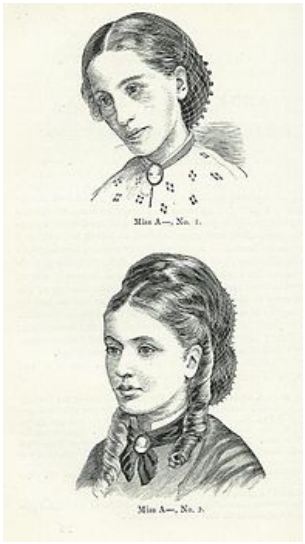
# Eating disorders

**Eating disorders** form a relatively broad diagnostic spectrum. They are characterized by pathological eating behavior and self-perception, with many other somatic, psychological, and social consequences. These disorders are multifactorial with many risk factors, including:

1. Genetic predisposition
2. Developmental factors
3. Stress-related conditions
4. Environmental influences

Some are common to the entire diagnostic spectrum. The etiopathogenesis of these disorders is not entirely known. In recent years, the awareness of experts and the entire population about the occurrence and clinical manifestations of eating disorders has increased significantly. The connection between eating disorders and the promotion of an extremely slim ideal of beauty (using computer-edited photographs) is often discussed in the media. Goals to achieve unrealistic slenderness often lead to dissatisfaction with one's own appearance, leading to even very young individuals of normal weight displaying subsequent risky dietary behavior.



Drawings of photographs taken between 1866 and 1870: Miss A, patient of William Withney Gull, before and after treatment for anorexia nervosa

## Epidemiology

The prevalence of anorexia nervosa (AN), bulimia nervosa (BN) and psychogenic overeating (PP) is 0.6, 1.0 and 2.8% respectively with a risk several times higher (up to 10 times) in women. The median time of the disease is 18-21 years. Children under 12 represent about 5% of patients. As many as 40% of patients with eating disorders have been described to have engaged in self-harm, especially in bulimic patients. In our population, it has been proven that at the age of 13, 35% of girls and 13% of boys are dissatisfied with their bodies, 50% of girls want to lose weight, 40% consciously limit themselves to food, and 4% intentionally vomit. With obesity rates increasing in children, we see eating disorders in individuals with premorbid obesity far more often.

## Clinical picture

Patients usually first contact a general practitioner, pediatrician, internist, gastroenterologist, dermatologist, surgeon, neurologist, gynecologist, or dentist. They do not ask for help directly with an eating disorder. The most common complaints are fatigue, dizziness, lack of energy, menstrual disorders, weight gain or loss, constipation, flatulence, abdominal pain, heartburn, sore throat, palpitations, polyuria, polydipsia, insomnia. Pathological eating behavior is likely to be concealed by the patient. Even in the physical examination, there might not be an obvious pathological finding at first. Therefore, it is necessary to consider the diagnosis, especially for adolescents and young women at risk (top athletes, dancers, models, actresses, and students of these fields) and to purposefully ask about problematic eating behavior. We inform the patient about the disease and its consequences, monitor the problems, and if they persist and worsen to malnutrition, we send the patient for psychiatric examination. Early detection of the disease and adequate treatment are essential for the course of the disease. The biggest problem, however, is the fact that most patients and sometimes their parents often initially refuse adequate treatment. They hide problems that worsen the somatic condition and prognosis (they abuse laxatives, diuretics, insulin, antiobesity drugs, and other substances) for a long time out of shame and fear of stigma.

Affected individuals often seek different alternative approaches. They have unrealistic demands on the doctor: they want to be cured, but keep the weight very low. With children, diagnosis may be more difficult: adult criteria may not always be used (e.g., amenorrhea in prepubertal children). Poor nutrition can result in weight stagnation during growth. Children are also more likely to complain about somatic problems. In contrast to the restriction of their own food intake, they sometimes show conspicuously interest in food theoretically, and even cook and control the diet of members of the whole family. We often observe changes in taste, salting, seasoning, excessive drinking, or insufficient fluid intake. When observing eating behavior, we find that they eat slowly, ceremoniously, "poke" at food and "morsel" between meals. Children may be affected by an eating disorder for a lifetime, leading to smaller stature and infertility. They lose weight more rapidly than adults and dehydration, hypochloremia, and hypokalemia manifest as drowsiness, muscle weakness, bradycardia, and arrhythmias, which can lead to cardiac arrest. Puberty is delayed, osteoporosis occurs earlier, often in the second year of the disease. A SCOFF questionnaire was developed for rapid screening of both AN and BN (Morgana et al., 1999).

