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FEATURES OF PHYSICAL DEVELOPMENT OF SENIOR PRESCHOOL CHILDREN

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Abstract

Currently, many scientists and specialists are raising the issue of the need for a significant restructuring of the system of physical education for preschool children. The period of adaptation to the beginning of systematic schooling is one of the most difficult for a child. Successful adaptation and subsequent schooling largely depend on health and the readiness of the body's physiological systems to withstand the constant impact of academic demands. It is known that when assessing a child's readiness for school, primary consideration has been given to the development of school- relevant psychophysiological functions (attention, memory, thinking, etc.). Equally important is the child's level of physical readiness for school, as systematic schooling places increased static loads on the body associated with the need to maintain a working posture for extended periods while sitting at a student's desk. Unfortunately, many hygienists have recently noted a decline in the functional capabilities of today's older preschoolers, including their level of physical fitness.

The primary means of enhancing children's functional capabilities lies in optimizing their physical activity in kindergarten and at home. A key feature of today's environment is the development and implementation of innovative movement programs aimed at developing physical skills in preschool-aged children. Kindergarten gyms are equipped with innovative physical education and sports equipment, which, when used during classes, helps develop and improve motor skills and motivate children to engage in physical activity. The widespread prevalence of hypokinesia and its important role in shaping the health of modern preschoolers determine the need to find effective ways to increase physical activity in a kindergarten setting, taking into account their functional capabilities and health status.

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In the process of physical education of preschoolers, the peculiarities of the ecological state of a particular region must be taken into account. In accordance with Federal State Requirements for Preschool Education Programs, considerable attention is paid to creating the necessary conditions for children's physical development and health development in preschool educational institutions. At the same time, it is essential to ensure that physical activity is consistent with the child's level of functional capacity and health. Physical preparation of children for school should be based on data on the developmental characteristics of modern senior preschool-age children, their lifestyle, including the specifics of physical activity in the daily routine, as well as innovative approaches to the hygienic optimization of physical regimes in kindergarten. In accordance with this, the purpose and objectives of the study were determined.

The aim of the study was to evaluate the impact of different options for organizing the physical activity of senior preschool children in kindergarten on the functional capabilities of their body and physical fitness and, on this basis, to develop an algorithm for hygienic optimization of the motor regime for the physical preparation of children for school.

Research objectives:
1) conduct a survey of older preschool children and determine the average age-sex values of their physical development and physical fitness indicators,
2) to evaluate the daily routine of older preschool children and identify the features of the organization of physical activity of children in preparatory groups for school.

The result of the study. Various diseases caused by micronutrient deficiencies and unfavorable natural and climatic conditions, such as vegetative-vascular dystonia, dyskinesia, dental caries, and bronchial asthma, are noted. Based on an analysis of scientific and methodological literature, a survey, a summary of the experiences of preschool teachers, and our own research, a physical education program has been developed that includes regional folk outdoor games, classified

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according to the primary development of certain physical qualities, as well as skills and abilities. Average age- and gender-specific values for physical fitness indicators in older preschoolers aged 5-7 were determined: 10-meter sprint time, 30-meter sprint time, standing long jump distance, and medicine ball throw distance. Differences in these values were identified compared to similar indicators in children of the same age and gender in the early 1990s. It was shown that today's older preschool-age children have lower functional capacity and physical fitness, as evidenced by both the absolute values of the assessed indicators and the magnitudes of their change ranges.

A first-ever study of the functional reserves of the body (FRB) in older preschool-aged children was conducted based on a comprehensive assessment of the cardiovascular and respiratory systems and the results of functional coordination tests during motor modes with different focus on physical development. The prevalence of low (17.6% of children), moderate (52.2% of children), and high (30.2% of children) levels of FRB was established. For the first time, the use of FRB as a criterion for assessing children's physical readiness for school was substantiated.

It was found that high levels of FRO were detected less frequently in children in preparatory groups than in children in older groups, which may be due to the influence of additional educational loads during classes preparing children for school. The percentage of children with high levels of FRO in preparatory groups was 1.4 times lower than in older groups, amounting to 31.7% and 44.1%, respectively ($p < 0.05$). Low levels of FRO were observed equally frequently in children, 20.3% and 22.0% ($p > 0.05$). It was found that children in preschool groups typically experience a reduction in the amount of physical activity in their daily routine, due to the need to attend additional physical activities to prepare them for school. In preschool, 55.9% of children attend such activities, while 44.3% attend such activities outside of preschool. This limits the time available for independent and additional activities to develop movement and optimize children's physical activity in their daily routine.

