Movement in the Fight against Diseases of the Future

Janina Danuta Rzeszot

Higher School of Social and Natural Sciences named after Wincentego Pola, Choiny 2, 20-816 Lublin, Poland

Abstract: “Motion” (philosophy) (Latin: motus, motio)—in modern philosophy, is a change in the place of space in relation to a fixed point or consideration as such. In the classical metaphysics of Aristotle’s time, motion is an actualization of what is possible, motion is a change: quantitative or local action is complete. Based on the literature of various sources, it seems that exercise is indicated for people with these diseases. Physical activity, according to Dr. Kavitz, focused on the functioning of dopamin signaling. D2 receptor deficiency is enough to explain inactivity in obese people—people with obesity are less socially active. It may contribute to this condition more and more often in the third or even fourth decade of life. About 50% of fifty-year-olds and 60%-70% of seventy-year-olds struggle with degeneration. Joint problems are the most common cause of disability among people under the age of 65. Diabetes is a serious disease, if left untreated and poorly regulated, it can lead to very serious complications and even death. Encouraging physical activity and education in this direction is very necessary.

Key words: Physical activity, obesity, joint degeneration, diabetes.

1. Admission

In Poland, 61% of men and 50% of women are overweight and obese. The awareness of people in our country about obesity is growing. Various anti-poverty programs are being implemented, one of which is the promotion of healthy eating among children and adolescents. When you have thick adipose tissue, the danger of complications is not treated postoperative wounds. In addition, only a few hospitals are suitable for transferring bedridden patients with whom there is no contact or who cannot move. This is the reason why obese people feel uncomfortable there.

According to Dr. Waldemar Sasiuk from the hospital in Słupsk1, obese people have problems with finding a job, employers pay attention to the appearance of employees2. Almost 60% of compatriots admit that they do not take care of their figure in any way in the workplace. This is thanks to the “Chitynin Extra Lighter at Work” campaign commissioned by the organizers. Being in little physical activity for a long time can lead to obesity. Studies on the energy balance in obese people show that obesity is the result of providing the body with excessive energy in the form of food or improper excretion of this energy in the form of food or improper expenditure of this energy. Physical activity is an element that leads to an increased expenditure of this energy and the maintenance of negative energy, that is, the amount of energy consumed is greater than the amount supplied. It prevents the build-up of spare substances to increase muscle mass3.

Muscles, especially postures, are responsible for the normal condition of the spine. A properly functioning spine makes movements: forwards, backwards, sideways and rotation around the long axis of the spine. These movements will make your muscles, ligaments, and joints better. Muscles correspond not only to the movements of the spine, but also to protective functions against the adverse effects of mechanical forces that could lead to degeneration and damage. Excessive muscle weakness and stretching lose the ability to protect the spine. Physical activity strengthens the muscles of the spine, which, combined with the
development of appropriate habits regarding body position during work and rest, allows you to avoid pain problems. Exercise has a beneficial effect on our body. Constant physical activity increases physical activity, improves health, and prevents premature aging. Physical activity can have a beneficial effect on erection and pituitary gland function, and thus can act as a factor intensifying physical development, preventing premature aging at a later age. Active and systematic exercise has better and longer physical performance. The functional efficiency of tissues, organs and regulatory mechanisms is increased. The adaptive efficiency of the body is also increased. The saying “active people live longer” is very relevant. Physical activity can only be combined with adherence to other principles of a healthy lifestyle: rational nutrition, maintaining a healthy body weight, mental hygiene. Movement alone is not enough.  

2. Obesity

Obesity is not included in the DSM-IV classification, this disorder is of interest to specialists in many fields. Obesity (Latin: obesitas)—is pathological accumulation of adipose tissue in the body, exceeding its physiological needs and adaptability, which can lead to adverse health effects. Obesity is considered a condition in which body fat makes up more than 20 percent of total body weight in men and 25 percent in women. Obesity is accompanied by being overweight or overweight. Obesity depends on the number and size of fat cells and weight loss with weight reduction on the decrease in the size of these cells because there is no fading process. This disease is chronic, accompanied by numerous complications of the circulatory system and other organs. This is an important factor in increasing the number of premature deaths. This state of affairs can be explained by health awareness and lifestyle, because people with higher education take care of their health and are physically active in their free time, but less educated people prefer to passively relax in front of the TV. In American society, there is a polarization of attitudes towards nutrition and leisure activities. A part of society chooses an attitude characterized by care for their own health and physical fitness. Such people run in jogging parks, regularly attend fitness clubs, drink still mineral water, and are customers of healthy food. However, the majority of the American population eat unhealthily and minimize physical exertion from time to time with currently fashionable diets, which do not have much effect in the case of a permanent change in diet. Another reason for the increase in the population of overweight and obese people, also in Poland, is too little awareness of normal body weight. This is especially true for men.

