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Physiological Danger Of Physical Inactivity For Humans.

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ABSTRACT

Modern society is less involved in physical labor in various technological chains, which is bad for the health of different categories of people. This is due to the fact that in maintaining and strengthening health, an important role is played by regular muscular loads at the expense of regular physical training or at the expense of physical labor. Of particular physiological significance of regular physical activity of a person has to ensure the functioning of all its internal organs. In addition, sufficient physical activity is a prerequisite for the harmonious development of the individual and her creative abilities. In order to avoid hypodynamia and eliminate its consequences, it is necessary to lead a healthy lifestyle. Proper day regimen in combination with reasonable regular physical activity and balanced diet are a prerequisite for the prevention of physical inactivity. Good rest is important, you need to pay enough time to sleep, preferably at least eight hours a day. Of great importance in the fight against physical inactivity has daily walks in the fresh air. It is also very important to regularly visit the pool. To increase physical stress on the body, it is also possible by daily climbing stairs to the desired floor on foot, without using an elevator, as well as by reducing the use of public transport services.

Keywords: physiology, hypodynamia, health, dysfunction, physical development.

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INTRODUCTION

The stability of the functional state of a person is an important indicator of his health [1, 2]. It largely depends on the level of its motor activity [3, 4]. It is known that movement is a natural need of the human body. It forms the structure and functions of the human body [5]. During the period of human growth and development, movement stimulates the body's metabolism, improves the activity of the heart and respiration, as well as some functions of other organs that play an important role in adapting a person to constantly changing environmental conditions. Some researchers argue that now physical activity has decreased by 100 times, compared with previous centuries. The lack of movement is the cause of many diseases [6].

Good health, reasonably preserved and strengthened by the person himself, provides him with a long and active life. In the preservation and strengthening of health, an important role is played by the right combination of work and rest, balanced diet, hardening of the body and physical culture, which are powerful health factors. Of particular importance is the physical activity of a person, regular muscular activity underlying the vital activity of the whole organism [7].

Unfortunately, many people do not comply with the simplest, science-based norms of a healthy lifestyle. In recent years, due to the high workload at work and at home and for other reasons, the majority has a deficit in the daily regimen, insufficient physical activity causing the appearance of hypokinesia, which can cause a number of serious changes in the body of people [8]. For this reason, the problem of hypodynamia is currently very relevant, which made it necessary to put a goal into operation: to consider the functional consequences of hypodynamia for a person.

BACKGROUND OF THE PROBLEM OF HYPOKINESIA

The term "hypodynamia" in translation from Latin means "mobility". By this means the limitation of motor activity, which occurs as a result of a sedentary lifestyle. Hypodynamia is a very common condition that can be observed not just with a large one, but with a huge number of people. In medicine, there is a fairly close concept of hypokinesia, which implies a decrease or complete absence of motor activity, usually caused by quite objective reasons. Doctors refer to such causes some serious diseases, specific working conditions in a confined space, prolonged bed rest or a plaster cast, and a number of others. The main difference between hypokinesia and hypodynamia is that in the second case, the movements are carried out, but in a very small volume and with insufficient load on the muscular system. In both cases, the muscular load is minimal, which leads to a decrease in muscle strength, a decrease in the volume and weight of muscle tissue [9].

The human genetic program has remained unchanged throughout the last millennia, but his lifestyle has undergone very significant changes. Movement for survival has ceased to be a necessity. Scientific and technical progress helps the modern man to ensure a comfortable living environment with a minimum of physical activity. Perfect cars, trains and airplanes move us over great distances, tons of cargo are lifted by simply pressing the right button. The working day of a city dweller, like his rest, often takes place in a chair at the computer. Thus, all our movements are limited to the road from the entrance to the car. Even television channels, we switch using the remote control. Of course, a certain number of movements inevitably makes each person. However, these movements are very monotonous, directed to one group of muscles and do not at all contribute to the physical development of the organism [10].

HYPODYNAMIA IN MODERN SOCIETY

Hypodynamia is often called the scourge of modern civilization. The validity of this statement becomes obvious if we recall how the human body was formed in the process of evolution of the animal world. Physical activity was necessary for our ancestors simply in order to survive. Ancient people were forced to be in constant motion in order to get food and save life for themselves and their offspring. Thus, the need for movement was laid in the human genes, as one of the conditions for the normal functioning of the body in harsh environmental conditions [11].

The life of modern man, thanks to the technical process and the benefits of modern civilization, has become much more convenient than, say, some 20-30 years ago. Transport brings us to the right place,

eliminating the need to walk long distances, home appliances help us to cope with household chores. People began to move less. To do something, no need to make special efforts. As a result, the human muscles, most of the time being at rest, begin to lose elasticity, ease of movement disappears and hypodynamia occurs - a painful condition caused by a decrease in physical activity. Hypodynamia is called the disease of modern civilization. The causes of hypodynamia may be different. Low physical activity may be caused by a disease or prolonged bed rest, but, more often, it is caused by a sedentary, sedentary lifestyle. For a stable full-fledged work, the body needs sufficient physical activity and stress on the muscles, and the well-being and health of a person largely depend on this.

The main symptom of physical inactivity is: general weakness, rapid heartbeat, increased fatigue, even with relatively small exertion, unstable emotional state, increased nervousness [12].

