it may well turn out to be the most prevalent form of eating disorder in males.

One established risk factor for eating disorders in men is homosexuality (Carlat et al., 1997), perhaps because thinness is highly valued in the gay community as a hallmark of attractiveness. Another important risk factor is premorbid obesity and being teased as a child. Other specific subgroups of men may also be at higher risk of eating disorders, especially wrestlers and jockeys who need to “make weight” in order to compete or work.

To the extent that eating disorders begin with dieting and a desire to lose weight, men (as we have already seen) are at much lower risk than women of developing eating disorders. Men tend to diet when their weight is 15 percent higher (considering height and weight norms) than the weight at which women begin to diet. In general, there are four major reasons why men diet: to avoid being teased again about childhood weight problems, to improve their performance in a sport, to avoid a weight-related medical illness that they have seen their fathers suffer from, and to improve a gay relationship (Andersen, 1999).

Although most typical eating disorders occur less frequently in men, one disorder that is found almost exclusively in men is “reverse anorexia” or “muscle dysmorphia.” This condition is characterized by a fear of being thin, despite being highly muscular. Males with this disorder often go to extreme efforts to “bulk up” and resort to the use of anabolic steroids to achieve their desired appearance. The growing prevalence of this phenomenon may be associated with changing cultural norms about the most desired body type for men. Leit et al. (2001) estimated the body fat content and level of muscularity of male centerfolds in Playgirl from 1973 to 1997. The results showed that over time, the bodies of the centerfold men had become more “dense.” In other words, the level of muscularity went up and the level of body fat went down. As more and more men begin to experience sociocultural pressures to have a toned body and “six-pack” abs, we can anticipate that their levels of body dissatisfaction may begin to rise. To the extent that this happens, we can expect eating problems and eating disorders in men to become increasingly prevalent.

Although eating disorders occur in males (see The World Around Us 9.1), they are far more common in women. In community samples there are 6 females for every male with an eating disorder. In clinical samples, the ratio is even more extreme at 10:1 (Andersen, 2002). These striking imbalances suggest that, for reasons not yet fully understood, variables associated with gender may be centrally involved in the nature and genesis of these disorders.

Anorexia Nervosa

Descriptions of extreme fasting or ascetic food refusal that were probably symptoms or signs of anorexia nervosa can be found in the early religious literature (Vandereycken, 2002). The first medical account of anorexia nervosa, however, was published in 1689 by Richard Morton (see Silverman, 1997 for a good general historical overview). Morton described two patients, an 18-year-old girl and a 16-year-old boy who suffered from a “nervous consumption” that caused wasting of body tissue. The female patient eventually died because she refused treatment. The disorder did not receive its current name, however, until 1873, when Charles Lasègue in Paris and Sir William Gull in London independently described the clinical syndrome. In his last publication on the condition, Gull (1888) described a 14-year-old girl who began “without apparent cause, to evince a repugnance to food; and soon afterwards declined to take any whatever, except half a cup of tea or coffee.”
After being prescribed to eat light food every few hours, the patient made a good recovery. Gull’s illustrations of the patient before and after treatment appear in Figure 9.1.

The term anorexia nervosa literally means "lack of appetite induced by nervousness." However, this definition is something of a misnomer, because lack of appetite is not the real problem. At the heart of anorexia nervosa is an intense fear of gaining weight or becoming fat. Within DSM-IV-TR (APA, 2000), this is coupled with a refusal to maintain a body weight that is normal for the person’s age and height (i.e., a reduction of body weight to about 85 percent of what would normally be expected). There is also a distorted perception of body shape and size. Finally, in postmenarcheal females, the DSM-IV criteria require that there be an absence of at least three consecutive menstrual periods. Some have questioned the value of this diagnostic criterion, however, because studies have suggested that women who continue to menstruate but meet all the other diagnostic criteria for anorexia nervosa are just as ill as those who have amenorrhea (Cachelin & Maher, 1998; Garfinkel, 2002). For men, the equivalent of the menstruation criterion is diminished sexual appetite and lowered testosterone levels (Beaumont, 2002).

Even though they may look painfully thin or even emaciated, many patients with anorexia nervosa deny having any problems. Indeed, they may be quietly proud of their weight loss. Despite this, efforts may be made to conceal their thinness by wearing baggy clothes or sometimes even carrying hidden bulky objects to make themselves look heavier than they are. If they are being weighed (for example, in a hospital setting), patients with anorexia nervosa may drink large amounts of water to increase their weight temporarily.

Patients with anorexia nervosa may be emaciated yet deny having any problems with their weight. They will go to great lengths to conceal their thinness by wearing baggy clothes or drinking massive amounts of water prior to being weighed (for example, in a hospital setting).

There are two types of anorexia nervosa: the restricting type and the binge-eating/purging type. The central difference between these two types concerns how patients maintain their very low weight. In the restricting type, every effort is made to limit how much food is eaten, and caloric intake is tightly controlled. Patients often try to avoid eating in the presence of other people. When they are at the table, they may eat excessively slowly, cut their food into very small pieces and dispose of food secretly (Beaumont, 2002).

The relentless restriction of food intake is not possible for all patients with anorexia nervosa. Patients with the binge-eating/purging type of anorexia nervosa have a breakdown of restraint that results in periods of binge-eating. A binge involves the out-of-control eating of amounts of food that are far greater than what most people would eat in the same amount of time and under the same circumstances. These binges are followed by efforts to purge. Approximately 30 to 50 percent of patients transition from the restricting type to the binge-eating/purging type of anorexia nervosa dur-
ing the course of their disorder (see Löwe et al., 2001). Methods of purging commonly include self-induced vomiting, misuse of laxatives, diuretics, and enemas. Purging strategies are not effective in preventing the absorption of all calories from food, however.

Indicative of the distorted values of eating-disordered patients, restricting anorexics are often greatly admired by others with eating disorders. One patient reported that she had not been “successful” in her anorexia nervosa because of her failure to reach an extreme low weight. Her belief was that the hallmark of a truly successful anorexic was death from starvation and that anorexia nervosa patients who were able to accomplish this should somehow be revered (see Bulik & Kendler, 2000).

In the example that follows, we describe the case of Tim. Tim’s case reminds us that eating disorders can occur in young children and also in boys. It also highlights the high comorbidity between eating disorders and obsessive-compulsive symptoms and personality traits that we will discuss later. In fact, Tim warrants an additional diagnosis of Obsessive-Compulsive Disorder (see Chapter 6).

**Restricting Type**

Eight-year-old Tim was referred by a pediatrician who asked for an emergency evaluation because of a serious weight loss during the past year for which the pediatrician could find no medical cause. Tim is extremely concerned about his weight and weighs himself daily. He complains that he is too fat, and if he does not lose weight, he cuts back on food. He has lost 10 pounds in the past year and still feels that he is too fat, though it is clear that he is underweight. In desperation, his parents have removed the scales from the house; as a result, Tim is keeping a record of the calories that he eats daily. He spends a lot of time on this, checking and rechecking that he has done it just right.

In addition, Tim is described as being obsessed with cleanliness and neatness. Currently he has no friends because he refuses to visit them, feeling that their houses are “dirty”; he gets upset when another child touches him. He is always checking whether he is doing things the way they “should” be done. He becomes very agitated and anxious about this. He has to get up at least two hours before leaving for school each day in order to give himself time to get ready. Recently, he woke up at 1:30 a.m. to prepare for school. (From Spitzer et al., 1994.)

Ballet dancers are at especially high risk for eating disorders. Heidi Guenther, a dancer with the Boston Ballet, died in 1997 of cardiac arrest. Her death was a result of her excessive efforts to lose weight, which began after someone in the company suggested to her that she lose 5 pounds. Gelsey Kirkland, who developed an eating disorder while she was a premier ballerina with the New York City Ballet, described the existence of a “concentration camp aesthetic” within the company. This was no doubt fostered by the famous choreographer George Balanchine, who, as described by Kirkland in her autobiography, tapped her on the ribs and sternum after one event and exhorted “must see the bones.”

As we see in the case of Ms. R, anorexia nervosa is often a stubbornly persistent and potentially life-threatening disorder. The mortality rate for females with anorexia nervosa is more than 12 times higher than the mortality rate
Bulimia Nervosa

The word bulimia comes from the Greek bous (which means "ox"), and limos ("hunger") and is meant to denote a hunger of such proportions that the person "could eat an ox." The DSM-IV-TR (APA, 2000) criteria for bulimia nervosa emphasize the frequent occurrence of episodes of binge-eating. Binges involve eating, in a fixed period of time, amounts of food that are far greater than anyone might eat under normal circumstances. For example, a person might eat a gallon of ice cream, a family-sized package of Oreo cookies, and a whole chocolate cake during a single short binge. While the binge is occurring, there is also a complete lack of control over eating and the person is unable to stop. There is also recurrent inappropriate behavior that is intended to prevent weight gain. This may include self-induced vomiting and excessive exercise. Some patients even take thyroid medication to enhance their metabolic rate. Finally, the DSM-IV-TR criteria require that self-evaluation be excessively influenced by weight and body shape.

Bulimia nervosa may not be diagnosed if the person also meets criteria for anorexia nervosa (i.e., if the person has the binge-eating/purging type of anorexia nervosa). In other words, the anorexia nervosa diagnosis "trumps" the bulimia nervosa diagnosis. This is because there is much greater mortality associated with anorexia nervosa than with bulimia nervosa. Recognizing this, the DSM requires that the most severe form of eating pathology take precedence diagnostically.

Bulimia nervosa was recognized as a psychiatric syndrome relatively recently. The British psychiatrist Russell proposed the term in 1979, and it was adopted into the DSM in 1987. G. F. M. Russell (1997) has concluded, on the basis of an historical review, that bulimia nervosa, as presently defined, is a new disorder "virtually unknown until the latter half of the twentieth century" (p. 20). However, as far back as the second century, the Greek physician Galen referred to a syndrome characterized by overeating, vomiting, and fainting, which he termed bulimos (see Ziolko, 1996). Therefore, it is subject to question just how "new" a disorder bulimia nervosa really is.