| **SCOFF** | |
|---|---|
| 1. | Do you ever feel uncomfortably full to madness? |
| 2. | Are you afraid of losing control over the amount of food you eat? |
| 3. | Have you recently lost more than 7 kilograms in 3 months? |
| 4. | Do you think you are fat when others think you are too slim? |
| 5. | Do you think that food controls your life? |

The clinical features of the syndrome in a cooperating patient or family can be easily identified. Diagnosis is reliable when all diagnostic guidelines are followed.

## Anorexia nervosa

**Anorexia nervosa (ICD-10: F50)**, according to the ICD-10 criteria, is characterized by:

1. Body weight maintained at least 15% below the expected weight (whether reduced or never reached) or a Body Mass Index (BMI, weight (kg) / height ($m^2$)) that is 17.5 or less. Prepubertal patients do not meet the expected **weight gain** during growth.
2. The patient loses weight on her own, through diets, provoked vomiting, taking diuretics, anorectics, laxatives, or excessive exercise.
3. Specific psychopathology is represented by **fear of obesity** persisting even when severely underweight, **distorted perception** of one's own body, and intrusive, controlling thoughts of remaining underweight, and sometimes specific eating rituals.
4. Extensive **endocrine disorder** of the hypothalamic-pituitary-gonadal axis, amenorrhea in women (often concealed by HRT), and loss of sexual interest.
5. **Delayed puberty** in prepubescent children or its arrest with no further development (growth, breast development, primary amenorrhea, underdeveloped genitalia in boys). After recovery, puberty will be completed, but menarche may be delayed.

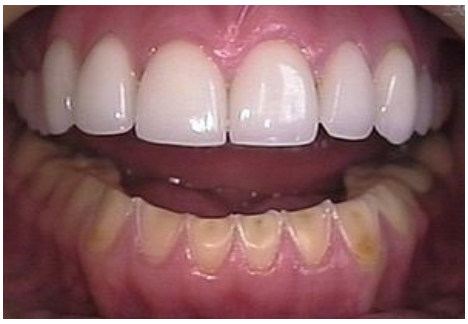
**Bulimia nervosa** begins later on in life and often develops from AN or its subclinical form.

🔎 *For more information see Anorexia nervosa.*

## Bulimia nervosa

**Bulimia nervosa (ICD-10: F50.2)**, according to the ICD-10 criteria, is characterized b:

1. Constant thoughts about food with an irresistible desire for it and bouts of overeating (binging).
2. Trying to get rid of calories from food consumed in one (or more) ways: provoked vomiting, abuse oflaxatives, starvation, anorectics, diuretics, and abuse/manipulation of insulin therapy in diabetic patients. Restrictive and bulimic subtypes may alternate.
3. Specific psychopathology is based primarily on morbid fears of obesity. The patient considers his or her target weight to be less than the optimal or healthy premorbid weight. Binge eating attacks correspond to consuming too much food (usually one that he or she normally refuses for dietary reasons - such as sweets) in a short time.



Oral Manifestation of Bulimia

## Overeating associated with other mental disorders

**Overeating associated with other mental disorders (F50.4)** includes:

- Overeating can be a reaction to stress (sexual trauma, loss of a loved one, or exercise).
- It leads to weight gain due to psychological factors and eating disorders.
- Subsequent obesity can gradually lead to a decrease in self-esteem, mood disorders, anxiety, insecurity in personal relationships, social isolation, and the development of another somatoform disorder. It can also be induced by long-term psychopharmacotherapy.
- Involvement in various dietary measures often leads to a vicious circle of significant weight fluctuations, leading to depressive disorders.

