Eating Disorders

Facts About Eating Disorders and the Search for Solutions

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Eating is controlled by many factors, including appetite, food availability, family, peer, and cultural practices, and attempts at voluntary control. Dieting to a body weight leaner than needed for health is highly promoted by current fashion trends, sales campaigns for special foods, and in some activities and professions. *Eating disorders* involve serious disturbances in eating behavior, such as extreme and unhealthy reduction of food intake or severe overeating, as well as feelings of distress or extreme concern about body shape or weight. Researchers are investigating how and why initially voluntary behaviors, such as eating smaller or larger amounts of food than usual, at some point move beyond control in some people and develop into an eating disorder. Studies on the basic biology of appetite control and its alteration by prolonged overeating or starvation have uncovered enormous complexity, but in the long run have the potential to lead to new pharmacologic treatments for eating disorders.

Eating disorders are not due to a failure of will or behavior; rather, they are real, treatable medical illnesses in which certain maladaptive patterns of eating take on a life of their own. The main types of eating disorders are anorexia nervosa and bulimia nervosa.[1] A third type, binge-eating disorder, has been suggested but has not yet been approved as a formal psychiatric diagnosis.[2] Eating disorders frequently develop during adolescence or early adulthood, but some reports indicate their onset can occur during childhood or later in adulthood.[3]

Eating disorders frequently co-occur with other psychiatric disorders such as depression, substance abuse, and anxiety disorders.[1] In addition, people who suffer from eating disorders can experience a wide range of physical health complications, including serious heart conditions and kidney failure which may lead to death. Recognition of eating disorders as real and treatable diseases, therefore, is critically important.

Females are much more likely than males to develop an eating disorder. Only an estimated 5 to 15 percent of people with anorexia or bulimia[4] and an estimated 35 percent of those with binge-eating disorder[5] are male.

Anorexia Nervosa

An estimated 0.5 to 3.7 percent of females suffer from anorexia nervosa in their lifetime.[1] Symptoms of anorexia nervosa include:

- Resistance to maintaining body weight at or above a minimally normal weight for age and height
- Intense fear of gaining weight or becoming fat, even though underweight
- Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or denial of the seriousness of the current low body weight

- Infrequent or absent menstrual periods (in females who have reached puberty)

People with this disorder see themselves as overweight even though they are dangerously thin. The process of eating becomes an obsession. Unusual eating habits develop, such as avoiding food and meals, picking out a few foods and eating these in small quantities, or carefully weighing and portioning food. People with anorexia may repeatedly check their body weight, and many engage in other techniques to control their weight, such as intense and compulsive exercise, or purging by means of vomiting and abuse of laxatives, enemas, and diuretics. Girls with anorexia often experience a delayed onset of their first menstrual period.

The course and outcome of anorexia nervosa vary across individuals: some fully recover after a single episode; some have a fluctuating pattern of weight gain and relapse; and others experience a chronically deteriorating course of illness over many years. The mortality rate among people with anorexia has been estimated at 0.56 percent per year, or approximately 5.6 percent per decade, which is about 12 times higher than the annual death rate due to all causes of death among females ages 15-24 in the general population.[6] The most common causes of death are complications of the disorder, such as cardiac arrest or electrolyte imbalance, and suicide.

Bulimia Nervosa

An estimated 1.1 percent to 4.2 percent of females have bulimia nervosa in their lifetime.[1] Symptoms of bulimia nervosa include:

- Recurrent episodes of binge eating, characterized by eating an excessive amount of food within a discrete period of time and by a sense of lack of control over eating during the episode
- Recurrent inappropriate compensatory behavior in order to prevent weight gain, such as self-induced vomiting or misuse of laxatives, diuretics, enemas, or other medications (purging); fasting; or excessive exercise

- The binge eating and inappropriate compensatory behaviors both occur, on average, at least twice a week for 3 months
- Self-evaluation is unduly influenced by body shape and weight

Because purging or other compensatory behavior follows the binge-eating episodes, people with bulimia usually weigh within the normal range for their age and height. However, like individuals with anorexia, they may fear gaining weight, desire to lose weight, and feel intensely dissatisfied with their bodies. People with bulimia often perform the behaviors in secrecy, feeling disgusted and ashamed when they binge, yet relieved once they purge.

