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PHYSIOLOGICAL AND HYGIENE PRINCIPLES OF OPTIMIZING EXTRACURRICULAR EDUCATION

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In the course of a series of complex physiological and hygienic studies on the determination of the specifics of the influence of the organization of extracurricular activities on the health and functional state of the organism of pupils and students with the use of modern methods of multidimensional statistical analysis, it was established that the nature of the use of free time has an extremely close relationship with the indicators of the adaptation resources of the students, is an important factor in increasing mental and physical capacity, preserving and strengthening the health of children, adolescents and youth [1, 2, 7, 8].

However, the traditional organization of free time, which has a disorganized nature, adversely affects the processes of formation of psychophysiological functions, personality characteristics and physical qualities of pupils and students, does not provide an optimal level of motor activity and, therefore, does not meet the biological needs of a growing organism [3, 4, 5, 6, 9, 10].

Instead, the introduction of experimental approaches to the daily activities of pupils and students regarding the rational organization of extracurricular time significantly increases the functional capabilities and adaptive resources of the organism. The most appropriate means of organizing extracurricular activities should be considered the use of a complex system for optimizing free time, the defining elements of which are scientific principles of rational organization of extracurricular activities, a conceptual model of effective use of free time as a factor of increasing social and professional efficiency, strengthening health, methods and means of targeted influence on the functional state of the organism.

The results of the conducted research convincingly testify to the fact that the physiological and hygienic principles of the rational organization of optimizing free time and optimizing extracurricular education are: (1) increasing motor activity in free time to optimal hygienically justified values; (2) taking into account the state of health, personality characteristics and chronobiological characteristics of the body; (3) taking into account the peculiarities of the processes of formation and development of psychophysiological functions in natural conditions and under the influence of training.

The following values should be considered the hygienic standards of motor activity of adolescents aged 15–17 years in free time: the number of locomotions – 10,000–17,000 steps for girls, 12,000–20,000 steps for boys, energy expenditure – 6,000–8,000 kJ for girls, 6,550–8,500 kJ for boys , the duration of the dynamic component is 180–210 and 170–200 minutes, respectively.

Taking into account the characteristics of the state of health and adaptation

capabilities of the body of schoolchildren involves determining the conformity of the content and regime of the organization of free time to the age-gender and functional characteristics of children and adolescents, the quantitative equivalent of which is the level of physical fitness of pupils and students.

The main chronobiological prerequisites for the rational organization of free time of girls and boys should include the determination of the biorhythmological type of daytime capacity, its synchronization with the motor mode, as well as ensuring the full implementation of the amplitude-phase program of biorhythms on the basis of strengthening their daytime acrophase by carrying out measures of psychophysiological impact on the body and psychohygienic correction.

The psychohygienic basis for optimizing free time is the study of individual-typological features of temperament, character, motivational orientation and neuropsychological states, taking into account the age-related patterns of their changes during the period of obtaining education, organizing extracurricular activities due to the introduction into everyday life of active methods of psychophysiological influence on processes formation of criterion indicators of personality.

At the same time, one should take into account the fact that psychophysiological functions, according to the basic patterns of their formation in natural conditions during the school period of life, should be divided into functions with a gradual dynamic nature of development (equilibrium of nervous processes, linear range, muscle and joint sensitivity, etc.), functions with jump-like nature of development (switching of attention, impulse of muscle power, etc.) and functions characterized by stabilization of development indicators in the dynamics of time (mobility of nervous processes, coordination of movements, etc.). At the same time, according to the features of the reaction in response to a targeted influence, psychophysiological functions must be divided into those that are strictly determined by the genetic code of personality development and are practically not subject to training (speed of visual-motor reaction, etc.), as well as functions with urgency (reaction to an object moving, muscle-joint sensitivity, etc.) and delayed (mobility of nervous processes, coordination of movements, etc.) training effect.

The conceptual model of the rational organization of extracurricular time involves the implementation of an optimal movement regime, the use of both traditional and non-traditional forms of physical education, the use of means of psychophysiological influence on the organism of pupils and students, conducting independent training.

The conceptual model of the rational organization of extracurricular time involves the implementation of an optimal movement regime, the use of both traditional and non-traditional forms of physical education, the use of means of psychophysiological influence on the organism of pupils and stud, conducting independent training classes in free time.

An important element of the optimization of extracurricular education and upbringing is the introduction into the practical activities of educational institutions and institutions of health care, education and labor protection of methods of predicting the state of health of students based on the provisions of variational statistics and neural networks, taking into account the peculiarities of the organization of free time and

psychophysiological, personal and chronobiological characteristics of the organism which have great prognostic value in determining the success of long-term adaptation processes, its long-term results, prospects of personality development for the future.

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