4.4: Eating Disorders

Before and After

The child on the left in this sketch is in the throes of a serious disorder. They are extremely emaciated and on the brink of death. The same child is depicted on the right after being treated for their disorder. They have gained weight and appear to be healthy. What disease wreaked such havoc on this child’s health? Was it cancer? Some terrible parasitic infection? The answer may surprise you. The disease that caused such serious health consequences is a mental health disorder, specifically, the eating disorder anorexia nervosa.

Figure \(\PageIndex{1}\) Anorexia Nervosa (CC BY 4.0; John Ryle via Wikimedia Commons)
What Are Eating Disorders?

Eating disorders are mental health disorders defined by abnormal eating habits that adversely affect health. Eating disorders typically begin during late childhood, adolescence, or early adulthood. In developed countries such as the United States, they occur in about 4 percent of people. In a study of 9,713 participants showed that about 5.5% of young males (adolescents and young adults from 12 colleges and universities) manifested elevated eating disorder risk in the United States (Mariusz Jaworski et al., 2019). In developing countries, they are less common but increasing in frequency. Eating disorders are serious diseases and can even be fatal. In fact, they result in about 7,000 deaths a year in the United States, making them the mental disorders with the highest mortality rate.

Major Eating Disorders

Common eating disorders in the United States include anorexia nervosa, bulimia nervosa, and binge eating disorder. They differ in the patterns of disordered eating that characterize them, but all of them can have life-threatening health consequences. They may also have similar causes.

Anorexia Nervosa

Anorexia nervosa is an eating disorder in which people consistently eat very little even though they may be obsessed with food. They typically have an obsessive fear of gaining weight. They also usually have an unrealistic perception of their own low body weight and see themselves as fat even when they are very thin. This misperception of one’s true body size and shape, along with dissatisfaction with that misperception, is called body dysmorphic disorder. It is very common in people with eating disorders such as anorexia nervosa. In fact, the majority of people with body dysmorphic disorder also have an eating disorder.

The food restriction in anorexia nervosa results in excessive weight loss and often amenorrhea (cessation of menses) in females. Other serious consequences of this pattern of eating include loss of bone mass; weakening of the heart and other muscles; abnormally low heart rate and blood pressure; and weakness, dizziness, and fainting. Because of such consequences, there is a significant risk of heart failure, and this can result in death.

Bulimia Nervosa

Bulimia nervosa is an eating disorder in which people recurrently binge on large amounts of food. Because of the extreme fear of gaining weight, each binge is usually followed by trying to purge the food from the body. This may be done — more or less successfully — by vomiting, using laxatives or enemas, taking diuretics, or exercising excessively.

People with bulimia nervosa may or may not have an abnormal weight, but they are likely to develop an electrolyte imbalance due to the repeated binging and purging. This imbalance may cause an irregular heartbeat, which can lead to heart failure and death. Frequent vomiting can also cause rupture of the stomach or esophagus, which can be fatal, as well as erode dental enamel.
Binge Eating Disorder

**Binge eating disorder** is an eating disorder in which people repeatedly binge on large amounts of food, and each binge is followed by feelings of guilt but not by purging. Adverse health impacts of binge eating disorder include excessive weight gain, obesity, high blood pressure, and high cholesterol. People with binge eating disorder are also at increased risk of gallbladder disease, cardiovascular disease, and type 2 diabetes.

Causes of Eating Disorders

The causes of eating disorders are not fully understood and are likely to vary among individuals. However, in virtually all cases, both biological and environmental factors appear to play a role.

