

**MODERN PRESENTATION OF THE PROBLEM OF ALIMENTARY OBESITY AND
POSSIBLE WAYS TO COMBAT IT**

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Annotation: There are now almost 2.8 billion people on Earth who are overweight or obese. Of these, over 200 million are men and almost 300 million are women. Every tenth child suffers from obesity; about 30% of the population in economically developed countries has a body weight that exceeds the norm. Obesity reduces life expectancy on average by 3 to 5 years. Every year the number of obese people progresses and increases by 10% every 10 years[1].

Key words: Obesity, non-communicable diseases, metabolic syndrome, excess weight, morphology.

Relevance of the problem. The World Health Assembly adopted the Global Strategy on Diet, Physical Activity and Health in May 2004. It describes necessary actions to support healthy eating and regular physical activity. The strategy calls on all stakeholders to take action at the global, regional and local levels to improve dietary patterns and physical activity[2]. In 2013, the World Health Assembly adopted the equally important Global Action Plan for NCDs (Noncommunicable Diseases) 2013–2020, covering a range of actions for Member States, international partners and the WHO Secretariat to promote healthy diets and physical activity and achieving them by 2025.

Nutritional obesity is rightfully considered a serious disease, accompanied by numerous complications and even deaths. Already in 1989, the World Health Organization for the first time declared nutritional obesity not a cosmetic problem, but a disease. Indeed, nutritional obesity, which often begins with a bad habit of overeating, characteristics of upbringing, and food preferences in young years, very quietly starting in society, can result in fatal diseases that make up the diagnosis of “metabolic syndrome” [3,4]. While a psychosomatic component was not seen in nutritional obesity, they tried to treat it at the level of somatic effects on excess body weight.

The World Health Organization (WHO) estimates that by 2015, approximately 2.3 billion adults will be overweight and more than 700 million will be obese 2008[5]. A report in the Journal of the American Medical Association (JAMA) shows that, overall, from 2003–2006:

- 11.3% of children and adolescents aged 2–19 years are at or above the 97th percentile on the BMI 2000 age group scale (severe obesity)
- 16.3% are in the 95th percentile or above (obesity)
- 31.9% are in the 85th percentile or above (overweight)
- Prevalence varies across age and ethnic groups
- Analysis of trends in BMI by age did not reveal statistically significant fluctuations during the four periods studied (1999–2000, 2001–2002, 2003–2004 and 2005–2006), for neither boys nor girls

Today, the average BMI has increased and obesity in patients has become more pronounced, so the bell curve has shifted to the right

- WHO data shows that in 2005, approximately 1.6 billion adults (aged 15 years and over) were overweight, and at least 400 million adults were obese
- At least 20 million children under 5 worldwide were overweight in 2005.
- Obesity is becoming an epidemic condition
- In the United States, obesity among adults has increased from 15.3% in 1995 to 23.9% in 2005.

It is known that drugs such as metformin and orlistat initially gained great popularity in the weight loss drug market, but over time, the illusion of a panacea for long-term use of drugs was replaced by a real view of their range of indications[6,7]. Orlistat, which interferes with the absorption of fats in the intestines when the diet is not followed, has shown itself to be excellent for treating weak-willed people who need to lose weight.

In such patients, despite weak motivation and awareness of what is happening, during therapy with orlistat, a conditioned reflex with negative reinforcement in the form of diarrhea is perfectly formed after changing the diet towards fatty foods, and this acts as a “whip” in the process of normalizing body weight. Ultimately, orlistat has established itself as an excellent “banquet drug” that works in an “on demand” mode [8,9]. Metformin is a drug that affects one of the many mechanisms of the formation of excess body weight - insulin resistance. When this mechanism is one of the leading ones (at menopausal age, with concomitant diabetes mellitus), long-term treatment with metformin is effective [10]. Sibutramine has proven itself to be effective in influencing the serotonin and norepinephrine mechanisms of obesity. The main indications for its use were “eating” (especially sweet) affective disorders, for example, mild depression. However, currently there is no sibutramine on the pharmacological market, which is due to the negative side effects of the drug on the cardiovascular system, identified during a study in patients with a high risk of cardiovascular pathology. It is surprising that although the instructions for the use of antidepressants - serotonin reuptake inhibitors, which have pharmacological properties similar to sibutramine (and therefore are also used to combat “jammed” emotional disorders), clearly state caution when prescribing them to cardiac patients, they are still present on market of drugs used for eating disorders. Great difficulties await both the patient and the doctor who are trying to “swim” in the sea of biologically active food additives[11,12].