It is important to understand that people with anorexia nervosa and bulimia nervosa share a common and overwhelming fear of being or becoming "fat." However, unlike patients with anorexia nervosa, bulimic patients are typically of normal weight. Sometimes they may even be slightly overweight. The fear of becoming fat helps explain the development of bulimia nervosa. Bulimia typically begins with restricted eating motivated by the desire to be slender. During these early stages, the person diets and eats low-calorie foods. Over time, however, the early resolve to restrict gradually erodes and the person starts to eat "forbidden foods." These typically include snack and dessert food, such as potato chips, pizza, cake, ice cream, and chocolate. However, some patients binge on whatever food they have available, including such things as raw cookie dough. During an average binge, someone with bulimia nervosa may consume as many as 4800 calories! (Johnson et al., 1982). After the binge, in an effort to manage the breakdown of self-control, the person begins to vomit, fast, exercise excessively, or abuse laxatives. This pattern then persists because, even though bulimic individuals are disgusted by their behavior, the purging serves to alleviate the extreme fear of gaining weight that comes from eating.

Bulimia is a costly disorder for many patients. High food bills can create financial difficulties, and patients sometimes resort to stealing food from house-mates. The DSM-IV-TR distinguishes between purging and nonpurging types of bulimia nervosa on the basis of whether, in the current episode, the person has employed purgative methods of preventing weight gain (e.g., vomiting, use of laxatives). The purging type is by far the most common and accounts for about 80 percent of cases. In the nonpurging type, the person may fast or exercise but does not vomit or use laxatives or diuretics to counteract the effects of binging. The difference between a person with bulimia nervosa and a person with the binge-eating/purging type of anorexia nervosa is weight. By definition, the person with
anorexia nervosa is severely underweight. This is not true of the person with bulimia nervosa (see Table 9.1).

The typical patient with anorexia nervosa engages in much denial regarding the seriousness of her disorder and may remain seemingly unaware of the shock and concern with which others view her emaciated condition. In contrast, the mind-set of the average bulimia nervosa patient is anything but complacent. Preoccupied with shame, guilt, self-deprecation, and efforts at concealment, she struggles painfully and often unsuccessfully on a daily basis to master the impulse to binge. The case described below depicts a typical pattern.

Table 9.1  Differential Diagnostic Criteria in Anorexia Nervosa, Bulimia Nervosa, and Binge-Eating Disorder

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Anorexia</th>
<th>Bulimia Purging</th>
<th>Bulimia Non-Purging</th>
<th>Binge Eating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintaining of extremely low weight</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Fear of weight gain, becoming fat</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Denial of seriously low weight</td>
<td>?</td>
<td>?</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Body image distortion</td>
<td>?</td>
<td>?</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Amenorrhea</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Frequent binge-eating</td>
<td>no</td>
<td>?</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Frequent purging</td>
<td>no</td>
<td>?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Frequent use of nonpurging methods to</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>avoid weight gain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensed lack of control over eating</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Self-evaluation unduly influenced by</td>
<td>?</td>
<td>?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>shape/weight</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: Based on criteria sets provided in the DSM-IV-TR. ? = the feature may or may not be present, as in the form of an either-or criterion alternative.

Bulimia Nervosa

Nicole awakens in her cold, dark room and already wishes it was time to go back to bed. She dreads the thought of going through this day, which will be like so many others in her recent past. She asks herself the same question every morning: “Will I be able to make it through the day without being totally obsessed by thoughts of food, or will I blow it again and spend the day binging?” She tells herself that today she will begin a new life, today she will start to live like a normal human being. However, she is not at all convinced that the choice is hers.

She feels fat and wants to lose weight, so she decides to start a new diet: “This time it’ll be for real! I know I’ll feel good about myself if I’m thinner. I want to start my exercises again because I want to make my body more attractive.” Nicole plans her breakfast but decides not to eat until she has worked out for a half-hour or so. She tries not to think about food because she is not really hungry. She feels anxiety about the day ahead of her. “It’s this tension,” she rationalizes. That is what is making her want to eat.

Nicole showers and dresses and plans her schedule for the day—classes, studying, and meals. She plans this schedule in great detail, listing where she will be at every minute and what she will eat at every meal. She does not want to leave blocks of time when she might feel tempted to binge. “It’s time to exercise, but I don’t really want to; I feel lazy. Why do I always feel so lazy? What happened to the will power I used to have?” Gradually, Nicole feels the binging signal coming on. Halfheartedly she tries to fight it, remembering the promises she made to herself about changing.

Ultimately, Nicole decides to give in to her urges because, for the moment, she would rather eat. (continues)
Nicole is not going to exercise, because she wants to eat, so she decides that she might as well eat some “good” food. She makes a poached egg and toast and brews a cup of coffee, all of which goes down in about thirty seconds. She knows this is the beginning of several hours of craziness!

After rummaging through the cupboards, Nicole realizes that she does not have any binge food. It is cold and snowy outside and she has to be at school fairly soon, but she bundles up and runs down the street. First she stops at the bakery for a bagful of sweets—cookies and doughnuts. While munching on these, she stops and buys a few bagels. Then a quick run to the grocery store for granola and milk. At the last minute, Nicole adds several candy bars. By the time she is finished, she has spent over $15.

Nicole can hardly believe that she is going to put all of this food, this junk, into her body. Even so, her adrenaline is flowing and all she wants to do is eat, think about eating, and anticipate getting it over with. She winces at the thought of how many pounds all of this food represents but knows she will throw it all up afterward. There is no need to worry.

At home Nicole makes herself a few bowls of cereal and milk, which she gobbles down with some of the bagels smothered with butter, cream cheese, and jelly (not to mention the goodies from the bakery and the candy bars, which she is still working on). She drowns all of this with huge cups of coffee and milk, which help speed up the process even more. All this has taken no longer than 45 minutes, and Nicole feels as though she has been moving at 90 miles an hour.

Nicole dreads reaching this stage, where she is so full that she absolutely has to stop eating. She will throw up, which she feels she has to do but which repels her. At this point, she has to acknowledge that she’s been binging. She wishes she were dreaming but knows all too well that this is real. The thought of actually digesting all of those calories, all of that junk, terrifies her.

In her bathroom, Nicole ties her hair back, turns on the shower (so none of the neighbors can hear her), drinks a big glass of water, and proceeds to force herself to vomit. She feels sick, ashamed, and incredulous that she is really doing this. Yet she feels trapped—she does not know how to break out of this pattern. As her stomach empties, she steps on and off the scale to make sure she has not gained any weight.

Nicole knows she needs help, but she wants someone else to make it all go away. As she crashes on her bed to recuperate, her head is spinning. “I’ll never do this again,” she vows. “Starting tomorrow, I’m going to change. I’ll go on a fast for a week and then I’ll feel better.” Unfortunately, deep inside, Nicole does not believe any of this. She knows this will not be the last time. Reluctantly, she leaves for school, late and unwilling to face the work and responsibilities that lie ahead. She almost feels as though she could eat again to avoid going to school. She wonders how many hours it will be until she starts her next binge, and she wishes she had never gotten out of bed this morning. (Adapted from Boskind-White & White (1983), pp. 29-32.)

Medical Complications of Anorexia Nervosa and Bulimia Nervosa

Anorexia nervosa is the most lethal psychiatric disorder there is. Not surprisingly, many patients with this disorder look extremely unwell. The hair on the scalp thins and becomes brittle, as do the nails. The skin becomes very dry, and downy hair (called lanugo) starts to grow on the face, neck, arms, back, and legs. Many patients also develop a yellowish tinge to their skin, especially on the palms of their hands. Because they are so undernourished, people with this disorder have a difficult time dealing with cold. Their hands and feet are often cold to the touch and have a purplish blue tinge due to problems with temperature regulation and lack of oxygen to the extremities. As a consequence of chronically low blood pressure, patients often feel tired, weak, dizzy, and faint (de Zwaan & Mitchell, 1999). Thiamin (vitamin B1) deficiency may also be present; this could account for some of the depression and cognitive changes found in low-weight anorexics (Winston et al., 2000).

Sudden death from heart arrhythmias (irregular heart beats) can occur in people with anorexia nervosa. Sometimes this is caused by major imbalances in key electrolytes such as potassium. Chronic low levels of potassium can also result in kidney damage and renal failure severe enough to require dialysis.

Although bulimia nervosa is much less lethal than anorexia nervosa, it also causes a number of medical problems. Purging can cause electrolyte imbalances and hypokalemia (low potassium), which, as we have already mentioned, puts the patient at risk for heart abnormalities. Another complication is damage to the heart muscle, which can be caused by using ipecac to induce vomiting (Pomeroy & Mitchell, 2002). More typically, however, patients develop calluses on their hands from sticking their fingers down their throat to make themselves sick. In extreme cases, where objects such as a toothbrush are used to induce vomiting, tears to the throat can occur.

Because the contents of the stomach are acidic, patients damage their teeth when they throw up repeatedly. Brushing the teeth immediately after vomiting irritates the teeth even more. Mouth ulcers and dental cavities are a common consequence of repeated purging, as are small red dots around the eyes that are caused by the pressure of throwing up. Finally, patients with bulimia very often have swollen parotid (salivary) glands caused by repeatedly vomiting. These are known as “puffy cheeks” or “chimpmunk cheeks” by many bulimics. Although such swellings are not painful, they are often quite noticeable to others.

Other Forms of Eating Disorders

In addition to anorexia nervosa and bulimia nervosa, the DSM-IV-TR includes the diagnosis eating disorder not otherwise specified (EDNOS). This diagnosis is given to
approximately one-third of all patients who seek treatment for an eating disorder. The majority of conditions that fall under this diagnosis are atypical clinical variants that resemble anorexia nervosa or bulimia nervosa (or both). For example, a woman who meets all criteria for anorexia nervosa except disrupted menstrual periods would be diagnosed as having EDNOS.

Still another group of people with eating disorders are diagnosed as having binge-eating disorder (BED). This new diagnosis is currently not part of the formal DSM. Instead, it is listed in an Appendix reserved for diagnostic conditions that warrant further study. Binge-eating disorder is proposed as a separate disorder distinct from bulimia nervosa, nonpurging type. The difference is that the individual with BED binges at a level comparable to a patient with bulimia nervosa but does not regularly engage in any form of inappropriate “compensatory” behavior (such as purging, using laxatives, or even exercise) to limit weight gain (see Table 9.1). There is also much less dietary restraint in BED than is typical of either bulimia nervosa or anorexia nervosa (Wilfley, Friedman, et al., 2000). Most patients with binge-eating disorder are older than those with anorexia nervosa or bulimia nervosa (they are generally between 30 and 50 years of age). It is also worth noting that binge-eating disorder is not uncommon in men; only 1.5 females are affected for each male with this disorder (Pike et al., 2001). Regardless, overweight is not a factor that is used diagnostically to distinguish people with BED from nonpurging bulimia nervosa patients (Walsh & Garner, 1997). As evidence grows about the idea that BED is a distinct clinical syndrome (e.g., Williamson, 2002), we expect that it will eventually move out of the DSM Appendix and become a formal diagnosis.

