



National Alliance on Mental Illness  
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## **Anorexia Nervosa Fact Sheet**

### **What is anorexia nervosa?**

Anorexia nervosa is a serious, occasionally chronic, and potentially life-threatening eating disorder defined by a refusal to maintain minimal body weight within 15 percent of an individual's normal weight. Other essential features of this disorder include an intense fear of gaining weight, a distorted body image, denial of the seriousness of the illness, and amenorrhea (absence of at least three consecutive menstrual cycles when they are otherwise expected to occur).

There are two subtypes of anorexia nervosa. In the restricting subtype, people maintain their low body weight purely by restricting their food intake and, possibly, by excessive exercise. Individuals with the binge eating/purging subtype also restrict their food intake, but also regularly engage in binge eating and/or purging behaviors such as self-induced vomiting or the misuse of laxatives, diuretics, or enemas. Many people move back and forth between subtypes during the course of their illness. Starvation, weight loss, and related medical complications are quite serious and can result in death. People who have an ongoing preoccupation with food and weight even when they are thin would benefit from exploring their thoughts and relationships with a therapist. The term anorexia literally means loss of appetite, but this is a misnomer. In fact, people with anorexia nervosa often ignore hunger signals and thus control their desire to eat. Often they may cook for others and be preoccupied with food and recipes, yet they will not eat themselves. Obsessive exercise that may accompany the starving behavior can cause others to assume falsely that the person must be healthy.

### **Who develops anorexia nervosa?**

Like all eating disorders, anorexia nervosa tends to occur in pre- or post-puberty, but can develop at any time throughout the lifespan. Anorexia nervosa predominately affects adolescent girls and young adult women, although it also occurs in boys, men, older women and younger girls. One reason younger women are particularly vulnerable to eating disorders is their tendency to go on strict diets to achieve an "ideal" figure. This obsessive dieting behavior reflects today's societal pressure to be thin, which is seen in advertising and the media. Others especially at risk for eating disorders include athletes, actors, dancers, models, and TV personalities for whom thinness has become a professional requirement. People with anorexia nervosa will often mention that the sense of control they develop over eating and weight helps them feel as if other aspects of their life are under control. The presence of depression and anxiety disorders may increase the risk of developing anorexia nervosa.

### **How many people suffer from anorexia nervosa?**

Conservative estimates suggest that one-half to one percent of females in the U.S. develop anorexia nervosa. Because more than 90 percent of all those who are affected are adolescent and young women, the disorder has been characterized as primarily a woman's illness. It should be noted, however, that males and children as young as seven years old have been diagnosed; and women 50, 60, 70, and even 80 years of age have fit the diagnosis. Some of these individuals will have struggled with eating, shape or weight in the past but new onset

cases can also occur.

### **How is the weight lost?**

People with anorexia nervosa usually lose weight by reducing their total food intake and exercising excessively. Many persons with this disorder restrict their intake to fewer than 1,000 calories per day. Most avoid fattening, high-calorie foods, and often eliminate meats. The diet of persons with anorexia nervosa may consist almost completely of low-calorie foods and or beverages like lettuce and carrots, popcorn, and diet soft drinks.

### **What are the common signs of anorexia nervosa?**

The hallmark of anorexia nervosa is a preoccupation with food and a refusal to maintain minimally normal body weight. One of the most frightening aspects of the disorder is that people with anorexia nervosa continue to think they look fat even when they are bone-thin. Their nails and hair become brittle, and their skin may become dry and yellow. People with anorexia nervosa often complain of feeling cold (hypothermia) because their body temperature drops. They may develop lanugo (a term used to describe the fine hair on a new born) on their body.

Persons with anorexia nervosa develop odd and ritualistic eating habits such as cutting their food into tiny pieces, refusing to eat in front of others, or fixing elaborate meals for others that they themselves don't eat. Food and weight become obsessions as people with this disorder constantly think about their next encounter with food. Generally, if a person or their family fears he or she has anorexia nervosa, a doctor knowledgeable about eating disorders should make a diagnosis and rule out other physical disorders. Other psychiatric disorders can occur together with anorexia nervosa, such as depression, anxiety disorders and substance abuse disorders.