2.1 Diseases That Threaten Us in the Future Related to Obesity

Obesity increases the risk of certain cardiovascular diseases, kidneys, gallstones, type 2 diabetes, sleep apnea, certain types of cancer, and osteoarthritis. Diseases and ailments caused by obesity can be divided into four groups.

• Medical conditions resulting from excess body weight.
• Diseases that are caused by fatness of the whole body and internal organs.
• Disorders of the nature of changes in metabolism.
• Psychological consequences of obesity.

A thick layer of adipose tissue under the skin hinders one of the important activities of skin thermoregulation, which is to maintain a normal body temperature. Obese people, due to the presence of thick, well-insulating fat under the skin, do not tolerate heat as well as physical work. A large accumulation of adipose tissue around the digestive organs, i.e. around the intestines, pancreas, liver, stomach, hinders the mobility of the gastrointestinal tract, and therefore

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4 http://www.fourumginekologiczne.pl/forum/vt.49,243,56455,0,b-wazne.

5 http://www.sfd.pl/0_oty%C5%9Bci-t70346.htm/.
motor activities are extremely important for efficient digestion. The consequence of intestinal motility obstruction will be, first of all, susceptibility to persistent constipation. High obesity reduces the efficiency of the respiratory system. Chest fat impedes respiratory movements, because the respiratory muscles move, in addition to the chest, also a thick layer of adipose tissue. The second cause of breathing difficulties is increased pressure in the abdomen. Very obese people are constantly in this situation, as if they have been overrun to the point of impossibility, with the only difference being that instead of food, they have a belly filled with fat, abundantly accumulated there. It compresses the lungs through the diaphragm and makes it difficult to breathe. That is why obese people have what is known as shortness of breath and with great effort they have shortness of breath. It has even worse to lie on your back, because in this position, your stomach squeezes your diaphragm even more to make it harder to breathe. Shortness of breath, feeling short of air. A large amount of fatty tissue around the heart and coronary arteries is the cause of an increase in the work of this vital life organ, untreated obesity can lead to permanent damage to the heart. Long-term obesity can cause carbohydrate and crouic disorders. The task of the pancreas is to store fat as a reserve of energy used during periods of starvation. The availability of energy accumulation functions in the form of nutrient substitutes for adipose tissue is a prerequisite for insulin, much more so than for other tissues. In a state of full health, when the amount of adipose tissue is not large (up to 15% of weight), the production of insulin by the pancreas is sufficient to cover the demand for this hormone in adipose tissue and other tissues. The situation becomes critical when the amount of body fat increases above the normal state, reaching values of 20%, 30% or 100% above the norm. In absolute quantities, it is 15, 20, 40 or more kilograms. Such a huge mass of body fat requires significant amounts of insulin, which it consumes. This makes it necessary to increase the production of the hormone by the pancreas, which is equivalent to a high load on this organ. Significantly increased, constant secretion of large amounts of insulin causes a state of fatigue of the pancreas after some time. It reduces the efficiency of organ secretion and the amount of hormone secreted, which is synonymous with the occurrence of diabetes. Obesity clearly promotes the occurrence of lipid disorders, which in turn accelerate atherosclerotic vascular changes. A primary element in the course of these disorders is an increase in the concentration of lipids (fats) in the blood, such as cholesterol and triglycerides. These changes are caused by a number of factors associated with the breakthrough of obesity, such as: reduced physical activity, increased consumption of sugars, disorders similar to diabetes. The occurring hyperlipidemia accelerates the deposition of cholesterol and other lipids in the vessel walls, which is the essence of atherosclerotic disorders. In addition to atherosclerosis, the adverse effects of obesity on the circulatory system, both peripheral vessels and the heart, are multifaceted and multifactorial. A large amount of adipose tissue impairs the efficiency of vascular regulation, i.e. the efficiency of vascular contraction and expansion depending on the need to distribute more or less blood in the circulatory area, or the need to maintain proper blood distribution regardless of body position. A decrease in the performance and regulation of vascular play leads to a part of the orders that can be described as vascular neuroses. They manifest themselves differently and most often observe an imbalance, and sometimes feel dizzy as a result of a rapid change in body position. These types of ailments are also the result of fatness, especially of the chest, leading to a sedentary lifestyle. A large amount of adipose tissue causes adverse conditions of blood circulation in the main venous arteries of the lower pelvis and femur.