**Binge-Eating Disorder**

Ms. A was a 38-year-old African-American woman who was single, lived alone, and was employed as a personnel manager at a hotel in New York. Her height was 6 feet, 0 inches, and she weighed 292 pounds (body mass index = 39.7; see Table 9.2) when she was initially seen at the eating disorders research clinic of a university hospital for the treatment of binge-eating disorder and obesity. Her chief reason for coming to the clinic was that she felt her eating was out of control and, as a result, she had gained approximately 80 pounds over the previous year.

Ms. A reported a lifetime history of obesity and a history of binge eating beginning at approximately age 11. At her intake session, she described her eating. She felt out of control and ate large amounts of food nearly every day, typically in the evenings when she was on her way home from work or alone at home. She tended to feel out of control throughout the day, which contributed to her snacking on three or four regular candy bars or three or four medium cookies and one ice cream bar during the day. Ms. A then felt that a binge episode was inevitable.

A typical binge episode consisted of the ingestion of two pieces of chicken, one small bowl of salad, two servings of mashed potatoes, one hamburger, one large serving of French fries, one fast-food serving of apple pie, one large chocolate shake, one large bag of potato chips and 15 to 20 small cookies—all within a 2-hour period. During her binge episodes, Ms. A ate much more rapidly than usual until she felt uncomfortably full, ate large amounts of food when she didn’t feel physically hungry, ate alone because she was embarrassed by how much she was eating, and felt disgusted with herself and very guilty after eating. She was also extremely distressed about her weight and acknowledged that her weight and shape were the most important factors that affected how she felt about herself. (Adapted from Goldfein et al., 2000.)

**Distinguishing Among Diagnoses**

As is perhaps implied by the large proportion of eating-disordered patients who fall within the EDNOS category, the diagnosis of an eating disorder is not always clear-cut. The distinction between normal and disordered eating, particularly in a time when very large numbers of young women perceive themselves as overweight and therefore indulge in one or another form of “dieting,” is at best a fuzzy one. And, as also indicated by the well-populated EDNOS category, failure to meet diagnostic criteria for either anorexia nervosa or bulimia nervosa does not imply that the individual is free of disorder. Furthermore, the distinction between anorexia nervosa and bulimia nervosa is often less than clear, and whether the two disorders should be separated at all has been seriously debated. In fact, many persons who presently meet the criteria for bulimia nervosa have been diagnosed with anorexia nervosa in the past and, less commonly, vice versa (Garner & Garfinkel, 1997). One 21-year follow-up of patients with anorexia nervosa suggests that patients tend not to maintain a restricting form of the disorder and instead progress to binging and purging over time (Löwe et al., 2001). It has been suggested that some cases of EDNOS may reflect a long-term end state of anorexia nervosa (Bulik, 2002). In short, the diagnosis given at one time may not be the diagnosis given at a later date. The clinical features of eating disorders seem to evolve, and one common pattern is anorexia nervosa “morphing” into bulimia nervosa.

**Comorbidity of Eating Disorders with Other Forms of Psychopathology**

Eating disorder diagnoses are commonly associated with other diagnosable psychiatric conditions. In other words, there is a great deal of comorbidity. For example, patients
with anorexia nervosa often also meet criteria for clinical depression (Kaye, Welzinz, & Hsu, 1993), as well as obsessive-compulsive disorder (Halmi et al., 1991; Thiel et al., 1995; Milos et al., 2002). Comorbid depression and OCD are also found in bulimia patients (Brewerton et al., 1995; Thiel et al., 1995; Milos et al., 2002). In addition, there is frequent co-occurrence of substance abuse disorders in the binge-eating/purging subtype of anorexia nervosa as well as in bulimia nervosa. The restrictive type of anorexia nervosa, however, tends not to be associated with higher rates of substance abuse (Steiger & Seguin, 1999). More than a third of patients with eating disorders also have engaged in self-harming behaviors (cutting or burning themselves, for example) at some point in their lives (Paul et al., 2002).

Comorbid personality (Axis II) disorders are also frequently diagnosed in people with eating disorders. Those with the restrictive type of anorexia nervosa are inclined toward personality disorders in the anxious–fearful cluster (i.e., Cluster C; see Chapter 11; Skodol et al., 1993). In contrast, eating disorders that involve binge/purge syndromes (both anorexia nervosa and bulimia nervosa) are more likely to be associated with Cluster B (dramatic, emotional, erratic) problems, especially borderline personality disorder (APA, 2000). Personality disorders are also found in patients with BED, although no clear pattern has emerged (Wilfley, Friedman, 2000). Some evidence (Wilson, 1993) suggests that alcohol abuse is less common in this group than in binge-eating/purging anorexia nervosa or in bulimia nervosa and that there is also less comorbidity with other psychiatric disorders (Telch & Stice, 1998).

One problem with simple examinations of personality disorders in patients with eating disorders is that some of the disturbances found in these patients could reflect the consequences of malnourishment. Starvation is known to increase both irritability and obsessionality (Keys et al., 1950). We must therefore be cautious in our conclusions. Current thinking, however, is that even though the physiological consequences of eating disorders may exacerbate personality disturbances, they may only be enhancing traits that were there in the first place. Research suggests that some personality traits in eating-disordered patients might both predate the onset of the disorder and remain even when the eating disorder remits and the patient has recovered (Pollice et al., 1997; Steinger & Stotland, 1996; Von Ranson et al., 1999).

Prevalence of Eating Disorders

If we were to look only at the number of reports about eating disorders in the popular media, it would be easy to get the impression that these disorders are reaching epidemic proportions. However, this is not exactly true. When strict diagnostic criteria are applied, the prevalence of anorexia nervosa at any one time is around 0.28 percent (Hoek, 2002) with a lifetime prevalence of 0.5 percent (APA, 2000). For bulimia, the point prevalence is around 1 percent (Hoek, 2002) and the lifetime prevalence 1 to 3 percent (APA, 2000). In other words, the prevalence of these disorders is actually quite low.

Very little is currently known about binge-eating disorder because it is a newly proposed diagnosis. However, it may be relatively common. Community-based estimates indicate a prevalence of 2 to 3 percent in the general population and a much higher prevalence (around 8 percent) in obese people (Grilo, 2002).

We should keep in mind here that we are talking about clinically diagnosable eating disorders. Certainly many people, particularly young women in their teens and twenties, have disordered eating patterns. For example, questionnaire studies suggest that up to 19 percent of students report some bulimic symptoms (Hoek, 2002). For some, this will prove a temporary condition, according to a published 10-year follow-up of persons who were in college at initial assessment (Heatherton et al., 1997). At follow-up, the women in this study had experienced significant declines in disordered eating and increased satisfaction with their bodies, despite a continuing preoccupation with losing weight. In contrast, many men in the study reported increased concern about their eating habits.

There is no strong evidence that the number of new cases (i.e., the incidence) of anorexia nervosa is increasing (Fombone, 1995). Any reported increases are probably due to increased awareness and better detection by clinicians. In contrast, the evidence suggests that bulimia nervosa has increased in frequency and that this increase in frequency began in the 1970s. The reasons for the increase are not fully understood, but most authorities point to changing norms regarding the “ideal” size and shape of women as one decisive factor. The type of body that used to be regarded as glamorous and attractive (e.g., Marilyn Monroe) is no longer considered desirable, especially by women.

Eating Disorders Across Cultures

Although the majority of research on eating disorders is conducted in the United States and Europe, eating disorders are not confined to these areas. Le Grange, Telch, and Tibbs (1998) have reported widespread eating disorder difficulties among both Caucasian and non-Caucasian South African college students. Anorexia nervosa and (more recently) bulimia nervosa have also become clinical problems in Japan, Hong Kong, Taiwan, Singapore, and Korea (Lee & Katzman, 2002). Cases of eating disorders have been reported in India and Africa, and the prevalence of eating disorders in Iran is comparable to that in the United States (Nobakht & Dezhkam, 2000). In other words, far from being confined to industrialized Western countries, eating disorders are becoming a problem worldwide.

Being white, however, does appear to be associated with having the kinds of subclinical problems that may put people at high risk for developing eating disorders.
Examples of such subclinical problems include body dissatisfaction, dietary restraint, and a drive for thinness. A meta-analysis involving a total of 17,781 participants has shown that such attitudes and behaviors are significantly more prevalent in whites than in non-whites (Wildes et al., 2001). African-Americans, on the other hand, seem to be much less susceptible to subclinical types of eating problems and body image concerns than either whites or other minorities. Asian women exhibit levels of pathological eating similar to those of white women (Wildes et al., 2001).

Some of the clinical features (as opposed to subclinical) of diagnosed forms of eating disorders may also vary according to culture. For example, about 58 percent of anorexia nervosa patients in Asia are not excessively concerned about fat. The reason they give for refusing food is fear of stomach bloating. It may be that within a culture in which most people are already quite thin, concerns about bloating provide a more “legitimate and acceptable” reason to refuse food (Lee et al., 1993).

### Course and Outcome

As we will see later, eating disorders are notoriously difficult to treat, and relapse rates are high. However, over the very long term, recovery is a possibility. Löwe (2001) looked at the clinical outcomes of patients with anorexia nervosa 21 years after they had first sought treatment. Reflecting the high morbidity of anorexia nervosa, 16 percent of the patients (all of whom were women) were no longer alive, having died primarily from complications of starvation or from suicide. Another 10 percent were still suffering from anorexia nervosa, and a further 21 percent had partially recovered. However, 51 percent of the sample were fully recovered at the time of the follow-up. These findings tell us that even after a series of treatment failures, it is still possible for women with anorexia nervosa to get well again. They also serve to highlight the dangers of this disorder. People who have both anorexia nervosa and comorbid substance abuse appear to be at especially high risk of early death (Herzog et al., 2000).

With regard to bulimia nervosa, the long-term mortality rate is much lower, at around 0.5%. In a long-term outcome study in which the mean length of follow-up was around 11 years, Keel et al. (1999) found that about 70 percent of initially bulimic women were in remission and no longer met diagnostic criteria for any eating disorder. The remaining 30 percent continued to have problems with their eating. Because 20 percent of the women could not be contacted or refused to be interviewed, this figure could be an underestimate (women with severe problems may be especially inclined to refuse an interview). Again, problems with substance abuse (as well as a longer duration of illness prior to entry into the study) predicted patients doing worse over time.

