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THE INFLUENCE OF EXERCISE ON STUDENTS' MENTAL ACTIVITY AND THEIR RELATIONSHIP

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The problem of effective assimilation of new material is one of the main problems that students studying at a university have to face since studying at a higher school takes place against the background of tension of adaptive opportunities in the new conditions of activity, taking place against the background of increased emotional stress, getting to know a large amount of new special information in the face of vitamin deficiency and inactivity. Emotional, neuropsychic, tension leads to various changes in the activity of the respiratory, cardiovascular systems, and other organs and systems, leading to overwork and health problems.

One of the conditions for the formation and improvement of mechanisms for adaptation to mental stress is motor activity, which can act as an optimizing and maladaptive factor in case of its irrational use. Physical activity causes restructuring of various body functions, affects mental performance, attention, operational thinking, the amount of processed information.

An important characteristic of a student's personality is his intelligence. Intelligence is the ability to think, rational knowledge. Intelligence is characterized by mental abilities, the formation and development of which takes place throughout life, but mainly in school and student years [3, p. 169].

An optimally selected mode of motor activity, physical exercises, have a positive effect on mental processes, the formation of mental resistance to intense intellectual activity. Any motor activity leads to an increase in metabolic processes in the body. Optimally selected loads increase mental and physical performance. It should not be forgotten that a significant increase in the volume and intensity of intellectual and physical activity causes a person to quickly become tired and reduce labor efficiency [4, p. 75]. The appearance of fatigue is a signal warning of the onset of overstrain of the body [4, p. 77].

According to the data of the Scientific Research Institute of Hygiene and Health Protection for Children and Adolescents of the RAMS Scientific Center, in recent years the number of healthy students has decreased by 5 times. Such a sharp deterioration in the health of the

growing generation was caused by the imperfection and low level of the existing system of physical education, based on which there is no principle of unity of mental and physical development.

Effective brain activity requires that it constantly receives impulses from systems of the body, which are almost half composed of muscles. Thanks to the work of muscles, a huge number of nerve impulses enter the brain, enriching it and maintaining it in a healthy state. During the performance of intellectual activity in the body, the electrical activity of muscles increases, reflecting the tension of skeletal muscles. The greater the load on the brain and the more pronounced mental fatigue, the more generalized muscle tension is created.

At the time of intense intellectual activity, the facial expression becomes concentrated, the lips are compressed and this is all the more noticeable, the brighter the emotions and the more difficult the task to be solved. During the assimilation of any given material in the body, the muscles that straighten and bend the knee joint unconsciously contract and tighten. This occurs as a result of the fact that the impulses coming from the tense muscles to the Central nervous system stimulate the brain, help it maintain the necessary tone.

With prolonged and intensive writing, tension gradually moves from the fingers to the muscles of the shoulder girdle and shoulder. Because the nervous system seeks to activate the cerebral cortex and maintain performance [2, p. 150]. The long-term performance of such work is addictive to such irritants, as a result, the process of inhibition, decrease in working capacity is launched, because the cerebral cortex is not able to cope with the ongoing nervous excitation, and it begins to spread throughout the muscular system. It is possible to get rid of it, release muscle from excess tension with the help of physical exercises, active movements [1, p. 94].

The activity and stability of attention, memory, processing of information perception, depends on the level of physical fitness of the body. The course of mental processes strongly depends on the physical qualities of the body – endurance, speed, strength, etc. Thus, a rationally selected physical load before, during and after the end of intellectual activity directly affects the intensity of the brain's working capacity.

The effect on the mental activity of intense physical exertion is manifested in the activation of protective processes, which is an important means of training them and improving mental performance. Dynamic exercises such as skiing, running, moving with a backpack, etc., contribute to the expansion of the mechanisms and methods of protective and adaptive processes in the brain.

We can confidently conclude that methods that enhance health and general physical condition, such as physical education and sports at the general development level, do have a beneficial effect on students' academic performance.

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