7 http://pl.wikipedia.org/%/Wiki/oty%C5%82%8%C5%9B%C46% 19.11.2010.
and lower limb due to pressure on the venous vessels, an increase in pressure in the abdominal cavity, which hinders venous return. The result is a stagnation of blood in the lower limbs, which reveals a tendency to swelling of the legs, mainly in the ankle joints, especially in the standing position, and sometimes pain in this area (the latter symptom is also due to the “fatigue” of the ankle joints of the muscles and tendons).

Very often, obesity causes changes in the human psyche. Their background is quite diverse, most develop in obese people who cannot effectively cope with obesity not in the sense of permanent weight loss, but the inability to even temporarily get rid of part of getting rid of excess weight. This does not apply to the so-called eternal weight loss, i.e. those who can easily lose weight under certain conditions, but also quickly again and again, which in turn causes them to become obese. However, the ease of getting rid of excess weight gives them a sense of self-confidence and the feeling that obesity is completely dependent on themselves, which also needs to be approved by them. However, the situation is worse with the group of obese people who cannot lose weight on their own without a guarantee of maintaining less weight. Their sense of help creates a sense of inferiority and sometimes a belief in illness as the root cause of obesity. This leads to the formation of complexes and mental tensions, reduction of life energy, “clout” in important life situations. Such people are sometimes prone to conflicts with the environment, marital conflicts, and so on. In this substrate, various neuroses develop, in turn the causes and effects of this chain are possible in most cases only through weight loss [5].

- Stroke: the risk of stroke in obese people is twice as high.
- Cholelithiasis: diseases in obese people occur six times more often than in slim people.
- Degenerative changes in the joints: conditions that

worsen excessive load are damaged more quickly, leading to pain syndromes.

- Tumors: tumors of the uterus, breast, gallbladder, colon, prostate are more common than in slim people.
- Sleep-disordered breathing, including but not limited to hypoventilation syndrome or sleep apnea.
- Varicose veins of the lower limbs: in an obese person, the conditions for the outflow of blood from the veins are worse, and thus the formation of varicose veins.

Syndrome X (now called polynectarine syndrome) is a syndrome of systemic disorders consisting of visceral obesity, impaired glucose tolerance, increased insulin levels, insulin resistance, hypertension disorders, ischemic heart disease. Currently, a number of additional elements described by Reaven have been added to Team X: increased cortisol levels, increased fibrinogen levels, and increased urinary albumin excretion.

- Hormonal disorders and pregnancy complications are more common in obese women.
- Musculoskeletal disorders.
- Degeneration of the spine.
- Stretch marks.
- Menstrual disorders and hirsutism [6].

The highest mortality rate for both smokers and non-smokers is determined in the BMI (Body Mass Index) range of 18.5-24.0. Smoking appears to be a stronger risk factor than obesity. The risk of death of a normal weight smoker is higher than that of non-smokers with a BMI of 30-35.0. Smoking cessation is advisable even when body weight increases. As a result of chronic skeletal overload, flat feet often occur in obese people, the knees are varus valgus. In addition, there are frequent skin lesions, mycosis, skin boils, eczema, eczema. Symptoms of altered function of some internal organs of the secretory include: impaired sex drive, oligospermia, reduced fertility, features of Cushing’s syndrome [7].

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3. Movement in the Treatment of Obesity and Comorbidities

Shedding the extra pounds helps treat obesity-related diseases, which sometimes even disappear completely. It should be carried out comprehensively, sensibly and, most importantly, under the supervision of a doctor and/or dietician [8]. The form of therapy is determined by weight (BMI), the presence of comorbidities and general health.