### **What are the causes of anorexia nervosa?**

Although the precise causes of anorexia nervosa are unknown, we do know that it is caused by a combination of genetic and environmental factors. Scientists have studied the role of personality, genetics, environment, and biochemistry of people with these illnesses. Certain personality traits common in persons with anorexia nervosa are perfectionism, neuroticism (anxiety-proneness), low self-esteem, and social isolation (which usually occurs after the behavior associated with anorexia nervosa begins). Many people who develop anorexia nervosa had been good students and athletes.

Eating disorders also tend to run in families, with female relatives most often affected. Relatives of someone with anorexia nervosa are over 10 times more likely to have an eating disorder themselves than relatives of someone without anorexia nervosa. The heritability of anorexia nervosa has been estimated to be over 50%. Behavioral and environmental influences also play a role in vulnerability to the illness. Stressful life events or transitions may precipitate the illness. In studies of the biochemical functions of people with eating disorders, scientists have found that the neurotransmitters serotonin and norepinephrine are decreased in those with anorexia nervosa who are at a low weight. People with anorexia nervosa also tend to have higher than normal levels of cortisol (a brain hormone released in response to stress) and vasopressin (a brain chemical found to be abnormal in patients with obsessive-compulsive disorder).

### **Are there medical complications?**

The starvation experienced by persons with anorexia nervosa can cause damage to vital organs such as the heart, kidneys, and brain. Pulse rate and blood pressure drop, and people suffering from this illness may experience irregular heart rhythms or heart failure. Nutritional deprivation along with purging causes electrolyte abnormalities such as low potassium and low sodium. Nutritional deprivation also leads to calcium loss from bones, which can become brittle and prone to breakage (osteoporosis). Nutritional deprivation also leads to decreased brain volume. In the worst-case scenario, people with anorexia can starve themselves to death.

Anorexia nervosa has the highest mortality rate of any psychiatric illness. The most frequent causes of death are suicide and complications of the malnutrition associated with the disorder.

### **Is treatment available?**

Recovery from anorexia nervosa is possible. In long term follow-up studies, about half of individuals fully recover from the illness, a small percentage continued to suffer from anorexia, and the remainder continue to have other eating disorders. For some, anorexia nervosa can be relatively short-lived, whereas for others it can become a chronic and debilitating illness. We do not yet know predictors of clinical course.

Luckily, most of the complications experienced by persons with anorexia nervosa are reversible when they restore their weight. People with this disorder should be diagnosed and treated as soon as possible because eating disorders are most successfully treated when diagnosed early. Some patients can be treated as outpatients, but some may need hospitalization to stabilize their dangerously low weight. Weight gain of one to three pounds per week is considered safe and desirable. The most effective strategies for treating a patient include weight restoration, individual, family, and group therapies along with psychiatric medications as needed.

To help people with anorexia nervosa overcome their disorder, a variety of approaches are used. Some form of psychotherapy is needed to deal with underlying emotional issues. Cognitive-behavioral therapy is sometimes used to change unhealthy thoughts and behaviors. Group therapy is often advised so people can share their experiences with others. Family therapy is important particularly if the individual is living at home and is a child or young adolescent. A physician or advanced-practice nurse is needed to prescribe medications that may be useful in treating the disorder or associated depression or anxiety. Be sure to check with your doctor before taking any psychiatric medications as they can impact weight and have varied risks and benefits. Finally, a nutritionist is necessary to advise the patient about proper diet and eating regimens. Where support groups are available, they can be beneficial to both patients and families. It is also important to realize that some people require a coordinated team of professionals from many disciplines to maximize their chance of recovery.

### **What about prevention?**

New research findings are showing that some of the "traits" in individuals who develop anorexia nervosa are actual "risk factors" that might be treated early on. For example, anxiety, low self esteem, body dissatisfaction, and dieting may be identified and interventions instituted before an eating disorder develops. Advocacy groups have also been effective in reducing dangerous media stories, such as teen magazine articles on "being thin" and pro-anorexia (pro-ana) websites that may glamorize such risk factors as dieting.