

## **APPLICATION OF COMPUTER TECHNOLOGIES FOR DEFINITIONS OF PHYSICAL PREPAREDNESS OF ADOLESCENTS WITH ACCOUNT OF ADAPTATION OF CARDIOVASCULAR SYSTEM**

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It is known that physical loads that exceed the functional reserves of the body of adolescents, can adversely affect their development. The incidence of school-age children over the past 10 years has increased by 26.8%. There is information that the results of medical examinations, which are conducted in schools Ukraine, categorized as healthy you can enroll less than 10% of students. According to other literary sources, 30% of children to practice of physical education, for health, doctors to direct the special medical group. In 1st class there are 30% of children with chronic diseases, 5 class – 50% in a 9 class – 64%. [1]

Analysis of scientific research shows that it is necessary to improve the differentiated approach to the process of physical education, taking into account the adaptive capacity of teenager cardiovascular system. Existing recommendations for defined a group to practice of physical education, not taking into account the current state of the problem (increasing the number of nosological units, their flow in modern terms, the level of modern medicine) require substantial revision and correction, which requires the use of mathematical apparatus and automation [2]. To correctly defined a group to practice of physical training required creation of an information system of evaluating health adolescents, which based on a new approach, which takes into account not only the presence of disease (diagnosis), the degree of functional impairment, physical development, but also the adaptive capacity of the child.

We have developed the mathematical support of the information system for the health assessment teenag to determine the groups for classes of physical training at school considering the reaction cardiovascular system on physical activity in carrying out a functional test, which is the earliest sign deterioration of the functional state which is connected with the disease, overwork, overtraining.

The implementation of the solutions will improve the quality of the division of students into groups of different preparedness, which will facilitate the correct dosing of physical activity based on a comprehensive study that includes groups with physical activity and an assessment of the degree of adaptation of the cardiovascular system to it. The use of the information system evaluation system health teenagers in determining the group to practice of physical culture in school will optimize the scientific process and achieve the greatest healing effect in physical education lessons.

### **Reference:**

1. Боднар І.Р. Теорія, методика та організація фізичного виховання у спеціальній медичній групі: навч. посіб. / Боднар І.Р. – Л.: 2013. – 187 с.
2. Ишмухаметов М.Г. Дифференцированное физическое воспитание школьников с учетом экологических особенностей региона: Монография. – М.: Научно-издательский центр «Теория и практика физической культуры и спорта», 2005. – 234 с.