Binge-Eating Disorder

Community surveys have estimated that between 2 percent and 5 percent of Americans experience binge-eating disorder in a 6-month period.[5,7] Symptoms of binge-eating disorder include:

- Recurrent episodes of binge eating, characterized by eating an excessive amount of food within a discrete period of time and by a sense of lack of control over eating during the episode
- The binge-eating episodes are associated with at least 3 of the following: eating much more rapidly than normal; eating until feeling uncomfortably full; eating large amounts of food when not feeling physically hungry; eating alone because of being embarrassed by how much one is eating; feeling disgusted with oneself, depressed, or very guilty after overeating
- Marked distress about the binge-eating behavior
- The binge eating occurs, on average, at least 2 days a week for 6 months
- The binge eating is not associated with the regular use of inappropriate compensatory behaviors (e.g., purging, fasting, excessive exercise)

People with binge-eating disorder experience frequent episodes of out-of-control eating, with the same binge-eating symptoms as

those with bulimia. The main difference is that individuals with binge-eating disorder do not purge their bodies of excess calories. Therefore, many with the disorder are overweight for their age and height. Feelings of self-disgust and shame associated with this illness can lead to bingeing again, creating a cycle of binge eating.

Treatment Strategies[1]

Eating disorders can be treated and a healthy weight restored. The sooner these disorders are diagnosed and treated, the better the outcomes are likely to be. Because of their complexity, eating disorders require a comprehensive treatment plan involving medical care and monitoring, psychosocial interventions, nutritional counseling and, when appropriate, medication management. At the time of diagnosis, the clinician must determine whether the person is in immediate danger and requires hospitalization.

Treatment of anorexia calls for a specific program that involves three main phases: (1) restoring weight lost to severe dieting and purging; (2) treating psychological disturbances such as distortion of body image, low self-esteem, and interpersonal conflicts; and (3) achieving long-term remission and rehabilitation, or full recovery. Early diagnosis and treatment increase the treatment success rate. Use of psychotropic medication in people with anorexia should be considered *only* after weight gain has been established. Certain selective serotonin reuptake inhibitors (SSRIs) have been shown to be helpful for weight maintenance and for resolving mood and anxiety symptoms associated with anorexia.

The acute management of severe weight loss is usually provided in an inpatient hospital setting, where feeding plans address the person's medical and nutritional needs. In some cases, intravenous feeding is recommended. Once malnutrition has been corrected and weight gain has begun, psychotherapy (often cognitive-behavioral or interpersonal psychotherapy) can help people

with anorexia overcome low self-esteem and address distorted thought and behavior patterns. Families are sometimes included in the therapeutic process.

The primary goal of treatment for bulimia is to reduce or eliminate binge eating and purging behavior. To this end, nutritional rehabilitation, psychosocial intervention, and medication management strategies are often employed. Establishment of a pattern of regular, non-binge meals, improvement of attitudes related to the eating disorder, encouragement of healthy but not excessive exercise, and resolution of co-occurring conditions such as mood or anxiety disorders are among the specific aims of these strategies. Individual psychotherapy (especially cognitive-behavioral or interpersonal psychotherapy), group psychotherapy that uses a cognitive-behavioral approach, and family or marital therapy have been reported to be effective. Psychotropic medications, primarily antidepressants such as the selective serotonin reuptake inhibitors (SSRIs), have been found helpful for people with bulimia, particularly those with significant symptoms of depression or anxiety, or those who have not responded adequately to psychosocial treatment alone. These medications also may help prevent relapse. The treatment goals and strategies for binge-eating disorder are similar to those for bulimia, and studies are currently evaluating the effectiveness of various interventions.

People with eating disorders often do not recognize or admit that they are ill. As a result, they may strongly resist getting and staying in treatment. Family members or other trusted individuals can be helpful in ensuring that the person with an eating disorder receives needed care and rehabilitation. For some people, treatment may be long term.

Research Findings and Directions

Research is contributing to advances in the understanding and treatment of eating disorders.

- NIMH-funded scientists and others continue to investigate the effectiveness of psychosocial interventions, medications, and the combination of these treatments with the goal of improving outcomes for people with eating disorders.[8,9]
- Research on interrupting the binge-eating cycle has shown that once a structured pattern of eating is established, the person experiences less hunger, less deprivation, and a reduction in negative feelings about food and eating. The two factors that increase the likelihood of bingeing—hunger and negative feelings—are reduced, which decreases the frequency of binges.[10]
- Several family and twin studies are suggestive of a high heritability of anorexia and bulimia,[11,12] and researchers are searching for genes that confer susceptibility to these disorders.[13] Scientists suspect that multiple genes may interact with environmental and other factors to increase the risk of developing these illnesses. Identification of susceptibility genes will permit the development of improved treatments for eating disorders.
- Other studies are investigating the neurobiology of emotional and social behavior relevant to eating disorders and the neuroscience of feeding behavior.
- Scientists have learned that both appetite and energy expenditure are regulated by a highly complex network of nerve cells and molecular messengers called neuropeptides.[14,15] These and future discoveries will provide potential targets for the development of new pharmacologic treatments for eating disorders.
- Further insight is likely to come from studying the role of gonadal steroids.[16,17] Their relevance to eating disorders is suggested by the clear gender effect in the risk for these disorders, their emergence at puberty or soon after, and the increased risk for eating disorders among girls with early onset of menstruation.

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