

THE ROLE OF PHYSICAL EXERCISES FOR THE HEALTH AND ACADEMIC PERFORMANCE OF STUDENTS

Lycheva Ekaterina Valeryevna

Student, Belgorod State National Research University, Russia, Belgorod

Musaelian Elena Nikolaevna

научный руководитель, Scientific Advisor, Associate professor, PhD in Pedagogy, Belgorod State National Research University, Russia, Belgorod

Abstract. The author of this article examines how physical activity and the state of health of students are interrelated in terms of improving academic performance. Also selected and scientifically substantiated are some types of physical activity that contribute to improving the health and academic performance of students in the course of their educational activities.

Keywords: students, physical activity, intellectual performance, physical exercises, active recreation, mental activity.

In modern post-industrial society, intellectual work has come out on top, not physical work. This is confirmed by the increase in the total number of specialized educational institutions, the introduction of new faculties and specialties, as well as the actively developing sphere of services. Scientific and technological progress has led to automation of production processes, computerization and robotics. Modern people lead a rather passive, sedentary lifestyle, since their main activity (study, work, rest) is built around a computer. The result of this lifestyle is negative changes in the health of young people: the appearance of excess weight, impaired posture, visual impairment, mental abnormalities, etc. Therefore, today the physical training of students – as future highly qualified specialists, on the one hand, as physically and mentally healthy individuals – on the other hand, is extremely important.

An analysis of the literature on this topic shows that physical culture plays an important role at any stage of personality formation. Suitable physical activity, which organically combined with the mental activity of an individual, contributes to improving the efficiency of educational and work activities, increasing the level of efficiency. Conversely, in the case of prolonged restriction of physical activity, there is a deterioration of attention, memory, thought processes – that is, overall performance. As for modern students, this contingent is characterized by a high and constant mental load, accompanied by minimal motor activity. In such conditions, there is a need to increase the stress resistance of the body, to activate intellectual performance.

The inclusion of physical activity in the process of students' learning activities will create favorable conditions for smoothing the negative impact of the external environment on the physical and psychological state of students. A properly selected mode of motor activity has a positive effect on mental processes, contributes to the formation of resistance to intensive intellectual work. Systematic performance of physical exercises of optimal duration and intensity will lead to an increase in the mental abilities of the student and improve the state of health. [3, p. 67]

The essence of the impact of physical exercises on the human body is that even relatively simple

movements are performed with the participation of a large number of muscles. Those have a stimulating effect on the central nervous system, maintaining the activity of nerve centers. With prolonged intellectual activity, tension in the skeletal muscles increases, which entails severe moral fatigue and muscle tension. As a result, braking processes begin. The individual has a decrease in the level of concentration, concentration of attention decreases, reaction slows down - in a word, performance deteriorates. That is why it is very important to form the right attitude to regular physical activity among students.

Awareness of the role of physical exercises in the student's learning activities helps to create an optimal daily routine and to reduce stress levels. As a result of regular physical activity, positive changes occur in the field of mental performance. Even during student classes, as it is clearly demonstrated in the study of K. V. Volkova, systematic gymnastics, athletics, sports games (especially outdoors) help students maintain a high level of intellectual performance and positively affect their academic performance [4, p. 52]. Physical activity is an effective means of active rest from mental stress.

The famous physiologist I.M. Sechenov experimentally proved that changing the work of some muscle groups to others helps to restore strength better than inactivity and passive rest. Later, researchers discovered that this could be applied not only to physical, but also to intellectual work [4, p. 36].

Among the most effective means of restoring the body after fatigue are the following:

- moderate physical activity;
- changing the type of activity;
- proper nutrition;
- prolonged exposure to the fresh air;
- correct sleep mode.

During the academic year, with an increase in mental and psychological stress, it is necessarily to take measures aimed at creating optimal conditions and modes of study, life and recreation of students, necessarily with the use of physical culture. The latter include motor activity of any kind - from walking, jogging, performing elementary exercises to regular classes in the gym. [5, p. 228-233] For example, the simplest morning gymnastics in practice is a fairly effective form of early inclusion of a student in the study and work day. It brings the body into working condition, increases the flow of blood and lymph in the body, which activates the metabolism and accelerates the excretion of decay products accumulated in the body overnight.

Numerous studies indicate that after the second pair of academic hours, students' intellectual performance sharply declines. A physical education break can help here. The maximum effect in this case can be achieved with the help of exercises that activate the work of previously inactive muscles, performing exercises to relax already tired muscles.

N. T. Perepelitsyn offers a physical training pause consisting of the following exercises [5, p. 228-233]:

- pull-ups - 5-6 times;
- tilts back and turns of the trunk - 3-4 times;
- forward bends - 6-10 times;
- tilts to the sides - 6-8 times;
- sit-ups - 6-8 times;
- swing - 4-6 times.

2-3 hours after the end of classes, the student's performance is restored to the level that was at the beginning of the study day. In the process of self-training, it decreases again. Taking into account the dynamics of students' performance during the school day, a 10-minute physical education break is recommended after 4 hours of classes and a 5-minute break after every 2 hours of self-preparation. It's good if a physical education minute is spent in the fresh air.

The results of scientific research show that 10 minutes of physical activity increases the level of

performance by 5-9%, and 5 minutes – by 2.5-6%. If it is impossible to hold a 5-10 minutes physical training pause, you can make at least a micro-pause lasting 1-3 minutes. In micropauses dynamic muscle stresses are used, in particular, isometric (without movements) character: alternating tension/relaxation of muscles, rotation of the head, eyes, breathing exercises, walking. They are applied repeatedly, as needed. [1]

Students who regularly train in the gym or engage in a certain sport, constantly relieve nervous tension through motor activity, increase the level of performance, maintain mental health. Thus, regular physical education and sports are a universal tool that can help students resist the stressful rhythm of life and psychological overloads that arise in the course of educational activities.

List of references:

1. Bulich E. V. Physiological and hygienic characteristics of the influence of physical education classes on mental performance and psycho-emotional stability of students. Scientific notes – SSU, 2011, – 320 p.
2. Perepelitsyn N.T. Physiology of fatigue during mental and physical work of a person. – Mn., 1968. – 164 p.
3. Vilensky V. I. Physical culture of the student. – Moscow: Gardariki, 2005, – 110 p.
4. Volkov K. V. Influence of physical exercises and sports on performance in mental labor. – L., 1960. – 102 p.
5. Zuikova E. G., Bondarchuk I. L. The influence of physical culture on the performance and adaptation of students to physical exertion // Health – the basis of human potential: problems and ways to solve them. 2012. No. 1. – pp. 228-233.