Finally, it is worth noting that even when they are well, many people who recover from anorexia nervosa and bulimia nervosa still have some residual food issues. These may include excessive concern about shape and weight, restricted dietary intake, and vulnerability to overeating and purging in response to negative mood states (Sullivan, 2002). In other words, the idea of recovery is relative. Someone who no longer meets all of the diagnostic criteria for an eating disorder may still have issues with food and body image.

### IN REVIEW

1. **How do the prevalence rates for eating disorders vary according to socioeconomic status, gender, sexual orientation and ethnicity?**
2. **What are the major clinical differences between patients with anorexia nervosa and patients with bulimia nervosa? What clinical features do these two forms of eating disorder have in common?**
3. **What kinds of medical problems do patients with eating disorders suffer from?**

### RISK AND CAUSAL FACTORS IN EATING DISORDERS

There appear to be a number of risk factors that raise the overall likelihood of developing an eating disorder of some kind. Many of these are not highly specific, however. In other words, they do not confer a precise susceptibility to eating disorders (as opposed to other types of disorders) or to the particular form in which an eating disorder may be manifested (e.g., anorexia nervosa, bulimia nervosa, or BED, which we do not discuss because little is currently known about its origins). As you read the following discussion, keep in mind that eating disorders (like most others) are undoubtedly multidetermined. Anorexia nervosa or bulimia nervosa in all probability results from the complex interaction of biological, sociocultural, and individual variables.

### Biological Factors

#### GENETICS

As with many other disorders, the tendency to develop an eating disorder runs in families (Strober, 1995; Walters et al., 1992). The biological relatives of probands with anorexia nervosa or bulimia nervosa have elevated rates of anorexia nervosa and bulimia nervosa themselves. In one large family study of eating disorders, the risk of anorexia nervosa for the relatives of anorexia nervosa probands, was 11.4 times greater than for the relatives of the healthy controls; for the relatives of bulimia nervosa probands, the risk was 5.4 times greater.
probands the risk of bulimia nervosa was 3.7 times higher than it was for the relatives of the healthy controls (Strober et al., 2000). However, eating disorders are not densely clustered in certain pedigrees the way mood disorders and schizophrenia sometimes are. It is also interesting that the relatives of patients with eating disorders are more likely to suffer from other problems, especially mood disorders (Lilenfield et al., 1998).

As you know, family studies do not enable us to untangle the different contributions of genetic and environmental influences. These kinds of questions are best resolved by twin studies and adoption studies. Presently, we have none of the latter, but a small number of twin studies do exist. Unfortunately, the results of some of these are hard to interpret. With regard to anorexia nervosa, Treasure and Holland (1989) studied 31 monozygotic (MZ) and 28 dizygotic (DZ) twins. They found a concordance rate of 67 percent in the MZ twins and a concordance rate of 0 percent in the DZ twins, results that suggest a heritability of around 70 percent. In complete contrast, however, a second study found that the concordance rates for anorexia nervosa were higher in DZ twins than in MZ twins (Walters & Kendler, 1995). Because of the ambiguity in this area, no firm conclusions can be drawn at this time (Fairburn, Cowen, et al., 1999; Bulik et al., 2000). Nonetheless, research in this area is proceeding rapidly. More recent work has found provocative evidence for a gene (or genes) on chromosome 1 that might be linked to susceptibility to the restrictive type of anorexia nervosa (Grice et al., 2002). Until this finding is replicated in other studies, however, we would be wise to treat it with caution.

For bulimia nervosa, the genetic evidence is just as complicated as it is for anorexia nervosa. Holland and Treasure’s (1989) study reported MZ and DZ concordance rates of 35 percent and 29 percent respectively, indicating a weak heritability of 10 percent. However, after interviewing more than 2000 twins from a population-based registry, Kendler et al. (1991) reported that the concordance rates for bulimia were higher in MZ twins (22.9 percent) than in DZ twins (8.7 percent) and that the heritability estimate was 55 percent. It is likely that small sample sizes andmethodological differences account for much of the variability in the findings. Unlike the study of schizophrenia, twin studies of eating disorders are still in their infancy. As sample sizes grow and give the statistical analyses more power, any genetic contributions to both anorexia nervosa and bulimia nervosa should become easier to detect (Bulik et al., 2000). In all probability, however, multiple genes (rather than a single gene) will be implicated.

**SET-POINT THEORY** Set-point theory (see Garner, 1997) invokes the well-established tendency for our bodies to "resist" marked variation from some sort of biologically determined individual norm (the set point), at least over limited time periods. Thus anyone intent on achieving and maintaining a significant decrease in body mass below his or her individual set point may be trying to do this in the face of internal physiological opposition. Garner (1997) states the idea as follows:

"Generally speaking, body weight resists change. Weight appears to be physiologically regulated around a "set point," or a weight that one’s body tries to "defend." Significant deviations from this weight result in a myriad of physiological compensations aimed at returning the organism to this set point (p. 149)."

One important "physiological compensation" designed to prevent us from moving far from our set point is hunger. As we lose more and more weight, hunger may rise to extreme levels, encouraging eating, weight gain, and a return to a state of equilibrium. Far from having little or no appetite, patients with anorexia nervosa think about food constantly and make intense efforts to suppress their increasing hunger. Accordingly, chronic dieting may well enhance the likelihood that a person will encounter periods of seemingly irresistible impulses to gorge on large amounts of high-calorie food. For patients with bulimia nervosa, these hunger-driven impulses may lead to "uncontrollable" binge eating.

**SEROTONIN** Serotonin is a neurotransmitter that has been implicated in obsessionality, mood disorders, and impulsivity. It also modulates appetite and feeding behavior. Because many patients with eating disorders respond well to treatment with antidepressants (which target serotonin), some researchers have concluded that eating disorders involve a disruption in the serotonin system (Kaye, 2002).

Evidence of disturbances in this neurotransmitter system can certainly be found. Underweight anorexics have low levels of 5-HIAA, which is a major metabolite of serotonin. The same is true of active bulimics. Moreover, upon recovery, both of these groups appear to have higher levels of 5-HIAA than control women (Kaye et al., 1991, 1998, 2001), which also suggests a problem in the serotonergic system.

Interpreting these results is very difficult, however. In research of this kind, it is always difficult to know whether disturbances in neurochemistry are a primary cause of the problem (in this case, eating disorders) or whether such disturbances simply reflect the fact that patients are malnourished, restricting, purging, or whatever (that is, they are a consequence of the disorder itself). Studies of recovered patients help a little in this regard. However, it is not valid to assume (as some researchers try to do) that any dysfunctions or dysregulations that remain must have predicted the onset of the illness. It is equally possible that these dysregulations are a residual neurochemical “scar” that results from years of eating (or not eating) in a pathological manner. There is also another problem. As you already know, the comorbidity between eating disorders and depression is very high. You may also remember,
from Chapter 7, that the serotonin system is implicated in depression. How can we be sure that any dysregulation in the serotonergic system in eating disorders is not a reflection of this susceptibility to depression?

**Sociocultural Factors**

**PRESSURE TO BE THIN** Young adolescents are avid consumers of fashion magazines. These magazines are also widely available all over the world. For example, *British Vogue* is published in 40 or more countries and can be found in India, Argentina, and Kenya, among other widely diverse places (see Gordon, 2000). There is unquestionably a general sociocultural idealizing of extremes of thinness in women in “advanced” Western cultures (and, by cultural diffusion, elsewhere). These pressures may be particularly powerful in higher-SES backgrounds, from where a majority of girls and women with anorexia nervosa appear to come (McClelland & Crisp, 2001).

It is likely that thinness became deeply rooted as a cultural ideal in the 1960s, although prior to this time women had certainly been concerned with their weight and appearance. One landmark event was the arrival of Twiggy on the fashion scene. Twiggy was the first super-thin supermodel. Although her appearance was initially regarded as shocking, it did not take long for the fashion industry to embrace the look she exemplified. The names of the models may have changed over time, but not much else has changed. The “waif-look” models of the early 1990s, as epitomized by Kate Moss, are a good example. Although from time to time there are proclamations of a shift in body standards toward a more “athletic” ideal, impossibly thin images of beautiful young women are still easy to find in the pages of any glossy fashion magazine.

A provocative illustration of the importance of the media in creating pressures to be thin comes from a fascinating study that was done by Anne Becker (see Gordon, p. 136). In the early 1990s, when Becker was conducting research in Fiji, she became aware of the considerable percentage of Fijians who were overweight with respect to their Western counterparts. This was especially true of women. Within Fijian culture, being fat was associated with being strong, being able to work, and being kind and generous (these latter qualities are highly valued in Fiji). Being thin, in contrast, was regarded in a highly negative manner and was thought to reflect being sickly, being incompetent, or having somehow received poor treatment. In other words, fatness was preferred over thinness, and dieting was viewed as offensive. What was also striking was the total absence of anything that could be considered to be an eating disorder.

The fashion industry promotes an ideal of unnaturally thin women. Supermodel Carre Otis, who is 5’9”, weighed 118 lbs at one point in her career, and took drugs to assist in keeping the weight off. Her unhealthy dietary habits eventually led to a heart condition, for which she had to have surgery. Today, Carre eats a healthful, balanced diet, exercises regularly, and sustains a strong support system with her friends. “I no longer let my size dictate who I am or how I feel,” says Otis. “I let my achievements, goals and compassion be the ruling force in my self-esteem.”

Through the early 1990s, being fat was considered the ideal in Fiji, where carrying extra weight was associated with strength, work aptitude, and being kind and generous. After television programs showing western ideals of female figures started being broadcast in Fiji in the late 1990s, women also started expressing dislike with their bodies.
Becker returned to Fiji in 1998. In the interim a major change had occurred. Television had come to Fiji. Although there was only one television station, Fijians were now able to see such programs as Beverly Hills 90210 and Melrose Place. There was another change too. Many young women were showing early signs of serious concern about their weight and expressed dislike of their bodies. For the first time, women in Fiji were dieting in earnest.

This “natural experiment” provides us with some anecdotal information on how Western values about thinness might begin to insinuate themselves into different cultural environments. Although Becker did not collect information about eating disorders themselves (she measured attitudes toward eating), and although this was far from a controlled research study, the findings from the Fiji study are both provocative and alarming.

Individual Risk Factors

Not everyone who lives in a society that places excessive emphasis on being thin goes on to develop an eating disorder. There must be other factors that increase a given person’s susceptibility to developing problems. Some of these differences may be biological. Others may be more psychological in nature.

