

УДК 796.412

Burka O.M.

associate professor, NU «Zaporizhzhia Polytechnic»

BODY WEIGHT DISORDERS AS A PROBLEM OF HEALTH-IMPROVING PHYSICAL CULTURE

A little more than 10 years ago, the issue of the rapid increase in the number of people suffering from body weight disorders was on the agenda, both in the scientific world and in the field of practical medicine.

Such impairments are a serious medical, social and economic problem of modern society. Its relevance is primarily determined by its high prevalence, as approximately half of the population of economically developed countries of the world have similar problems. For example, according to forecasts of WHO experts, by 2025 there will be more than 300 million people diagnosed with "obesity" in the world. Prevention and treatment of body weight disorders is the most important medical, social, demographic, state problem. The fact that there is a "rejuvenation" of these types of pathology is also alarming.

Human body weight: the sum of the weight of bones, muscles, internal organs, fluid and fat tissue. Water makes up 60-65% of the total body weight and is a rapidly changing component, albeit in small quantities.

In the human body, it is customary to distinguish between two components - fat-free lean and fatty parts. Fat-free lean mass of the human body is represented by protein, water and minerals. In a healthy person, lean body mass has a constant composition: water - 72-74%, protein - about 20%, potassium 60-70 mmol/kg in men and 50-60 mmol/kg in women. In contrast to the lean part of the body, the amount of fat can vary significantly.

Anthropometric methods: measurement of body weight, height (body

length), waist circumference and hip circumference, thickness of subcutaneous fat folds, circles of various body parts and calculation of a number of indices and ratios. Anthropometric measurements include body weight, height (body length), body and limb circumferences, and subcutaneous fat fold thickness.

Body weight is the main measure of body fat accumulation and a measure of nutritional status. However, the absolute values of body weight depend to a large extent on the height of a person and the size of body parts. Therefore, the characteristic of the ratio of body weight and height is used to diagnose nutritional status.

The definition of normal weight is based on the ratio of muscle mass (the active part that burns calories throughout the day) and the amount of fat deposits, at which the metabolic processes in the body are not disturbed. And, nevertheless, normal weight is a purely individual value and depends on the type of body structure, age, gender, metabolic rate and lifestyle.

Asthenic structure of the body. In people with an asthenic body structure, the bones of the skeleton are fragile, they are usually tall, the wrist circumference is less than 16 cm, the muscles are weakly expressed, the body is elongated in the longitudinal direction. Asthenics are luckier than others: their metabolism is fast, they do not gain much weight, and with age, fat can be deposited in the waist area. Usually, asthenics have problems with weight deficit.

Average build or normosthenic constitution. People with an average build or normosthenic constitution usually have an average or higher than average height, a wrist circumference of 16-18 cm, their body is a fairly harmonious combination of muscles and fat, and the bones of the skeleton are quite strong. The metabolism of such people is of medium intensity, and in order to feel comfortable, they need to follow their diet and move quite a lot.

Hypersthenics. Hypersthenics are usually stocky, short, have broad shoulders, pelvis, thick and strong bones. Wrist circumference - more than 18 cm. Their weight is usually average or above average. Their fat and muscle corset are the most pronounced. To reach their ideal weight, they need to build muscle by burning fat.

Indicators of violation of the ideal mass:

1. Excess body weight (BMI) - can be defined as an excessive accumulation of fat in the body, which is a health hazard. Such accumulation occurs when the energy input to the body with food exceeds energy expenditure.

2. Obesity is a disease in which excess accumulated fat in the body adversely affects health, leading to a decrease in average life expectancy and/or an increase in health problems.

3. Dystrophy is a complex pathological process, the basis of which is a violation of tissue (cellular) metabolism, which leads to structural changes. Therefore, dystrophies are considered as one type of injury.

Trophics is understood as a set of mechanisms that determine the metabolism and structural organization of tissue (cells), which are necessary for the dispatch of a specialized function. Cellular and extracellular mechanisms are distinguished among these mechanisms.

Cellular mechanisms are provided by the structural organization of the cell and its autoregulation. This means that cell trophism is largely a property of the cell itself as a complex self-regulating system. The vital activity of the cell is provided by the "environment" and regulated by a number of body systems. Therefore, extracellular trophic mechanisms are classified as transport (blood, lymph, microcirculatory channel) and integrative (not yro-endocrine, neurohumoral) systems of its regulation.

Therefore, the impairment of body weight is a serious medical, social and economic problem of modern society. Its relevance is primarily determined by its high prevalence and gradual «rejuvenation». Therefore, today the task of developing new, most effective methods and means of health-improving physical culture and physical therapy, which contribute to the prevention of such disorders, prolongation of the period of maintenance of the achieved weight and improvement of the quality of life of patients, is relevant.