What is anorexia nervosa?
Anorexia nervosa is a serious, often chronic, and 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, and amenorrhea (absence of at least three consecutive menstrual cycles when they are otherwise expected to occur). In addition to the classic pattern of restrictive eating, some people will also engage in recurrent binge eating and purging episodes. 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 ignore hunger and thus control their desire to eat. This desire is frequently sublimated through cooking for others or hiding food that they will not eat in their personal space. Obsessive exercise may accompany the starving behavior and cause others to assume 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 major life change. Anorexia nervosa predominately affects adolescent girls and young adult women, although it also occurs in men and older women. 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. For the person with anorexia nervosa, the satisfaction of control achieved over weight and food becomes very important if the rest of their life is chaotic and emotionally painful.

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.

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 eliminate meats. The diet of persons with anorexia nervosa may consist almost completely of low-calorie vegetables like lettuce and carrots, or popcorn.

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. Depression is common in patients suffering from this disorder. 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 strange 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 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 and obsessive-compulsive disorder.

What are the causes of anorexia nervosa?
Knowledge about the causes of anorexia nervosa is inconclusive, and the causes may be varied. In an attempt to understand and uncover the origins of eating disorders, scientists have studied the personalities, genetics, environments, and biochemistry of people with these illnesses. Certain personality traits common in persons with anorexia nervosa are low self-esteem, social isolation (which usually occurs after the behavior associated with anorexia nervosa begins), and perfectionism. These people tend to be good students and excellent athletes. It does seem clear (although this may not be recognized by the patient), that focusing on weight loss and food allows the person to ignore problems that are too painful or seem irreparable.

Eating disorders also tend to run in families, with female relatives most often affected. A girl has a 10 to 20 times higher risk of developing anorexia nervosa, for instance, if she has a sibling with the disease. This finding suggests that genetic factors may predispose some people to eating disorders. Behavioral and environmental influences may also play a role. Stressful events are likely to increase the risk of eating disorders as well. 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, which links them with patients suffering from depression. 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 and brain. Pulse rate and blood pressure drop, and people suffering from this illness may experience irregular heart rhythms or heart failure. Nutritional deprivation causes calcium loss from bones, which can become brittle and prone to breakage. In the worst-case scenario, people with anorexia can starve themselves to death. Anorexia nervosa is among the psychiatric conditions having the highest mortality rates, killing up to six percent of its victims.

Is treatment available?
Luckily, most of the complications experienced by persons with anorexia nervosa are reversible when they restore 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 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 have been weight restoration within ten percent of normal, and individual, family, and group therapies. 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 abnormal 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 young adolescent. A physician or advanced-practice nurse is needed to prescribe medications that may be useful in treating the disorder. Finally, a nutritionist may be 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.

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, 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" that may glamorize such risk factors as dieting.

Reviewed by Barbara Wolfe, RN, PhD, FAAN June 2003; Updated January 2013, May 2017