INTERNALIZING THE THIN IDEAL

The Duchess of Windsor once said that you could never be too rich or too thin. Clearly she had internalized the thin ideal, buying into the notion that being thin is highly desirable. Think for a moment about the extent to which you subscribe to this way of thinking. Do you regard thin people as unhealthy and weak? Or do you associate being thin with feeling attractive, being popular, and being happy? The extent to which people internalize the thin ideal is associated with a range of problems that are thought to be risk factors for eating disorders. These include body dissatisfaction, dieting, and negative affect (Stice, 2002). In fact, there is some empirical evidence that internalizing the thin ideal may be an early component of the causal chain that culminates in disordered eating (see Stice, 2001).

BODY DISSATISFACTION

One consequence of sociocultural pressure to be thin is that young girls and women often develop highly intrusive and pervasive perceptual biases regarding how “fat” they are (e.g., Fallon & Rozin, 1985; Rodin, 1993; Wiseman et al., 1992; Zellner et al., 1989). In sharp contrast, young Amish people (who live radically separated from the modern world) do not show such body image distortions (Platte et al., 2000). This supports the idea that sociocultural influences are implicated in development of the discrepancy between the way many young girls and women perceive their own bodies and the “ideal” female form as represented in the media. Such perceptual biases lead girls and women to believe that men prefer more slender shapes than they in fact do (see Figure 9.2). Many women also feel judged and evaluated by other women because of their size or shape.

It would be one thing if women had a reasonable chance of attaining their “ideal” bodies simply by not exceeding an average caloric intake or maintaining a healthy weight. But this is not possible for most people. In fact, as pointed out by Garner (1997), the average body weight of American young women has been increasing over at least

Figure 9.2

Mean body figure ratings of women (top) and men (bottom). Total scale values range from 10 to 90. (Adapted from Cohn & Adler, 1992.)
the past four decades, probably as a consequence of general improvements in nutrition, pediatric health care, and other factors as well (e.g., the widespread availability of high-calorie foods). Yet, as women’s average weight has been increasing since the late 1950s, the weight of such cultural icons of attractiveness as *Playboy* centerfolds and *Miss America* contestants has decreased at a roughly comparable rate. Figure 9.3 depicts these trends.

In light of this, we should hardly be surprised that many women have problems with their body image. It has been calculated that 70 percent of *Playboy* centerfolds have a body mass index below 18.5 (Katzmarzyk & Davis, 2001). This is underweight, but it is considerably less underweight than the description of the “ideal girl,” who, according to the reports of adolescent girls, should be 5 feet 7 inches tall, weigh 100 pounds, and be a size 5 (as well as having long blonde hair and blue eyes; Nichter & Nichter, 1991). In other words, the “ideal girl” has a body mass index of 15.61 (this means she would have to have anorexia nervosa). Even children’s toys promote unrealistic slender ideals. This can be seen in the size and shape of the Barbie doll, to which many girls receive much exposure. It has been calculated that for an average woman to achieve Barbie’s proportions, she would have to be 7 feet 2 inches tall, lose 10 inches from her waist circumference, and add 12 inches to her bust (Moser, 1989).

The research literature strongly implicates body dissatisfaction as an important risk factor for pathological eating (Stice, 2002). Body dissatisfaction is also associated with dieting and with negative affect. Simply put, if we don’t like how we look, we are likely to feel bad about ourselves. We may also try to lose weight in order to look better.

**DIETING** When people wish to be thinner, they typically go on a diet. Nearly all instances of eating disorders begin with the “normal” dieting that is reaching epidemic proportions among young women in our culture. In fact, it is almost impossible to look at a list of best-selling books and not see a diet book among them. Bill Clinton, Madonna, and Howard Stern have all tried the “Zone Diet” (Gordon, 2000, p. 153). They are hardly alone. At any one time, estimates are that approximately 39% of women and 21% of men are trying to lose weight (Hill, 2002). Indeed, the majority of people have been on a diet at some point in their lives (Jeffrey et al., 1991).

Dieting is regarded as a risk factor for the development of anorexia nervosa and bulimia nervosa in young women (Polivy & Herman, 1985; Wilson, 2002). Moreover,
As anyone who has tried to diet knows, dieting is hard. Ironically, dieting may also make it more likely that we will steadfastly pursue the perfect body. It has also been suggested that perfectionism helps maintain bulimic pathology through the rigid adherence to dieting that then drives the binge–purge cycle (Fairburn, 1997).

In general, research supports the association of perfectionism and eating disorders. Halmi and her colleagues (2000) studied 322 women with anorexia nervosa and found that they scored higher on a measure of perfectionism than did a sample of controls without an eating disorder. The women with anorexia nervosa scored higher on perfectionism regardless of whether they had the restricting subtype of anorexia nervosa or subtypes that involved either purging or binge-eating and purging. A large proportion of bulimia nervosa patients also show a long-standing pattern of excessive perfectionism (Garner & Garfinkel, 1997).

As we have already noted, any personality characteristics found in eating-disordered patients could be the result of the eating disorders themselves, rather than contributory in a causal sense. However, even when they have recovered from their anorexia nervosa, former patients still score higher on perfectionism than do controls to whom they are compared (Bastiani et al., 1995; Srinivasagam et al., 1995). This suggests that perfectionism may be an enduring personality trait of people who are susceptible to developing eating pathology (see also Stice, 2002; Fairburn, Cooper, et al., 1999).

**NEGATIVE AFFECT** Negative affect is a causal risk factor for body dissatisfaction (Stice, 2002). When we feel bad, we tend to become very self-critical. We may focus on our limitations and short-comings and magnify our flaws and defects. This seems to be especially true of patients with eating disorders. People with eating disorders, like those with depression, tend to exhibit distorted ways of thinking and of processing information received from the environment (e.g., Butow, Beumont, & Touyz, 1993; Garner, Vitousek, & Pike, 1997). In many cases, there is widespread negative self-evaluation (e.g., Fairburn et al., 1997). These cognitive distortions (I’m fat; I’m a failure; I’m useless) have the potential to make people feel even worse about themselves.

Longitudinal studies involving young people have confirmed that depression and general negative affect are predictive of high risk for later eating disorders (Johnson, Cohen, Kotler, et al., 2002; Leon et al., 1997). Moreover, evidence suggests that negative affect may work to maintain binge-eating (see Stice, 2002). Patients often report that they engage in binges when they feel stressed, down, or bad about themselves. They also say that in the very short term, eating offers them some comfort. These reports are highly consistent with affect-regulation models (e.g., McCarthy, 1990) that view binge-eating as a distraction from negative feelings. Of course, a major problem is that after binges, patients feel disappointed or even disgusted with themselves. In short, a bad situation leads to behavior that makes things even worse.

**PERFECTIONISM** Perfectionism has long been regarded as an important risk factor for eating disorders (Bruch, 1973). This is because people who are perfectionistic may be much more likely to subscribe to the thin ideal and relentlessly pursue the perfect body. It has also been suggested that perfectionism helps maintain bulimic pathology through the rigid adherence to dieting that then drives the binge–purge cycle (Fairburn, 1997).

There are also cultural differences in the prevalence of dieting. Women in the United States are more likely to diet than are women in Europe (although the dieting rates for adolescents are much more similar in the two regions; Hill, 2002). The culture of dieting is also beginning to extend from the United States and Europe to many other countries, as the earlier Fiji example illustrated. As anyone who has tried to diet knows, dieting is hard. Ironically, dieting may also make it more likely that we will overeat. As Developments in Research 9.2 shows, even planning to go on a diet makes us eat more! Moreover, as Stice (2002) notes in his comprehensive review of this topic, self-reported dieting is itself a risk factor for negative affect (see also Ackard et al., 2002). This may be because when our efforts to diet fall short, it is almost inevitable that we will feel bad about ourselves.

**ENDNOTES**

1. For example, the average age at which young women start to diet has sunk to between 12 and 13 years of age (Hill, 2002). Not surprisingly, eating disorders tend to be most common in groups that are especially focused on dieting and weight loss (e.g., white middle-class and upper-middle-class women).

2. Longitudinal studies involving young people have confirmed that depression and general negative affect are predictive of high risk for later eating disorders (Johnson, Cohen, Kotler, et al., 2002; Leon et al., 1997). Moreover, evidence suggests that negative affect may work to maintain binge-eating (see Stice, 2002). Patients often report that they engage in binges when they feel stressed, down, or bad about themselves. They also say that in the very short term, eating offers them some comfort. These reports are highly consistent with affect-regulation models (e.g., McCarthy, 1990) that view binge-eating as a distraction from negative feelings. Of course, a major problem is that after binges, patients feel disappointed or even disgusted with themselves. In short, a bad situation leads to behavior that makes things even worse.

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As we have already noted, any personality characteristics found in eating-disordered patients could be the result of the eating disorders themselves, rather than contributory in a causal sense. However, even when they have recovered from their anorexia nervosa, former patients still score higher on perfectionism than do controls to whom they are compared (Bastiani et al., 1995; Srinivasagam et al., 1995). This suggests that perfectionism may be an enduring personality trait of people who are susceptible to developing eating pathology (see also Stice, 2002; Fairburn, Cooper, et al., 1999).
The Unwanted Consequences of Deciding to Diet

There is a general consensus in the literature that dieting is a risk factor for binge-eating. Research now suggests that even anticipating going on a diet can itself trigger overeating. In one study, female university students were randomly assigned to one of two groups (Urbszat et al., 2002). One group was led to believe that after they had completed a taste perception test (which involved rating how sweet, bitter, etc. different varieties of cookies were), they would immediately be beginning a week-long low-calorie diet. The other group (the no-diet group) was simply told they would be returning to do another taste-test the week after they had completed the current evaluations of the cookies. In other words, they were not expecting to have to begin a diet. As you might have already guessed, none of the participants really had to go on a diet (although the subjects did not know this until the end of the experiment). What the researchers were most interested in was how many cookies (which were freely available) the participants actually ate during the taste-testing. The findings were most interesting. Subjects in the diet group who expected to start dieting very soon ate more than subjects who did not expect to go on a diet. However, it was only the people who came into the study saying that they were already trying to restrict their general intake of food (so-called restrained eaters) who showed the effect. Those subjects who were not already trying to restrain their eating (unrestrained eaters) didn’t eat any more cookies, even when they were assigned to the diet condition. In other words, for people who were already trying to restrain their eating (and only for this group), simply anticipating going on a diet (and being “deprived”) seems to trigger disinhibited eating of food that is currently available. As Urbszat and colleagues (2002) astutely observe, “It is no wonder, then, that diets are so fragile; they can be broken not only by eating forbidden food but also by the prospect of not being able to eat forbidden food.”

