

## **Orthorexia nervosa – a new health problem – characteristics**

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### **Summary**

Orthorexia nervosa is a relatively new health problem. In the world scientific literature there are only a few publications in this subject. This can be the reason why uniform diagnostic criteria for orthorexia have not been developed yet. Therefore, further research into the cause, course and treatment of orthorexia is needed.

Regarding the characteristics of the phenomenon, it is necessary to consider orthorexia as a public health problem.

### **Introduction**

The Institute of Food and Nutrition defines proper human nutrition as total coverage of the body's energy needs and all nutrients needed for life and health [1]. Proper nutrition is fundamental to maintaining health. Poor diet and poor absorption or digestion of food leads to malnutrition, underweight, deficiencies of nutrients and related diseases. However, excessive or inadequate portions of food are the cause of civilization diseases, such as obesity, diabetes or cardiovascular diseases.

Food fulfills various functions, but we often do not provide the amount of nutrients that is necessary for the proper functioning of the body. In some cases, this can result in eating disorders.

Rational nutrition consists in providing the body with all necessary nutrients on a regular basis and in the amounts and proportions appropriate for age, sex and job of a person [2]. A rational diet should be created on the basis of the Healthy Nutrition Principles and the Healthy Nutrition Pyramid recommended by the Institute of Food and Nutrition.

Importantly, food products contain nutrients in various amounts and proportions. There is no one product that could provide all nutrients in the right proportions, which is why all meals should be varied, and products from different dietary groups should be consumed. The daily menu should include at least one product from the following groups: cereal products, vegetables and fruits, milk and dairy products, products high in protein. It is also important to eat meals 4-5 times a day at about 3-hour intervals. This allows the organism to better use nutrients absorbed from the food. It is not advisable to eat less than 3 times a day, because long intervals between meals adversely affect attention, cause weariness, fatigue and weakness. This is due to the decrease in blood glucose [3].

This paper is devoted to the study of a recently described eating disorder *Orthorexia nervosa*. Nowadays, food is modified with the use of color additives and preservatives or genetics. There is a growing reluctance of society to eat new foods, which is affected by fashion, advertising or close environment. For this reason, in the near future orthorexia can become a serious public health problem.

### **Definition of orthorexia nervosa**

The name *orthorexia* comes from the Greek words *ortho*, which means *correct*, and *orexia*, which means *appetite*. It is a pathological obsession with biologically clean and healthy food, which can cause significant dietary limitations and lead to persistent thinking about food, emotional dissatisfaction and social isolation. The disorder was described in 1997 by an American physician, Steven Bratman, who was the first person diagnosed with orthorexia. In his book "Health Food Junkie - Orthorexia Nervosa, the New Eating Disorder" he described his struggle with orthorexia and cases of patients, whose rigorous diets led to a medical condition [4,5].

Although orthorexia has not been included in the current classification of diseases and mental disorders (International Statistical Classification of Diseases and Related Health Problems ICD-10, Diagnostic and Statistical Manual of Mental Disorders DSM-V), it is

usually placed among other eating disorders. In 2003 official information on orthorexia was published by the National Eating Disorders Association (NEDA). However, some researchers are of the opinion that behaviors typical of orthorexia fall within other disease entities, distinguished in the classification of eating disorders, thus orthorexia should not be considered as a separate disease entity [6].

### **Etiology**

The source of disease is behavior that aims at improving physical condition, reducing body weight and avoiding civilization diseases. Motivation behind this behavior can also be the need to change the diet because of digestive problems or allergies. The disease develops slowly and starts with resignation from products that are perceived to be unhealthy or harmful to the body. According to the recommendations, each bite is chewed several times, usually in solitude. Over time, more products are eliminated, until only a few ones, considered the healthiest and harmless, are left in the diet. Orthorexia starts when the diet becomes an escape from life – an everyday activity is subordinated to planning, buying and preparing meals [4,7,8].

Orthorexia is suspected to be prevalent in vegans – people who do not consume any animal products (including honey, eggs, milk and milk products), fruitarians – vegetarians who eat only fruit and nuts, raw vegans – vegetarians who consume only raw vegetables and fruits, as well as in people who are involved in the activities of organizations fighting for animal rights, dealing with transgenic plants or organic food. Orthorexics are more often found among people with increased physical activity and those seeking a slim figure [7,8].

It is considered that the roots of the disease can also be found in religion and spirituality, since a diet can help achieve purity, or in obsessive-compulsive disorders, hypochondria or phobia. The relationship between an obsessive-compulsive disorder and orthorexia is not clear, although obsessions and repetitive activities occur in both disorders. It is difficult to say whether obsessive thinking about the diet causes suffering in patients, and nutrition related activities are performed to reduce anxiety. According to Bratman, orthorexics are proud of their diet and do not consider themselves ill [5,6].