Movement is essential, guidelines suggest that a healthy lifestyle depends primarily on our physical activity. The fact is that nothing degrades our body as much as a lack of exercise. If we lead a sedentary lifestyle, our heart has less capacity, the muscles disappear. As a result, we get tired faster, gain weight, and raise blood cholesterol levels. It can also cause a deterioration in sugar tolerance. It reduces the body’s immunity, making us more susceptible to diseases, including civilization diseases such as diabetes, hyperlipidemia, atherosclerosis, and hypertension. Therefore, it is advisable to give your body about an hour of exercise every day. Cycling, skating, running, and swimming are best suited for this. A good way to get fit is to walk—but at a brisk pace. The principle of “Walk and Talk” applies here [9].

4. The Role of Massages and Balneological Treatments

These treatments improve general well-being, improve physical performance and reduce fatigue. This type of treatment also has other benefits, especially for the elderly and those who are long obese, causing excess skin. In the case of weight loss, the fat deposits are compacted, but the skin coating is the same as before the weight loss. Wrinkles are formed on the skin, especially on the face, and the skin hangs down on the abdomen, hips, and other parts of the body. And in this case, skilfully conducted massages, appropriate balneological and cosmetic treatments will make the skin more elastic, shrink faster and return to its pre-consumer state. The importance of massages, balneological and cosmetic treatments in the treatment of obesity can be defined in this way: they are not strictly recommended because they do not reduce weight. They can be recommended, but not as a supplement instead of a weight loss treatment [10].

5. Sport and Health

A study of 31,000 conductors and public transport drivers in London aged 35-64 and other occupational groups, men and women, who engaged in high-intensity physical activity, had a lower mortality rate from coronary and general heart disease than those who did not engage in such activity [9].

6. Self-esteem and Its Importance in Physical Activity

The level of self-esteem is not constant and can vary depending on age, life experience gained, successes or failures, health status, etc. Types of self-esteem are based on self-image, taking the degree of stability of self-esteem as a criterion. The importance of self-esteem for human behavior is evident in the fact that it is a component of motivation, based on belief in oneself and one’s abilities. Only in reality, based on adequate self-esteem, is the individual’s self-acceptance able to admit their mistakes or actions [11], and at the same time aimed at intensifying a positive attitude towards their partner [12]. In addition, the level of self-esteem and self-control is one of the ways to shape the mental resilience of an athlete [9, 13].

7. Impact of Exercise

The type of previously formed and preserved habits and the accompanying effects of muscle work are not indifferent to the course of learning habits at a given moment. The transfer of a previously carried out positive effect to the currently exploited classes is called transfers, while the occurrence of a negative effect is referred to as a negative transfer (interference) [14]. The phenomenon of transfer most often translates into the similarity of the components of the structure or
the way different habits are taught. These may be common elements of a physical activity or methods or ways of mastering these activities. For example, a person who has mastered the technique of throwing a jerk ball learns the skill of throwing a javelin more easily and quickly. These two types of projections contain common elements of movement. Properly performed exercises, in addition to their natural impact, can also affect the development of relatively permanent psychomotor skills, which include the coordination of motor skills [9].

8. Exercise Addiction

Physical exercise is a problem for people who play sports at an amateur level. Characteristic symptoms include a constant focus on exercise and feelings of guilt or anxiety that occur when exercise is not performed [15]. Strong thirst leads to uncontrollable, overintense exercise [16]. There are signs of tolerance, characteristic of addiction, that is, you have to exercise more and more to get a psychological effect of similar strength and withdrawal effects: A few days break a strong distance, anxiety or depression. It is emphasized that performing physical exercise is addictive in such cases. It is important to emphasize that there is a risk of eating disorders among exercise-dependent individuals, which is likely greater among men than among exercise-dependent women [17]. An effective technique for treating this problem is unknown [18].

9. Material Object

The research material of my thesis is obese people actively losing weight in a clinic of proper nutrition and weight loss in dismissal as well as the students who did not lose weight (30 people). Research - knowledge of movement as a good drug for their case.

10. Variables and Indicators

Defining and recording variables in the study of an event or process means deciding to what extent we will investigate an event or process. The variables adopted in the research give direction and determine their goal. A researcher has to define a fragment of reality, and the properties that characterize this fragment of reality are variables. Variables in pedagogical studies are a form of detail of the research problem it wants to solve and hypotheses.

In accordance with the aim of the study and research problems, the following system of variables was adopted (independent variables, dependent variables).