CHILDMHOOD SEXUAL ABUSE  Childhood sexual abuse has been implicated in the development of eating disorders (Connors, 2001; Fairburn et al., 1997; Fallon & Wonderlich, 1997). However, there is some debate about the empirical status of sexual abuse as a risk factor for eating disorders (see Stice, 2002). In the only prospective study to date that has examined this issue, Vogeltanz-Holm and colleagues (2000) failed to find that early sexual abuse predicted the later onset of binge-eating. On the other hand, a meta-analysis of 53 studies did reveal a weak but positive association between childhood sexual abuse and eating pathology (Smolak & Murnen, 2002). This suggests that the two variables are linked in some way, although the precise nature of the link is not yet clear. One possibility is that being sexually abused increases the risk of developing other known risk factors for eating disorders, such as having a negative body image or high levels of negative affect. In other words, the causal pathway from early abuse to later eating disorder may be an indirect one (rather than a direct one) that involves an array of other intervening variables.

Family Environment

Clinicians dealing with anorexia nervosa disorder have long been impressed with certain problems that seem regularly to characterize the families out of which these distressed young women emerge, and many clinicians advocate a family therapy approach to treatment intervention (Lock et al., 2001). Anorexia nervosa patients usually describe their mothers in unflattering terms: excessively dominant, intrusive, overbearing, and markedly ambivalent in dispensing affection. By contrast, their fathers are usually described as emotional absentees. However, in attempting to depict family characteristics associated with eating disorders, we must remember that having a patient with an eating disorder in the family is likely to affect family functioning in a negative way. That is, the causal connection, if any, might be in the other direction.

The portrait painted of families of anorexic patients by the research and clinical literature is generally consistent with the portrayal rendered by the girls and young women themselves. Families of anorexics are described as showing the following characteristics:

- Limited tolerance of disharmonious affect or psychological tension
- An emphasis on propriety and rule-mindedness
- Parental overdirection of the child or subtle discouragement of autonomous strivings
- Poor skills in conflict resolution (Adapted from Strober, 1997, p. 234.)
- In addition, many of the parents of patients with eating disorders have long-standing preoccupations regarding the desirability of thinness, dieting, and good physical appearance (Garner & Garfinkel, 1997). Like their children, they have perfectionistic tendencies (Woodside et al., 2002).
We can thus conceive of a typical developmental course in which the compliance and perfectionism of the pre-anorexic girl are an adaptation to the rigid rules and control of a family system that is intolerant of deviation or disharmony. During adolescence, which is characterized by normal strivings for individuality and autonomy, the daughter “rebels” in one of the few ways available within this family system. She becomes a super-perfect exemplar of the values of thinness, propriety, and restraint. In effect, she “turns the tables” on the oppressive influences dominating her life. She retains this “autonomous” position with a stubborn fierceness and relentlessness that is impressive even to clinicians with long experience in the field.

The essentials of this admittedly somewhat speculative interpretation of how anorexia nervosa may develop were advanced a number of years ago by psychiatrist Hilde Bruch (1986, posthumously published), who until her death in 1984 was generally considered the world’s leading authority on the psychotherapy of anorexic disorders. Bruch saw the anorexia nervosa sufferer as attempting to camouflage an undeveloped and amorphous sense of self by being different, even unique, in a special and fiercely independent way.

Findings about family patterns in bulimia suggest, again, a number of similarities to anorexia nervosa. For example, in the previously noted study of British bulimic subjects by Fairburn and colleagues (1997), bulimic women were statistically differentiated from the general psychiatric control group (and from the normal one) on such risk factors as high parental expectations; other family members about shape, weight, or eating.

Some of this ambivalence is apparent in the behavior of patients admitted to inpatient units. “Contagion” is a very common phenomenon, and patients learn from other patients how to deceive hospital staff into thinking they are following a treatment program when they are not. For example, patients teach other patients how to dispose of food, how to exercise without people noticing, and other counter-therapeutic strategies. In addition, patients who restrict may learn about purging. When one of the authors of this book was working on an inpatient unit that had a large number of patients with eating disorders, it was not uncommon for staff to find food vomited into small cups and hidden in patients’ rooms. The World Around Us 9.3 describes how patients with eating disorders are now using the Internet to communicate with each other — again in ways that are very counter-therapeutic.

### Treatment of Anorexia Nervosa

The most immediate concern with patients who have anorexia nervosa is to restore their weight to a level that is not life-threatening. In severe cases, this requires hospitalization and such extreme measures as tube feeding. This is followed by rigorous control of the patient’s eating and the monitoring of progress toward a targeted range of weight gain (Andersen, Bowers, & Evans, 1997). Normally, this short-term effort is successful. However, without treatment designed to address the psychological issues that fuel the anorexic behavior, any weight gain will be temporary and the patient will soon need medical attention again.

There is no strong evidence that medications are particularly helpful in the treatment of patients with anorexia nervosa, although antidepressants as well as antipsychotic medications (to help with the disturbed thinking) are sometimes used (Ferguson & Pigott, 2000; Walsh, 2002). There are also several psychological interventions that are potentially useful. The central features of many of these approaches are described more fully in Chapter 17. Most of what we know about their successful use in the treatment of anorexia nervosa comes from published case reports. Unfortunately, and unlike the situation with bulimia, there have been surprisingly few controlled studies on which to base an informed judgment about what treatment will work best. This is probably due in large measure to the fact that successful treatment of anorexia nervosa, by whatever means, takes a long time.

As we discuss in the next section, cognitive-behavioral therapy (CBT) has proved to be very effective in bulimia. Because anorexia nervosa shares many features with bulimia, CBT is often used with anorexia nervosa patients too (Vitousek, 2002). The recommended length of treatment is 1 to 2 years. A major focus of the treatment involves modifying distorted beliefs about weight and food, as well as distorted beliefs about the self that may have contributed to the disorder (e.g., “People will reject me unless I am thin”). Although the data are not yet particularly strong,
there are hints that treatment approaches of this type do help patients—at least compared to nutritional counseling or drug therapy alone (Vitousek, 2002). However, it is still unclear whether CBT is significantly better than other forms of psychotherapy for the treatment of anorexia nervosa.

As we noted earlier, several theories about the development of eating disorders draw attention to the family environment. It has also been found that when patients with eating disorders live in families that are high in expressed emotion (see Chapter 14 for a detailed discussion of this variable), they tend to do much worse, from a clinical perspective, than patients who live in families low in expressed emotion (that is, with relatives who are low on such things as criticism and hostility; see Butzlaff & Hookey, 1998). For these reasons, family therapy is gaining attention in the treatment of anorexia nervosa.

In family therapy, the therapist works with the parents to help them help their anorexic child (typically a daughter) to begin to eat again. Family meals are observed, and efforts are made to get the parents functioning as a team where their daughter’s eating is concerned. After the patient starts to gain weight, other family issues and problems begin to be addressed. Later, in the final phase of treatment, the therapist works with both the patient and her parents to help the patient develop more independent and healthy relationships with her father and mother (see Lock et al., 2001).

Randomized controlled trials have shown that patients treated with family therapy for 1 year do better than patients who are assigned to a control treatment (where they receive supportive counseling on an individual basis). However, it is clear that family treatment works better for some patients than for others. In particular, patients who...
developed anorexia nervosa before age 19 and had been ill for less than 3 years did much better than patients who had been ill for longer or who had bulimia nervosa (Dare & Eisler, 2002). These results suggest that family therapy may be most effective when it is used to treat adolescents (as opposed to adults) whose anorexia nervosa is of fairly recent onset.

**Treatment of Bulimia Nervosa**

It is quite common for patients with bulimia nervosa to be treated with antidepressant medications. Researchers became interested in using these medications to treat bulimic patients after it became clear that many patients with bulimia also suffered from mood disorders. Generally speaking, patients taking antidepressants do better than patients who are given inert, placebo medications. Perhaps surprisingly, antidepressants seem to decrease the frequency of binges, as well as improving patients’ mood and their preoccupation with shape and weight (Walsh, 2002).

The treatment of choice for bulimia, however, is cognitive-behavioral therapy (CBT). Most of the current treatment approaches are based on the work of Fairburn and his colleagues in Oxford, England. Multiple controlled studies that include post-treatment as well as long-term follow-up outcomes attest to the clinical benefits of CBT for bulimia (e.g., Agras et al., 1992; Fairburn et al., 1993, 1995; Fichter et al., 1991; Leitenberg et al., 1994; Walsh et al., 1997; Wilson & Fairburn, 1993, 1998). Such studies have included comparisons with medication therapy (chiefly antidepressants; see Wilson & Fairburn, 1998) as well as interpersonal psychotherapy (IPT; see Agras et al., 2000), and they generally show CBT to be superior. In fact, combining CBT and medications produces only a modest increment in effectiveness over that achievable with CBT alone. On average, about 50 percent of patients treated with CBT stop binging and purging completely after treatment (Pike, 2001). Patients also show fairly rapid improvement; 62 percent of the eventual clinical gains are apparent after about 10 therapy sessions (Wilson, 2002). Treatment gains have also been found to be maintained for as long as 5 years after treatment (Fairburn et al., 1995).

The “behavioral” component of CBT for bulimia is focused on normalizing eating patterns. This includes meal planning, nutritional education, and ending binging and purging cycles by teaching the person to eat small amounts of food more regularly. The “cognitive” element of the treatment is aimed at changing the cognitions and behaviors that initiate or perpetuate a binge cycle. This is done by challenging the dysfunctional thought patterns usually present in bulimia, such as the “all or nothing” thinking described earlier. For example, the tendency to divide all foods into “good” and “bad” categories is disputed by providing factual information and by arranging for the patient to demonstrate to herself that ingesting “bad” food does not inevitably lead to a total loss of control over eating. Figure 9.4 shows a cognitive worksheet that was completed by a patient. It provides a good example of the kind of “hot thought” that can facilitate a binge.

Recent research suggests that an important mediator of treatment outcome in bulimia is a rapid decrease in dietary restraint. In other words, patients who show a decline in how much they try to restrain their eating during the course of their treatment seem to do better over the longer run (Wilson et al., 2002). This finding lends support to the idea, proposed by Polivy and Herman (1985), that dietary restraint is an important antecedent to binge-eating. Trying to limit one’s intake of food may (paradoxically) place a person at higher risk for the later development of binge-eating. Conversely, when patients stop trying so hard to restrain their eating, they seem to be more likely to improve.