According to previous studies, the following factors predispose to the development of orthorexia: incorrect attitude to food, obsessive-compulsive disorder and higher values of BMI. A lower level of education has also been observed [9]. Greater tendency to orthorexia is shown by people with previously diagnosed eating disorders [10].

## **Epidemiology**

A study by Olejniczak et al., conducted on students, revealed that respondents who were prone to orthorexia were those who paid attention to the qualitative composition of food products and spent more than 3 hours a day planning their diet. This group of students constituted 3% of the whole group [11]. Similar results were obtained by Fidan, who diagnosed the prevalence of orthorexia in a group of medical students at the level of 1.9% [12]. Higher results were obtained by Donini et al., who diagnosed orthorexia among 6.9% of the respondents. Kinzl used the Bartman's test among female dietitians and diagnosed orthorexia in 12.8% of the sample and subliminal orthorexia in 34.9% of the sample [13, 14].

The study by Donini showed that the prevalence of orthorexia was higher among men than women. The study by Fidan et al. also revealed a higher prevalence of this disease in men. However, the study by Olejniczak demonstrated no gender differences, and neither did the study by Bagaci Bosi among resident doctors [12, 13, 14, 15].

However, the study by Olejniczak et al. showed that half of those most exposed to orthorexia suffered from eating disorders (earlier or at the time of the study) [11].

## **Course of disease and complications**

Orthorexics focus on consuming food that is as little processed as possible. They buy food products almost exclusively in health food stores and at organic farms, or they cultivate food crops on their own, as this gives them the confidence of biologically clean food. When doing shopping in popular stores, supermarkets and hypermarkets, they carefully analyze product labels, focusing on information about preservatives and additive colors. Products that may contain heavy metals, pesticides, herbicides and artificial additives as well as processed foods are excluded from the diet [16,17].

Patients with orthorexia spend several hours a day preparing food in a way that ensures health safety. Each meal is prepared in accordance with the calorie tables and information on the nutritional value of the product. They also pay attention to the techniques and equipment used in the preparation of meals. Orthorexics live according to a strict schedule, which tells them when to perform and eat meals. They spend a lot of time planning meals' order, size and quality. The most important aspect for them is the qualitative composition of the dish, while its taste is practically irrelevant [16,17].

Consumption becomes a ritual. Those suffering from orthorexia avoid restaurants, pubs or even parties with friends, and if they have to be in such places, most preferably they

turn up with their own dishes. This leads to social isolation, which is also affected by judging others on the basis of one's own dietary choices. Orthorexics feel best in the group of people sharing their views [16,17].

Any disturbance of a strictly defined schedule, deviation from a planned diet or eating a product of unknown origin can lead to an outbreak of aggression and result in imposing a severe penalty. Patients feel guilty and they feel aversion to themselves when they do not meet the requirements of the diet. In extreme cases, they prefer to starve, rather than consume foods perceived by them as unhealthy and polluted. Over time, the only water they consider safe is specially selected water [16, 17].

Health risk depends on a diet chosen by a particular individual. Certain social problems have been observed, e.g. focusing on food in social conversations, isolation, spending a lot of time looking for and selecting products of the best quality. The result of the disorder is a significant decrease in body weight and, consequently, malnutrition. The body is deprived of nutrients that are necessary for its functioning. Iron, vitamin B12 and protein deficiencies occur. Symptoms from various systems can be observed, such as headaches and dizziness, general weakness, nausea, anemia, osteoporosis, impaired intestinal function or increased susceptibility to infections. Additional symptoms are problems with memory and concentration, mood swings and depression. Menstruation can stop in women. The risk of cardiovascular diseases increases. Orthorexia can lead to the development of other diseases in the field of eating disorders, such as anorexia nervosa or bulimia nervosa, although it is more often that anorexia leads to orthorexia. In extreme cases untreated orthorexia can lead to death [16, 17].

### **Orthorexia and public health**

Having analyzed the causes, symptoms and treatment of orthorexia, and taking into account its specificity, it seems justified to conclude that orthorexia is a public health problem. This thesis can be justified. Firstly, orthorexia is a social phenomenon of a large range and big influence, due to the cult of a beautiful body; and secondly, the effects of the disease affect not only patients, but also their environment, including families.

### **Conclusions**

Low awareness of orthorexia in society indicates little information on the topic in the society. Orthorexia is a disorder that is difficult to recognize. This can hinder empirical

research on it and the development of uniform diagnostic criteria. There is a strong need to educate society in the field of eating disorders, with particular emphasis on orthorexia.

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