Age-specific sensitivity of 5- to 7-year-old children to developmental and health-improving physical activity has been established. At age 5, children are more

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sensitive to physical exercises aimed at normalizing muscle tone and developing optimal static-dynamic patterns, while at age 6, they are more sensitive to the development of coordination skills and balance. Sports games and exercises adapted to the child's age-specific developmental characteristics have a positive effect on children throughout the entire preschool years.

The use of identified patterns in the development of motor regimes in kindergarten allows for increasing the effectiveness of children's physical preparation for school. The peculiarities of development of the main physical qualities in children aged 5-7 years were revealed: the growth rate over the academic year of speed-strength qualities indicators was 25-30% for the shoulder girdle muscles, 10-13% for the lower limb muscles, and speed qualities - no more than 5%.

Movement patterns characterized by the targeted development of the body's fundamental physical qualities and functional capabilities have a developmental impact on the growing bodies of children aged 5-7 years. It has been shown that a movement pattern that incorporates sports, games, and exercises into the supplementary education system for preschoolers in kindergarten has the most pronounced positive effect.

A comprehensive assessment of the body's functional reserves, based on the analysis of the results of studies of the cardiovascular and respiratory systems, as well as the child's coordination abilities, made it possible to establish the distribution of older preschool children by the level of FRO: a low level was observed in 17.6% of children, an average level in 52.2% of children, and a high level in 30.2% of children. It was found that children in preparatory groups were less likely to have high levels of FRO than children in older groups. This may be due to the adverse effects of additional educational loads during school preparation, which are accompanied by a decrease in physical activity and an increase in static loads. The percentage of children with high FRO levels in preparatory groups was 1.4 times lower than in older groups, amounting to 31.7% and 44.1%, respectively. Low FRO levels were observed equally frequently, in 20.3% and 22.0% of children, respectively.

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An analysis of the growth rates of physical fitness indicators in children of different ages depending on their physical activity regimen allowed us to determine the age-specific sensitivity of children to physical activity of various types and formulate the main principles of an algorithm for hygienic optimization of physical activity regimens for children's physical preparation for school. At age 5, physical exercises aimed at normalizing muscle tone are recommended, while at age 6, they are aimed at developing coordination skills and balance. The use of sports games and exercises adapted to the age-specific developmental characteristics of children is recommended for children of all ages—5, 6, and 7. When assessing the physical development and results of physical fitness testing of senior preschool children, medical workers of preschool educational institutions are recommended to use the average age-sex values of speed, speed-strength physical qualities and physiometric indicators (vital capacity of the lungs, muscle strength of the right and left hands).

To optimize children's physical preparation for school, it is recommended to use a developed algorithm for building a motor regimen in preschool educational institutions, based on the child's age-related sensitivity to various types of physical activity and contributing to an increase in the level of physical fitness and functional reserves of the body. The assessment and monitoring of the effectiveness of motor regimes in kindergarten should be carried out using the methodological recommendations “Monitoring the physical development and health of children in preschool educational institutions”.

In conclusion. An analysis of the dynamics of motor fitness indicators revealed that children in the second experimental group outperformed their peers in the first experimental and control groups across all five parameters studied. Furthermore, they showed a significant reduction in absenteeism from preschool due to illness and disease. Studies of physical development and physical fitness of senior preschool children made it possible to obtain average age- and sex-specific values of physiometric indicators (vital capacity of the lungs, muscle strength; right and left hands) and indicators of development of physical qualities (10 m run, 30 m run, standing long jump, medicine ball throw), which are

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recommended for use in the analysis of the results of dynamic observation in the process of assessing the influence of motor modes on the functional capabilities of the body and physical fitness of senior preschool children. A comparative analysis of physical fitness indicators and functional capabilities of the body based on physiometric indicators in children aged 5-7 years with standard values of similar indicators obtained on the basis of mass surveys of children of the same age and sex in the 90s of the twentieth century revealed differences both in the level of absolute values and in the magnitude of the ranges of their changes, indicating a decrease in the functional capabilities of the body of modern senior preschool children.

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