## Atypical forms of anorexia nervosa and bulimia nervosa

**Atypical forms of anorexia nervosa (F50.1) and bulimia nervosa (F50.3)** do not meet all the criteria for classification, but otherwise show a typical clinical picture and the treatment is the same. The disease can be considered atypical when patients hide some symptoms. We do not argue with patients about the symptoms to not deepen their resistance against treatment. Family information is especially important for young patients. At present, experts are paying more attention to psychogenic overeating, which, especially with the individual's predisposition, leads to obesity and has a comparable impact on health and quality of life with other **eating disorders**. The diagnostic subtypes of the spectrum of eating disorders often overlap, but their treatment, course, and prognosis vary.

## Treatment

Psychiatric and psychological examination should lead to the communication of the diagnosis, psychoeducation, treatment design, and motivation for further treatment. If the first contact is a self-help group, the prognosis and course of the disease depend on its organization and the way patients are referred for further treatment (effectiveness has been demonstrated in BN programs with the participation of experts).

The treatment of eating disorders is very demanding, working with ambivalence for treatment requires considerable skills and patience. We emphasize **interdisciplinary cooperation**, cooperation with the family, school, and sport coaches. Without improved motivation to change eating behavior and adjust weight, even highly sophisticated medical approaches remain ineffective. The pediatrician or general practitioner plays a crucial role in the first contact with the patient and his or her family, especially in early diagnosis and psychoeducation and in the persistence of the problem in the recommendation of further appropriate professional care. Nutritional therapists are increasingly involved in the treatment of eating disorders, representing members of the therapeutic team. Clear definition of professional competencies and adherence to clear rules and boundaries are important for good team cooperation as eating disorders can be very manipulative in nature. Psychotherapeutic and counseling interventions require psychotherapeutic training and supervision and considerable communication skills.

## Realimentation

Hospitalization at intermediate care unit occurs in patients without insight and motivation for treatment only when there is a serious threat to somatic status: at weight below 85% of standard weight, pulse below 40 beats per minute, blood pressure below 90/60 mmHg in adults and 80/50 mmHg in children, dehydration, hypothermia, hypokalemia, hypoglycemia, electrolyte imbalances, and the threat of renal, cardiac, or liver failure. The indication for hospitalization of a child is clearly weight loss of more than 25%, dehydration, signs of circulatory failure (bradycardia, hypotension), persistent vomiting, severe depression, or suicidal behavior. Hospitalization often requires gavage and parenteral nutrition. Partial oral food intake should be started as soon as possible.

An uncommon but life-threatening complication of realimentation is refeeding syndrome. It occurs as a result the sudden realimentation of carbohydrates, which increases the secretion of insulin and cellular uptake of phosphates, leading to hypophosphatemia (malnutrition leads to a reduction in intracellular phosphate supply at normal serum concentrations). Clinical signs include rhabdomyolysis, muscle weakness, leukocyte changes, respiratory failure, cardiac failure, hypotension, cardiac arrhythmias, seizures, ataxia, encephalopathy, coma, and sudden death. Early non-specific manifestations may remain unrecognized.

Rapid changes in serum osmolarity, rapid correction of hyponatremia or hypokalemia may also lead to central pontine myelinolysis.

## Psychotherapy

When patients manage their ambivalence with the disease and treatment, they usually accept the help of a specialist. The procedure of treatment and psychotherapy is then selected according to motivation, stage of the disease and its duration, and changes that the patient is currently able to undergo (mere weight adjustment, change of attitudes in eating behavior, solving relationship problems, relapse prevention). The attitude and personality of the therapist and the availability of other forms of care also play a role. But in the acute phase of the disease (with severe malnutrition), the effectiveness of psychotherapy is questionable, as most patients have difficulty concentrating on psychotherapeutic work, which involves working to improve insight and understanding the context in which pathological eating behavior occurs and is maintained. In the case of children, the younger and more mentally immature a child is, the worse his or her cooperation and treatment is and the more influential the child is to his or her surroundings.

### Cognitive-behavioral therapy

Of the psychotherapeutic approaches, Cognitive Behavioral Therapy (CBT) is the most commonly used. It helps to change unwanted eating behaviors (overeating, vomiting, food restriction, avoidant behavior, and overuse of diuretics and laxatives) and to establish a normal eating regime. At the same time, patients work to change their thinking, which is responsible for their negative perception of their own body, reduced self-esteem ,and perfectionist demands on themselves and their surroundings.