Biological Factors

Genes are likely to be involved in the development of eating disorders because having a close biological relative with an eating disorder increases one’s own risk tenfold or more. At a biochemical level, eating disorders are thought to be caused in part by the deregulation of neurotransmitters such as serotonin and dopamine. Serotonin normally has an inhibitory effect on eating and dopamine regulates the rewarding property of food. Imbalance in these neurotransmitters is likely to affect appetite and eating behavior. Deregulation of the hormones leptin and ghrelin may also be involved in eating disorders. These two hormones normally help maintain the body’s energy balance by increasing or decreasing food intake. This occurs through the regulation of appetite and eating behavior. **Leptin** is produced mainly by fat cells in the body. It normally inhibits appetite by inducing a feeling of satiety. **Ghrelin** is produced in the stomach and small intestine. Its normal role is to stimulate the appetite. If these hormones are out of balance, the imbalance will affect appetite and may lead to disordered eating.

Environmental Factors

A number of environmental factors have also been shown to increase the risk of developing eating disorders. One of the most salient is abuse suffered as a child, including physical, psychological, or sexual abuse. Child abuse has been shown to triple the risk of developing an eating disorder. Parental pressure to control a child’s eating habits can also increase the risk, as can having a fragile sense of self-identity. In older individuals, social isolation increases the risk of eating disorders.

For women, cultural ideal relates to slenderness, and for men to the musculature that is thought to be a major contributing cause of anorexia and bulimia nervosa. Dancers (like the one pictured below), jockeys, and athletes such as gymnasts are the groups of young individuals who may feel exceptional pressure to be thin. Up to 12 percent of dancers develop anorexia or bulimia, compared with about 2 percent of individuals in the general population.
Treatment and Recovery

Treatment of eating disorders varies according to the type and severity of the eating disorder. Usually, more than one treatment option is used. Treatment typically includes mental health counseling, which can take place in a variety of settings, such as a community program, private practice, or hospital. Treatment may also include the use of antidepressants or other medications because many people with eating disorders also suffer from depression or other mental health disorders. Nutritional counseling is often recommended as well. Hospitalization is occasionally required, in many cases to treat the adverse physical health consequences of the disordered eating.

The goal of treatment is recovery, including gaining control of eating, adopting normal eating habits, and attaining a normal weight. About 50 to 85 percent of people with eating disorders recover with treatment. However, some may have to struggle to maintain normal eating behaviors throughout the rest of their life.

Feature: Reliable Sources

People with anorexia nervosa, as with many other health problems, may seek information and advice online before or instead of contacting a healthcare professional. The web offers a plethora of useful information on eating disorders, including anorexia nervosa, but some websites, blogs, and social media pages actually have the agenda of promoting disordered eating. The term pro-ana (from “pro-anorexia”) refers to organizations, websites, and other sources that promote anorexia nervosa. Their mission is to normalize or even glamorize anorexia nervosa. They defend it as a lifestyle choice and an accomplishment of self-control rather than as a mental disorder. Research has shown that visiting pro-ana sites can have a negative impact on eating behavior in people both with and without eating disorders. After visiting such sites, people tend to decrease their Caloric intake, although most of them do not actually perceive that they...
have reduced their intake of Calories.

Following a 2001 episode of the Oprah Winfrey Show that focused on pro-ana, the mainstream press started covering the issue. Pressure from the public and pro-recovery organizations led to some social media and other websites adopting policies of blocking pro-ana pages or labeling them with warning messages. As a result, many pro-ana groups have taken steps to conceal themselves. For example, they may claim that they are simply providing a nonjudgmental forum for people with anorexia nervosa to discuss their disorder. They may also claim that they exist in part to provide support for those who choose to enter recovery.

Some clues that a website or page may be pro-ana include providing information on topics such as:

- crash dieting techniques and recipes.
- socially acceptable pretexts for refusing food, such as veganism.
- ways to hide weight loss from parents and doctors.
- reducing the adverse health effects of anorexia.
- ways to ignore or suppress hunger pangs.

Do you think you can tell the difference between pro-ana websites and legitimate pro-recovery websites, which are designed to encourage the development and maintenance of healthy behaviors and cognition? Go online and try to find at least one pro-ana website and at least one pro-recovery website. Then write a brief explanation of how you made your choices.