**Treatment of Binge-Eating Disorder**

Little of a systematic nature is currently known about effective treatment for binge-eating disorder (BED). Undoubtedly, there is usually some overlap between BED and anorexia nervosa and bulimia. For this reason, clinicians have tended to try to adapt relevant aspects of the treatment of these disorders to the particular clinical picture presented by the BED patient. This is well illustrated in the approach advocated by Marcus (1997), who emphasizes adapting CBT techniques already established in the treatment of anorexia nervosa and bulimia nervosa to the special circumstances of the BED patient. Such patients are typically overweight and subject to chaotic eating patterns. They also typically have a variety of illogical and contradictory “rules” about food ingestion—for example, they share the bulimic’s a rigid distinction between “good” and “bad” foods. They may also have stereotypic attitudes about the character flaws of overweight people and so lack the self-esteem that might motivate them to stop their binging. Somewhat curiously, and in marked contrast to anorexia nervosa and bulimia nervosa patients, most binge-eating disorder patients do not appear to overvalue thinness, although they do disparage their own bodies (Marcus, 1997).

Many BED patients are failed veterans of various diet plans based on unproven and sometimes nonsensical principles. This adds to their burden of misinformation, confusion, and sense of failure. Significant depression is a common comorbid condition for binge eaters; some 60 percent have a lifetime diagnosis of mood disorder (Wilfley, Schwartz, 2000). Thus a well-planned program of CBT, together with corrective and factual information on nutrition and weight loss, is often helpful (see Goldfein et al., 2000; Wilfley et al., 2002). Fairburn and Carter (1997) also suggest incorporating selected self-help reading materials into such a therapeutic program.
OBESITY

There is now a worldwide epidemic of obesity, and prevalence rates are rising rapidly. To get an idea of how extensive the problem of obesity is, just look around at any public gathering and count the number of people who are seriously overweight. In the United States, 20 percent of men and 25 percent of women are considered morbidly obese. In the UK, the figures are 15 percent and 17 percent. These figures are not so high as in Samoa, where more than half of the population is obese! In contrast, the prevalence of obesity in such countries as China and Japan is quite low (Valdez & Williamson, 2002).

Obesity is defined on the basis of a statistic called the body mass index (BMI). You can calculate your BMI by following the instructions in Table 9.2. Generally speaking, people with a BMI below 18.5 are considered underweight, 18.5 to 24.9 is considered normal, 25.0 to 29.9 is overweight, and obesity is defined as having a BMI above 30.

Obesity tends to persist over time. DiPietro, Mossberg, and Stunkard (1994) reported on a 40-year follow-up of

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Emma’s completed worksheet: Identifying permissive thoughts

<table>
<thead>
<tr>
<th>Situation</th>
<th>Feelings and sensations</th>
<th>Permissive thoughts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday, at college, alone, had a free period, thinking about my assignment (how difficult it was going to be). Ate a bar of chocolate, knew I was going to binge. Got on the bus to town, went to Burger King — had a burger, two portions of fries, a milkshake, one big bar of chocolate, another smaller bar of chocolate.</td>
<td>Anxious Heavy Blank</td>
<td>I might as well keep eating now I’ve started.</td>
</tr>
<tr>
<td>• When was it?</td>
<td>• What feelings did you have?</td>
<td>I can make myself sick afterwards — so it doesn’t matter — I can have what I want and I won’t gain weight.</td>
</tr>
<tr>
<td>• Where were you?</td>
<td>• What body sensations did you notice?</td>
<td></td>
</tr>
<tr>
<td>• Who were you with?</td>
<td>• What were you saying to yourself that made it easier to keep eating?</td>
<td>I might as well carry on until my money has run out. I’ve got to eat more and more.</td>
</tr>
<tr>
<td>• What were you doing?</td>
<td></td>
<td>• Identify and circle the hot thought. This is the thought that makes it most likely that you will binge.</td>
</tr>
<tr>
<td>• What were you thinking about?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 9.4
Cognitive worksheet.

IN REVIEW

• Compare the treatment approaches that are used for anorexia nervosa and bulimia nervosa. Why do you think cognitive-behavioral therapy is so beneficial for patients with eating disorders?

• What factors make eating disorders (especially anorexia nervosa) so difficult to treat?

### Table 9.2 Calculating Body Mass Index

\[
\text{BMI} = \frac{\text{weight (lb)}}{\text{height (in.)}^2} \times 703
\]

<table>
<thead>
<tr>
<th>BMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy</td>
</tr>
<tr>
<td>Overweight</td>
</tr>
<tr>
<td>Obese</td>
</tr>
<tr>
<td>Morbidly obese</td>
</tr>
</tbody>
</table>
504 overweight children. Sadly, the majority of these overweight children became overweight adults. This is a problem because obesity can be a dangerous, life-threatening disorder. It results in such conditions as diabetes, musculoskeletal problems, high blood pressure, and other cardiovascular diseases that may place a person at high risk for a heart attack (e.g., Kenchaiah et al., 2002). In the United States, more than 300,000 people die each year from the consequences of obesity, making it the second most prevalent preventable cause of death. The heavier the person, the greater the health risks.

From a diagnostic perspective, obesity is not an eating disorder. Many clinicians, however, regard the central problem as the habit of overeating. Although some cases of obesity result from metabolic or hormonal disorders, this is extremely uncommon. Put simply, most obese persons just take in more calories than they burn.

In the sections that follow, we consider why people overeat to the point of becoming obese despite an awareness of the detrimental health effects, the negative body image that results (Sarwer et al., 1998), and strong social pressures that favor being slender. Although results are not yet conclusive, biological and learning factors seem to be of great importance (Drewnowski, 1996).

**Biological Factors**

Thinness seems to run in families (Bulik & Allison, 2002). Some of the reasons for this may be biological. Genes for thinness and leanness have been found in certain animals, and a special type of rat has now been bred that does not become obese even when fed a high-fat diet. Perhaps similarly, some people seem able to eat high-calorie foods without significant weight gain, whereas others become overweight easily and engage in a constant struggle to maintain their weight. Most people gain weight with advancing age, but this gain could be related to reduced activity and to the fact that older people are likely to continue their earlier eating habits even though they need fewer calories.

Genetic inheritance contributes substantially to the tendency for some people to become obese or, alternatively, to remain thin. Findings in a study of twins reared apart have shown that genetics plays an important role in body weight (Stunkard et al., 1990). However, genes are far from the most important factor here. Rates of obesity are rising far more rapidly than genetics alone could explain (genes change over generations, far too slowly to account for the rapidly rising rates in obesity). This implicates unhealthful lifestyles in the development of extreme problems with weight.

Adult obesity is related to the number and size of the adipose cells (fat cells) in the body (Heymsfield et al., 1995). People who are obese have markedly more adipose cells than people of normal weight (Peeke & Chrousos, 1995). When weight is lost, the size of the cells is reduced, but not their number. Some evidence suggests that the total number of adipose cells stays the same from childhood on (Crisp et al., 1970). It is possible that overfeeding infants and young children causes them to develop more adipose cells and may thus predispose them to weight problems in adulthood.

**Psychosocial Factors**

Factors other than biological endowment also play an important role in obesity (Jeffrey & French, 1996; Fairburn, Doll, et al., 1998). In many cases the key determinants of excessive eating and obesity appear to be family behavior patterns. In some families, a high-fat, high-calorie diet or an overemphasis on food may produce obesity in many or all family members, including the family pet! In such families, a fat baby may be seen as a healthy baby, and great pressure may be exerted on infants and children to eat more than they want. In other families, eating (or overeating) becomes a habitual means of alleviating emotional distress (Musante, Costanzo, & Friedman, 1998).

Several psychological views address the causes of gross habitual overeating. According to the psychoanalytic view, obese individuals are fixed at a very early stage (the oral stage) of psychosexual development (Bychowski, 1950). They are believed to orient their lives around oral gratification (e.g., excessive eating). This view has been elaborated by Bruch (1973) and by Schneider (1995). Bruch distinguishes between developmental obesity and reactive
obesity. Bruch saw developmental obesity as a childhood response to parental rejection or other severe disturbances in the parent–child relationship. Supposedly, the parents compensate for their emotional rejection by overfeeding and overprotecting the child. Such children never learn to distinguish among different internal signals because their parents respond to all signs of distress by giving them food. Bruch saw this pattern as leading to a distorted perception of internal states—that is, not knowing when enough food has been ingested.

Bruch defined reactive obesity as obesity that occurs in adults as a reaction to trauma or stress. Here, overeating is thought to function as a means of reducing feelings of distress or depression. There is evidence to support the idea that many obese people experience psychological problems such as depression. For example, one study reported that 26 percent of patients seeking treatment in an effort to achieve weight loss were diagnosed as having a mood disorder and that 55 percent had at least one diagnosis of mood disorder in their lifetime (Goldsmith et al., 1992). Other research has found that a striking percentage of subjects with an eating disorder binge-eat in response to aversive emotional states such as feeling depressed or anxious (Kenardy, Arnow, & Agras, 1996).

Learning Perspective

According to the cognitive-behavioral viewpoint, a person’s weight gain and his or her tendency to maintain excessive weight can be explained quite simply in terms of learning principles (Fairburn et al., 1998). For all of us, eating behavior is determined in part by conditioned responses to a wide range of environmental stimuli. For example, people are encouraged to eat at parties and movies, while watching TV, and even at work.

Obese people, however, have been shown to be conditioned to more cues—both internal and external—than are people of normal weight. Anxiety, anger, boredom, and social inducements all may lead to overeating. Eating in response to such cues is then reinforced because the taste of good food is pleasurable and because the individual’s emotional tension is reduced. This reinforcement increases the probability that overeating will continue and worsen. Binge-eating is also an important factor and is reported by many people entering into weight-control programs (Wilson & Fairburn, 1993).

With such frequent overfeeding, obese people may then learn not to respond to feeling “full” as most people do—that is, they no longer feel full when they have had enough. Meanwhile, physical activity, because its short-term effects are often aversive rather than pleasant, tends not to be reinforced, especially as pounds accumulate. Thus obese individuals may become less and less active.

Sociocultural Factors

Different cultures have different concepts of human beauty. Some value slimness; others, a more rounded contour. In some cultures, obesity is valued as a sign of social influence and power. Within our own society, however, obesity seems to be related to social class, occurring six times as often in lower-SES adults, and nine times as often in lower-SES children (Ernst & Harlan, 1991). Other demographic and behavioral factors that are linked to obesity are shown in Table 9.3. In addition, Lissau and Sorenson (1994) have found that children who were seriously neglected had a greater risk of obesity in young adulthood than well-cared-for children. Low parental education also seems to be an important risk factor (Johnson, Cohen, Kasen et al., 2002).