### Interpersonal psychotherapy

Interpersonal psychotherapy (IPT) focuses on relationship problems. We include it as part of the the relapse prevention program (which occurs in up to 50% of cases).

### Psychodynamic psychotherapy

Psychodynamic (psychoanalytic) psychotherapy requires a modified approach with knowledge of the specific symptoms of eating disorders, already described by Hilde Bruch (1973). It is usually indicated when short-term interventions fail and/or comorbidity of eating disorders with personality problems in individuals with a history of psychological trauma, sexual abuse and/or post-traumatic stress disorder.

### Family therapy

For adolescents diagnosed with AN, European treatment standards primarily recommend family therapy. A new approach for adolescent patients and their families brings "multi-family programs": intensive psychotherapeutic programs designed for a group of four to six families of patients with AN. An modified CBT program with family participation is recommended for adolescents with BN.

### Psychoeducation

Working with families is recommended, and it involves psychoeducation and support for the individuals who care for the chronically mentally ill, because their attitudes can fundamentally influence the course of the disease of their affected relative. New technologies are increasingly involved in new forms of prevention and treatment: sending support SMS, internet counseling, chat psychotherapy, and clubs for parents. On the Internet, families can obtain basic information about the somatic and psychological consequences of the disease, normal eating habits and weight, and inappropriate dietary and purgative methods. Psychoeducation available on the Internet brings recommended diets, scales to assess the severity of the disease and disorders of self-perception, and contacts (e.g., www.idealni.cz).

In recent years, new concepts of therapy have been developed, such as "mentalization" (improving the ability to understand oneself and others) or cognitive remediation (focusing on specific cognitive issues of eating disorders).

### Psychopharmacotherapy

In eating disorders, antidepressants, antipsychotics, appetite stimulants and other drugs have been tested. No substance has been demonstrated to have benefits that clearly and effectively outweigh the risk of side effects. Their risk in individuals with severe malnutrition can be significantly increased. The effect of antidepressants in the prevention of relapse of AN has been described in AN. Also, their use for the reduction of the frequency of overeating and vomiting (even in the absence of depression) in BN has been demonstrated. However, antidepressants are used mainly for the treatment of present depressive, anxious, and obsessive symptoms, in the failure of psychotherapy and psychosocial approaches, or in those who refuse psychotherapy.

Efficacy has been demonstrated in comorbid psychiatric disorders (alcohol and drug addiction, self-harm, kleptomania, sexual disinhibition, and OCD). At the same time, a comprehensive (specialized) program is needed in treatment.

#### Treatment by virtual reality

In a virtual environment, the patient performs tasks that allow him or her to learn from the consequences of his or her behavior. So, for example, what happens to the patient's figure if he eats more or less. The patient is allowed to compare the actual body shape with the avatar created using his or her body perception. This is a more illustrative approach than simply explaining the effects of self-destructive behavior.

## Prognosis

Mortality in childhood is reported at 3%. The onset of the disease in prepubertal age has a worse prognosis. AN has the highest mortality, sometimes as high as 10-20%. Deaths are often caused by suicide, while a third of deaths are attributed to heart failure. Other causes are pneumonia, liver failure, and myocardial degeneration. However, mortality and serious somatic consequences cannot be underestimated for BN and psychogenic overeating either, even if we do not have reliable epidemiological data. Estimates of the outcome of AN indicate that up to 50% of individuals will recover, 20% will remain very thin, 25% will be very lean, and 5 to 10% will die from malnutrition. 52-70% of patients with BN achieve full or partial remission, while the others suffer from chronic problems and frequent relapses.

## Links

### Related Articles

- Obesity
- Obesity (pediatrics)
- Psychological aspects of obesity
- Eating disorders in obese people
- Anorexia nervosa
- Bulimia nervosa
- Eating disorders in pregnancy

### Source


- PAPEŽOVÁ, Hana. *Poruchy příjmu potravy* [online]. [cit. 2012-03-13]. <https://el.lf1.cuni.cz/p51755144/> (https://connect.cuni.cz/p51755144/).