Summary

- Eating disorders are mental health disorders defined by abnormal eating habits that adversely affect health. They generally begin by young adulthood and are much more common in females than males. Eating disorders are mental disorders with the highest mortality rate.
- Anorexia nervosa is an eating disorder in which people consistently eat very little and become extremely thin. They may also develop amenorrhea and other serious health problems. People with anorexia nervosa often fail to appreciate how thin they are and how severe their illness is.
- Bulimia nervosa is an eating disorder in which people recurrently binge on large amounts of food, followed by purging the food from the body through vomiting, using laxatives, exercising excessively, or other methods. People with bulimia nervosa may have normal weight but often have serious health problems such as electrolyte imbalances and irregular heartbeat.
- Binge eating disorder is an eating disorder in which people repeatedly binge on large amounts of food, followed by feelings of guilt but not by purging. This generally leads to excessive weight gain, obesity, and other serious disorders.
- Genes are likely to be involved in the development of eating disorders because eating disorders tend to “run in families.” At a biochemical level, eating disorders may be caused in part by dysregulation of neurotransmitters or the hormones leptin and ghrelin, which normally help maintain the body’s energy homeostasis.
- Environmental factors that increase the risk of eating disorders include being abused as a child, tight parental control over eating habits, fragile sense of self-identity, and social isolation. Cultural idealization of thinness in females may be a major cause of anorexia nervosa and bulimia nervosa in particular.
- Treatment of an eating disorder depends on the type and severity of the disorder. Treatment options include mental health counseling, medications, nutritional counseling, and hospitalization. The majority of people with eating disorders improve with treatment.
disorders recover with treatment.

**Review**

1. What are eating disorders? How serious are they?
2. What demographic group is most likely to be diagnosed with eating disorders?
3. Describe anorexia nervosa and its adverse effects on health.
4. What is bulimia nervosa? How does it affect health?
5. Define binge eating disorder, and identify its health consequences.
6. Why are genes likely to be involved in the development of eating disorders?
7. Explain how the deregulation of biochemicals may be involved in eating disorders.
8. Discuss environmental factors that may increase the risk of eating disorders.
9. Identify types of treatment for eating disorders. How effective is the treatment likely to be?
10. What is a common ultimate cause of death in people with anorexia nervosa and bulimia nervosa?
11. *True or False.* Someone who is a normal weight cannot have an eating disorder.
12. *True or False.* The neurotransmitter serotonin normally has an inhibitory effect on eating.
13. When you are feeling hungry, what do you think are the relative levels of your ghrelin and leptin hormones? Explain your answer.
14. Which disorder is most likely to affect teeth enamel?
   A. Anorexia nervosa
   B. Binge eating disorder
   C. Bulimia nervosa
   D. None of the above
15. Female dancers are _____ as likely to develop anorexia or bulimia than women in the general population.
   A. half
   B. just
   C. two times
   D. six times

**References:**

Mariusz Jaworski, Mariusz Panczyk, Andrzej Śliwczyński, Melania Brzozowska, Katarzyna Janaszek, Piotr Małkowski, Joanna Gotlib. *Eating Disorders in Males: An 8-Year Population-Based Observational Study; First*
Facing so much pressure in the media to be skinny, little girls often become self-conscious about their body image. Watch this video to see identical twin girls and their struggles with an eating disorder.

America has a cultural obsession with thinness and its correlation with beauty. Watch this video by underwear model Cameron Russell and learn her take on why looks aren't everything:
There are substantially more publications on the prevalence of (Eating Disorders) EDs in females, especially young women below 35 years. Few studies concentrate on the prevalence of EDs in males, which are largely under-represented in the ED peer-reviewed literature and, hence, marginalized. Changes to current conceptualizations of ED pathology that accommodate male ED presentations better are needed (Mariusz Jaworski et al., 2019). Watch the following video about a 13-year-old boy’s struggle and confusing about his eating disorder.