Of course, eating behavior is determined by a whole complex of regulators, and not by a failure in the metabolism of some individual biologically active substance, even a very important one, for example, serotonin. The role of norepinephrine (increased energy consumption for thermoregulation) has also been known for a long time; this phenomenon was used in the mechanism of action of sibutramine. The old rule: if you want to lose weight, dress cooler, swim in cold water.

A generally accepted strategy for the treatment of nutritional obesity is the use of a comprehensive program of non-drug therapy, often in combination with medical and surgical treatment methods [13].

Clinically significant and bringing real health benefits to these patients is a decrease in body weight by 5-10% of the initial value over 4-6 months, which is accompanied by a significant improvement in the course of concomitant diseases [14]. Regularity of nutrition (the presence of 3 main methods and 2 intermediate ones) is an important component of the program for reducing body weight. It is proposed to distribute calories during the day according to the following

scheme: breakfast - 25%, 2nd breakfast - 10%, lunch - 35%, afternoon snack - 10%, dinner - 20% [15,16].

To reduce body weight, it is recommended to create a negative energy balance, in which fat, as a form of stored energy, begins to be used up to cover the existing deficit. In this regard, various types of diets with a certain ratio of proteins, fats and carbohydrates are used to treat obesity [19, 20].

Although it is now well established that chronic diseases are a growing problem in low- and middle-income countries, there is only limited data on incidence in these regions, and the developing world has generally been ignored in global policy frameworks. healthcare. WHO warns that projected numbers of new cases of diabetes could cause costs of hundreds of millions of dollars over the next 20 years.

The process of globalization may increase inequalities in dietary development between rich and poor: while high-income groups may enjoy the diversity of a more dynamic market, low-income groups may experience a shift to a lower-quality diet. Many developing countries are in a “nutritional transition” phase, evident in the rapid rise in obesity and diet-related chronic diseases around the world. Although developing countries still struggle with malnutrition and micronutrient deficiencies, consumption of foods rich in fats and sugars is increasing in these countries[17,18].

According to the WHO, many low- and middle-income countries are now facing a “double burden” of disease:

- While they continue to fight infectious diseases and malnutrition, they also have to contend with rapidly increasing risk factors for chronic diseases such as obesity and excess weight.
- Problems of undernutrition and obesity can now coexist in the same country, the same community, and even in the same family.
- This double burden is caused by inadequate nutrition during the prenatal period, infancy and early childhood, followed by consumption of a high-energy, high-fat, micronutrient-deficient diet and accompanied by a lack of physical activity.

Materials and methods of research. During the period from 2020 to 2023, 110 people were under our supervision at the emergency hospital in Fergana. Of these, 20 people were in the control group and 90 people were in the experimental group, which consisted of patients with obesity of varying degrees of severity. The average age of the patients was 41 years overall.

In gender ratio, the control group was 1:1, and in the experimental group there were 60 women and 30 men, which in percentage terms was 67% and 33%, respectively. All patients were divided into groups depending on BMI. All patients underwent general clinical and special examination methods. The results obtained were statistically processed. Clinical study data were processed using the statistical analysis program STATISTICA version 5.0. The STATISTICA program includes a large number of statistical analysis methods. In cases where the distribution of variables followed a normal law, comparisons were made using the Student's t test. Otherwise, nonparametric rank tests were used to determine significant differences: Wilcoxon and Mann-Whitney tests.

Differences between groups were considered significant at $p < 0.05$ (probability of difference - 95%) and $p < 0.01$ (probability of difference - 99.9%). When analyzing the relationship of the

data, a linear Pearson correlation was calculated. The data obtained were interpreted as follows: if the correlation coefficient is greater than 0.4, then there is a linear relationship between the parameters. A negative value of the correlation coefficient indicates the presence of feedback between the parameters, a positive value indicates the presence of a direct connection.

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