Independent variables are determinants of certain phenomena, states of affairs, behaviors. They produce effects in the sphere of other phenomena, in other words, they cause the emergence and course of phenomena that are dependent variables [18].
A dependent variable is a phenomenon that is affected by other phenomena.

In accordance with the aim and research problems, the following system of variables was adopted. The functions of the independent variable will meet: the knowledge of obese people about proper nutrition and the benefits of physical activity. The variable depends on the following factors, which correspond to the functions of the independent variables: age, sex and body mass index, while the dependent variables are, how they eat and what kind of lifestyle they lead.

11. Measurement Methods, Techniques and Tools

Methodological research can come across very different classifications of research methods and techniques. These differences are so serious that what is a method for some is a technique for others, and vice versa [19].

METHOD < Gr.Methodos = > Study (1) A consciously and consistently applied procedure for achieving a specific goal; A set of targeted actions and measures; (2) The method of scientific investigation of things and phenomena; Principles used to investigate reality [26]. On a descriptive basis, research is presented, which is an important element in the topic.

12. Research Results and Discussion

Among the subjects were 21 people, including one obese man who was at the meeting, which is associated with unaware obese men. You have not filled out and completed the questionnaire that is associated with laziness, which in my opinion accompanies this disease. Among the surveyed students, there were 30 people, 24 women and 6 men, who quickly filled out the questionnaire and were willing to answer all the questions. These people were in the 15 to 70 age group (1%), most people were in the age range of 30 to 45 years, it is 93% of the respondents, the second group is people between 26 and 28 years old (4%), the rest are adolescents aged 15-16 years (1%), one adult in their 70s (1%) and one did not write age. These are women in a much larger part, it is about the age range between 30 and 45 years of age, after having a child and entering menopause, it is the most difficult to mobilize to lose weight, one person did not provide an age.

Cigarettes, like some foods, are an emotional suppressor, they are the equivalent of sedatives. Hence, quitting smoking means that food often takes over the role of this addiction. They were addicted to smoking. Smoking is very harmful to health, especially for obese people, this addiction is accompanied by many diseases, including heart attack. Respondents are now 100% non-smokers, one person has not smoked for 30 years, another for 12 and 5 years. In the case of type 2 diabetes, we mainly work alone. Improper nutrition, being overweight, lack of exercise and smoking are the main allies. While the pancreas produces insulin, it does not work as it should because the body becomes resistant to it. It is as if, in our “key”, a few teeth have been converted into cells. Type 2 diabetes can be treated with diet, blood sugar-lowering medications, and insulin
injections depending on the severity of the treatment. It is the most common form of the disease (90 percent of all cases) that usually affects a mature person. Whether or not we get type 2 diabetes depends largely on ourselves. The red light should be turned on by people who are overweight. Hereditary diseases, regardless of whether the parents had suffered a heart attack, stroke or another illness diagnosed by a doctor related to obesity, 5% of respondents answered in the affirmative, 95% did not. These diseases include myocardial infarction and stroke. People with a history of myocardial infarction and atherosclerotic infarction are at increased risk of atherosclerotic arthritis. Overweight people generally have higher blood pressure and high cholesterol levels. Even losing a few pounds causes a significant drop in blood cholesterol levels. A stroke is a neurological injury caused by the cessation of blood supply to the brain. The part of the brain that is cut off in this way is not supplied with oxygen, causing damage to brain function, it can cause mental, physical, emotional, or combined impairment. Strokes occur primarily in people suffering from atherosclerosis. All factors influencing the development of atherosclerosis, such as stress, smoking, alcohol abuse, increased cholesterol levels, genetic factors, overweight, high blood pressure or diabetes, increase the risk of strokes; 96% of the respondents do sports (physical activity), i.e. 15 min of walking, jogging, running, cycling, swimming or gymnastics 0-1 once a week; 4% take physical activity 1-4 times a week. This means that the traffic is not common among them, and there is such a popular saying that movement is healthy. Studies have shown that a decrease in physical activity levels is one of the leading causes of obesity among people. There are many studies confirming that the best way to prevent obesity is through an active lifestyle and exercise. Properly selected physical exercises along with diet are the basis of therapy. In the past, 20 min a day of vigorous physical exercise was recommended. Over the past twenty years, scientists have come to realize that this level of activity caused by intensity and tension is unacceptable to most people. The new recommendations promote a moderate degree of exercise intensity. A number of benefits include, for example: a brisk 30-min walk every day, or a walk most days of the week. Care must be taken to ensure that obese people perform the correct type of physical fitness and thus do not expose themselves to joint damage with very strenuous exercises. For example, swimming, cycling are not disciplines that require heavy stress on the joints and can be an excellent choice for people who are overweight. Obesity, as we have said many times, is the result of an inactive, sedentary lifestyle. It is synonymous with a limited amount of energy and therefore a low calorie requirement. So we should eat little. In people with obesity, appetite does not want to decrease depending on energy expenditure. That is why there has to be an iron rule: if we cannot eat less, let us move more. When asked what kind of lifestyle they lead on a daily basis, the respondents answered that they were mostly sedentary (94%), and standing and very active (3%). They should reduce the time spent sitting. You can make simple changes to your daily activities, such as: give up the elevator and take the stairs, instead of taking the bus or car, you can walk the distance of two or three bus stops. It will not reduce your physical performance as quickly and effectively as exercise, but it will also allow for health effects. Movement is a very important part of a healthy lifestyle, a diet without physical activity will not give us the desired result that we would like to achieve. Movement is very important, giving up certain luxuries and solutions of modern techniques, we can also do something for ourselves. The next question was taking the stairs instead of the elevator, parking the car in the rest of the parking lot, walking during the lunch break, gardening. Among the questionnaire, 14 people answered yes, 14 said no, and 2 people who did not have time. Only a combination of sport, proper diet and care is able to effectively and permanently impress the appearance of the body. Some treatments are very fashionable. Such as, for example, massage can relax
and unwind, using the pool and gym can also be a pleasant form of leisure time, jogging is a good form of outdoor training surrounded by a beautiful landscape, which is an additional plus. This is how 100% of respondents spend their free time! LCD diets are very healthy for obese people, very low calorie diets have a low energy content in VLCD, which results in weight loss in a relatively short period of time. 100% of respondents spend their free time! Cushing’s syndrome is a set of clinical signs caused by an excess of glucocorticoids, which are a porous steroid hormone and rich adrenal cortex. Polycystic ovary syndrome is an endocrine disorder that is a very common cause of infertility.