Treatment of Obesity

Losing weight is a preoccupation of many Americans. New diet books, dietary aids, and weight-loss programs are big business. Unfortunately, the success rates of most of these devices and programs are quite low (Brownell & Wadden, 1992). For those who are obese, losing weight and maintaining the weight loss presents a formidable challenge (Yanovski & Yanovski, 2002).

WEIGHT-LOSS GROUPS A number of weight-loss group programs are conducted by organizations such as Overeaters Anonymous and Weight
Watchers (Weiner, 1998). These programs provide strong group pressures to reduce weight through group praise of weight losses and group disapproval and “punishments” for failures. Thus they provide community support and encouragement to maintain better eating habits.

**MEDICATIONS**

Drugs that are used to promote weight loss fall into two main categories. One group of medications reduces the intake of food by suppressing appetite, typically by increasing the availability of neurotransmitters (e.g., serotonin, norepinephrine, or dopamine). A second group of medications works by preventing some of the nutrients in food from being absorbed.

Medications to treat obesity are not without problems. In 1997, two appetite suppressants, fenfluramine (Pondimin) and dexfenfluramine (Redux), were withdrawn from the market by the U.S. Food and Drug Administration (FDA) because their use, even over a short time, resulted in heart disease. The former medication had been part of a combination known as “Phen-Fen” that involved two different drugs (phentermine and fenfluramine) that were taken together. Another over-the-counter medication that was approved for the treatment of obesity was recently withdrawn because of fears that it was associated with hemorrhagic stroke (Kernan et al., 2000). Finally, amphetamines are no longer recommended as a weight-loss treatment (and are not approved for this use by the FDA) because they have such a high abuse potential.

One medication that is approved by the FDA for use in conjunction with a reduced-calorie diet is sibutramine (Meridia). Sibutramine has a mixed method of action and seems to inhibit the reuptake of both serotonin and norepinephrine. Patients who use it for 6 months typically lose 5 to 8 percent of their pretreatment weight. Orlistat (Xenical) is another FDA-approved medication. It works by reducing the amount of fat in the diet that can be absorbed once it enters the gut. Patients who take orlistat for 1 year lose approximately 9 percent of their pretreatment weight. The weight loss for controls who take a placebo medication during this time is just under 6 percent (Heck et al., 2000).

**GASTRIC SURGERY**

Given that severe obesity presents a major health risk for hypertension, heart disease, pulmonary insufficiency, and arthritis, it is no wonder that extreme treatment measures are often considered necessary to help severely obese patients who cannot lose weight by other means. One such patient is Vincent Caselli.

Vincent Caselli’s battle with obesity began in his late twenties. “I always had some weight on me,” he said. He was 200 pounds when he married his wife, and a decade later he reached 300. He would diet and lose 75 pounds, only to put 100 back on. By 1985 he weighed 400 pounds. On one diet, he got down to 190, but he gained it all back. “I must have gained and lost a thousand pounds,” he said. He developed high blood pressure, high cholesterol, and diabetes. His knees and his back ached all the time, and he had limited mobility. He used to get season tickets to the local hockey games and go out regularly to the track every summer to see the auto racing. Years ago, he drove in races himself. Now he could barely walk to his pickup truck. He hadn’t been on an airplane since 1983, and it had been 2 years since he had visited the second floor of his own house, because he couldn’t negotiate the stairs. He had to move out of the bedroom, upstairs, into a small room off the kitchen. Unable to lie down, he had slept in a recliner ever since. Even so, he could only dose in snatches, because of sleep apnea (a breathing problem), which is common among the obese and is thought to be related to excessive fat in the tongue and soft tissues of the upper airway. Every 30 minutes his breathing would stop, and he’d wake up asphyxiating. He was perpetually exhausted. (Adapted from Gawande, 2001.)

One very extreme method for treating obesity like Vincent Caselli’s involves bariatric or gastric bypass surgery (Benotti & Forse, 1995). This current surgery of choice for the morbidly obese involves placing lines of staples in

| **Table 9.3** Demographic and Behavioral Factors Related to Obesity Factor |
|-----------------------------|-----------------------------|
| **Prevalence of obesity is increased if subjects are . . .** |
| Age | Older |
| Sex | Female |
| Race or ethnicity | Of racial and ethnic minorities |
| Socioeconomic status | Of low SES |
| Family history | Children of obese parents |
| Marital status | Married |
| Children | If the person has more children |
| Smoking | Ex-smokers |

the intestines to develop a holding pouch for food that is ingested. Before the operation, the stomach might be able to hold about a quart of food and liquid. After the procedure, the stomach might be able to hold only the contents of a shot glass. Binge-eating becomes virtually impossible.

The operation takes a couple of hours, but because it is performed on an obese patient, recovery can be difficult. Weight loss is quite dramatic after bariatric surgery. Vincent Caselli, the patient described above, weighed 250 pounds a year and a half after his surgery and was still losing weight. By the end of the year, Roker had shed 100 lbs.

**PSYCHOLOGICAL TREATMENTS**  The most effective psychological treatment procedures for extremely obese patients are behavioral management methods. A number of methods using positive reinforcement, self-monitoring, and self-reward can produce moderate weight loss over time (Agras, Telch et al., 1997). In general, these procedures based on positive reinforcement are more effective than classical conditioning procedures, such as aversive conditioning in which shock or unpleasant thoughts are paired with eating behavior. Considerable support for treatment of binge-eating using cognitive-behavioral methods has been found (Carter & Fairburn, 1998; Wilson & Fairburn, 1993). Research suggests that highly motivated people can lose weight and keep it off (Klem et al., 1997; Tinker & Tucker, 1997). In these studies, clients identified strong reasons for losing weight, such as medical problems aggravated by obesity (for example, varicose veins) or concerns over their appearance. These individuals were able to reduce their weight through diet and exercise in a long-term weight-loss program.

However, not every obese person has the strong motivation it takes to lose weight under a behavior management regimen. The evidence is overwhelming that most approaches are ineffective at producing weight loss (Garner & Wooley, 1991). Obese people may feel a great sense of shame and failure because they have tried many diets but either have failed to lose weight or have regained the lost weight soon afterward. Brownell and Wadden (1992) found that their patients had undertaken an average of five major diets on which they lost (and eventually regained) a total of 56 kilograms, or 123.2 pounds. People who go on very low-calorie diets that produce dramatic weight loss are especially likely to regain the weight they lost and may weigh more at follow-up than people who go on a more gradual (balanced diet) weight-loss program (Wadden, Foster, & Letizia, 1994). High but stable weight maintenance is preferable to the weight fluctuation that commonly results from most treatment and dietary programs (Garner & Wooley, 1991).

**The Importance of Prevention**

The treatment of extremely obese patients is often a difficult and frustrating task for all concerned. Even with the most effective treatment procedures, failures abound, partly because of the necessity of self-motivation in treatment. Once people have become obese, it is almost impossibly difficult for them to lose weight and maintain their new, lower weight. As Brownell (2002) notes, "we are losing the war on obesity."
What can we do? Given the powerful environmental forces at work, Brownell (2002) makes several specific policy recommendations. These include (1) improving opportunities for physical activity, (2) regulating food advertising aimed at children, (3) prohibiting the sale of fast food and soft drinks in schools, and (4) subsidizing the sale of healthful foods. Although some of these measures may seem extreme, the more we can focus on prevention, the better our chance to stop the nationwide problem of obesity from escalating even further out of control.

**IN REVIEW**

- What behavioral and demographic factors seem to place people at higher risk for becoming obese?
- Explain the importance of the body mass index in the definition of obesity.
- What treatment approaches are currently being used to help obese patients?

**SUMMARY**

- DSM-IV-TR recognizes three different eating disorders: anorexia nervosa, bulimia nervosa, and eating disorder NOS (not otherwise specified). A fourth type of eating disorder, binge-eating disorder, is listed in the Appendix and is not yet part of the formal DSM.
- Both anorexia nervosa and bulimia nervosa are characterized by an intense fear of becoming fat and a drive for thinness. Patients with anorexia nervosa are seriously underweight. This is not true of patients with bulimia nervosa.
- Eating disorders are more common in women than in men. They can develop at any age, although they typically begin in adolescence.
- Anorexia nervosa has a lifetime prevalence of around 0.5 percent. Bulimia nervosa is more common, with a lifetime prevalence of 1 to 3 percent. Many more people suffer from less severe forms of disturbed eating patterns.
- Genetic factors play a role in eating disorders, although exactly how important genes are in the development of pathological eating patterns is still unclear.
- The neurotransmitter serotonin has been implicated in eating disorders. This neurotransmitter is also involved in mood disorders, which are highly comorbid with eating disorders.
- Sociocultural influences are important in the development of eating disorders. Our society places great value on being thin. Western values about thinness may be spreading, which may help explain why eating disorders are now found throughout the world.
- Individual risk factors such as internalizing the thin ideal, body dissatisfaction, dieting, negative affect, and perfectionism have been implicated in the development of eating disorders.
- Anorexia nervosa is very difficult to treat. Treatment is long-term, and many patients resist getting well. Current treatment approaches include tube re-feeding (in severe cases), family therapy, and CBT. Medications are also used.
- The treatment of choice for bulimia nervosa is CBT. CBT is also helpful for binge-eating disorder.
- Obesity is defined as having a body mass index of 30 or above. Being obese is associated with many medical problems and with increased risk of death from heart attack. Obesity is not viewed as an eating disorder or as a psychiatric condition.
- A tendency to being thin or heavy may be inherited. However, unhealthful lifestyles are the most important cause of obesity.
- People are more likely to be obese if they are older, are female, or are of low socioeconomic status. Being a member of an ethnic minority group is also a risk factor for obesity.
- Obesity is a chronic problem. Medications help patients to lose small amounts of weight; drastic weight loss usually requires bariatric surgery.
- Because obesity tends to be a life-long problem, and treating obesity is so difficult, there is now a focus on trying to prevent people from becoming obese in the first place. Implementing many approaches that have been recommended will require major changes in social policy.
**KEY TERMS**

- anorexia nervosa (p. 000)
- binge-eating disorder (BED) (p. 000)
- body mass index (BMI) (p. 000)
- bulimia nervosa (p. 000)
- cognitive-behavioral therapy (CBT) (p. 000)
- eating disorder (p. 000)
- eating disorder not otherwise specified (EDNOS) (p. 000)
- meta-analysis (p. 000)
- negative affect (p. 000)
- obesity (p. 000)
- perfectionism (p. 000)
- randomized controlled trials (p. 000)
- serotonin (p. 000)