PHYSIOLOGICAL EFFECTS OF PHYSICAL INACTIVITY

Even in antiquity, as has already been said, it was noted that physical activity contributes to the formation of a strong and enduring person, and immobility leads to a decrease in efficiency, illness and obesity. All this is due to metabolic disorders. The decrease in energy metabolism associated with changes in the intensity of decomposition and oxidation of organic substances leads to disruption of biosynthesis, as well as changes in calcium metabolism in the body. As a result, profound changes occur in the bones. First of all, they begin to lose calcium. This leads to the fact that the bone is loose, less durable. Calcium enters the blood, settles on the walls of blood vessels, they are impregnated with calcium, lose their elasticity and become brittle. The ability of blood to clot dramatically increases. There is a risk of blood clots in the vessels. The high content of calcium in the blood contributes to the formation of kidney stones [13].

The absence of muscular load reduces the intensity of energy metabolism, which adversely affects skeletal and cardiac muscles. In addition, a small number of nerve impulses coming from the working muscles, reduces the tone of the nervous system, previously acquired skills are lost, new ones are not formed. All this is the most negative impact on health. A sedentary lifestyle leads to the fact that the cartilage gradually becomes less elastic, loses its flexibility. This can lead to a decrease in the amplitude of the respiratory movements and loss of body flexibility. But the joints are particularly affected by stiffness or low mobility [14].

Hypodynamia can have serious consequences. In the absence of the need for physical exercise, muscle tone decreases, endurance decreases, a person's strength is lost, as a result vegetovascular dystonia can develop, and metabolism is disturbed. Over time, hypodynamia leads to abnormalities in the work of the musculoskeletal system: the development of osteoporosis, osteoarthrosis and osteochondrosis. Hypodynamia affects the activity of the cardiovascular system, this leads to the occurrence of arterial hypertension and coronary heart disease. Hypodynamia also affects the respiratory system, it can threaten the development of lung diseases. Hypodynamia can cause disorders of the digestive system and intestines. Changes in the endocrine system lead to obesity and metabolic disorders [15].

When hypodynamia, the work of the brain worsens, mental activity and working capacity decrease, rapid fatigability, general weakness, insomnia appear. With physical inactivity, there is a decrease in the strength of heart contractions, weakening of the venous and arterial vessels, which, in turn, leads to deterioration of blood circulation and varicose veins. The effect of hypodynamia on the musculoskeletal system is expressed in the reduction of muscle mass and the occurrence of fat between muscle fibers. As a result, muscle tone decreases [16].

THE EFFECT OF PHYSICAL INACTIVITY ON THE BODY OF CHILDREN

Children are increasingly becoming "hostages" of this state. Hypodynamia is considered to be a social disease, as fewer and fewer people make any effort to do this or that work [17].

Over the past decade, hypodynamia significantly younger. After all, not so long ago, outdoor games were the main children's entertainment, and the work of many adults was associated with physical activity. And now the TV and personal computer have entered every home, replacing other health-promoting leisure activities. Modern children devote a great amount of time not so much to study and sport as to a computer [18, 19].

One of the causes of myopia is hypodynamia. It has long been observed that adolescents who are poorly developed physically are often short-sighted. Sometimes, while progressing, myopia leads to irreversible changes and significant loss of vision [20]. Sometimes parents themselves are also to blame for this, who cannot wean the child away from computer games and do not teach their children to lead a healthy lifestyle [21]. Some parents believe that the computer hobby protects against the negative impact of the street. But in this way they teach their children to a sedentary lifestyle, which sooner or later will affect health. At the same time, hypodynamia especially affects the spine of a child, which in turn causes the development of various diseases of vital organs [22-26].

At school age, hypodynamia is usually associated with the unconventional routine of the child's bottom, with overloading of his studies. Children are very few in the fresh air, little move. Without work, the muscles weaken and gradually atrophy. Decreased strength and endurance, there is vegetovascular dystonia, depression and other disorders of the nervous system, metabolism is disturbed. Hypodynamia leads to functional changes in the cardiovascular and respiratory systems. Because in this case the muscles that help the movement of blood through the vessels do not work. Lack of blood flow to the brain, poor outflow through the vessels of the neck lead to changes in intracranial pressure. Hence, severe headache, fatigue, fatigue [27,28]. To the above, you can add respiratory and digestive disorders [29]. Over time, due to physical inactivity, bone mass decreases, joints and the spine are affected. Especially dangerous hypodynamia in early childhood and school age. It delays the formation of the body [30]. Significantly reduces immunity, children often get sick, diseases can acquire a chronic course [31,32]. Low mobility of schoolchildren and a long stay in a monotonous pose at the table at school and at home can cause poor posture, stoop, spinal deformity [33]. The so-called muscular hunger in children can lead to a more pronounced dysfunction than in adults, to a decrease not only physical but also mental performance [34].

The accumulation of excess weight in a child is also a consequence of inactivity. Obesity in children is now twice as common as 10 years ago. Sometimes obesity in a child can reach a significant extent. Many parents do not perceive this as a disease. But in 80% of cases, the fullness that has arisen in childhood does not leave a person for a lifetime [35,36]. Hypodynamia leads to obesity because fat burns in the muscles: in the working muscles, this process is multiplied and in the sedentary, respectively, decreases.

CONCLUSION

Adequate motor activity is a prerequisite for the harmonious development of personality. For the functioning of the human body and the preservation of health requires a certain level of motor activity. In order to avoid hypodynamia and its consequences, it is necessary to lead a healthy lifestyle. The correct mode of the day in combination with reasonable physical exertion and nutrition is a necessary condition for the prevention of physical inactivity. Food should be balanced, in the diet must be a sufficient amount of fruits and vegetables. Good rest is also important, you need to devote enough time to sleep, because everyone needs to sleep at least eight hours a day in order to feel vigorous and rested. Of great importance in the fight against physical inactivity has daily walks in the fresh air. The importance of such regular exercise, frequent visits to the pool. To increase physical stress on the body, it is also possible by daily climbing to the floor you need on foot, without using an elevator and using transport less.

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