Hyperthyroidism and hyperpituitarism limit hypothalamic damage, 88% replied “no” and 12% “yes”. In obesity—excessive insulin secretion, impaired insulin secretion growth hormone, excessive cortisol secretion and insufficient testosterone production in men, and in women, psychological factors such as mood disorders, overweight people who develop a tendency to gain weight during each subsequent relapse of depression may be the cause: 40% answered yes and 60% said no.

13. Conclusions

The aim of the study was to present the knowledge of obese people about movement and physical activity. Movement speeds up circulation and oxygenates the body, the most important factor for these people is movement, they should be more active, but it is different for them. The activity of these people is important because two assumptions can keep them healthy and help avoid many diseases associated with obesity. In this case, no one has diabetes, 95% of their parents have disease, 5% of their parents have not gotten sick. When asked with what regularity you do at least 15 min of walking, jogging, running, cycling, swimming or gymnastics, etc., here 70% answered once a week and 30% 1-4 times a week. When asked about their lifestyle, they answered: sitting at 93% and being very active means 3%. In a pilot survey colloquially for the purposes of the study, they wrote that they knew that physical activity was necessary for them. The worrying thing is that obese people do little towards losing weight and know little because, although they have been going to the saucers for a long time, they are still obese. Health is a person’s physical, mental, and social well-being, not just the absence of disease or disability (as defined by the World Health Organization). If a person is healthy, it means a constant, high level of clean energy, emotional balance, mental clarity, resistance to disease, the ability to defend against cancer, cardiovascular disease, which leads to a slowing of the aging process and a long life.

Sport and a proper, balanced diet are the best way to maintain vitality, endurance and joie de vivre for a long time. We sympathize with the feeling of the way we practice. As we age, we forget to take care of our body, which requires not only care but also physical effort to maintain flexibility and health. It is necessary to introduce movement into your daily schedule to notice a clear difference in sensations after a few months. Exercises can be selected according to your needs and preferences.

References

in the Theory of the Life Cycle and Reserch Methodology.”


