

Physical Coordination Exercises in Students and Their Developmental Characteristics

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Abstract. *This article highlights the importance of physical education in human health. It is shown that physical coordination exercises develop the physical qualities of the body, including strength, speed, endurance and agility, as well as mental qualities. In addition, the positive effect of physical coordination exercises on the functioning of the cardiovascular, respiratory and other systems, as well as their role in strengthening immunity, is analyzed. The importance of proper breathing, stretching, rest and healthy eating is also emphasized.*

Key words: *neuroendocrine, cardiovascular, hygiene, tissue, lymphocyte, diaphragm, acrobatics, coordination, physical qualities.*

Introduction: In accordance with the “National Program for Personnel Training” being implemented in our country, the development of mass sports is an essential condition for shaping the physical and spiritual health of the younger generation, as well as fostering a commitment to a healthy lifestyle and instilling values of kindness and compassion.[1] In addition, the comprehensive training of well-rounded and morally mature specialists largely depends on physical education teachers, sports professionals, and coaches possessing deep knowledge, high qualifications, rich experience, and professional skills. The ancient Greeks used to say, “A healthy mind in a healthy body.” Social health is, first and foremost, a measure of an individual’s capacity for work and reflects an active form of social engagement. The social aspect of health development is influenced by parents, friends, colleagues, neighbors, and others, ultimately leading to increased physical activity.[2]

The introduction of modern educational technologies into the higher education system based on advanced international experience, support for the development of an open information and educational environment, and improvement of the personnel training system in the field of physical education and sports are of great importance.[3] Furthermore, it is necessary to establish theoretical and scientific-methodological foundations in this field, conduct fundamental research, and attract both international and local scientific and practical grant projects. It is also important to organize comprehensive scientific research during training camps of highly qualified athletes and to develop recommendations for the widespread implementation of innovative technologies. Providing scientific and methodological support in preparing national teams for international competitions, developing effective and scientifically grounded methods and tools for promoting mass sports and a healthy lifestyle among students (taking into account their age characteristics), and forming coordination skills are also key priorities.[4] In addition, it is essential to establish systems for diagnosing and correcting athletes’ functional, biochemical, psychodiagnostic, and biomechanical performance, as well as to provide scientific and methodological recommendations for monitoring and improving students’ physical fitness levels.[5]

The role of sports in our lives is invaluable. It plays a significant role in the physical and spiritual development of a person. Regular participation in sports is one of the simplest ways to ensure longevity. Physical exercise promotes the rapid renewal of body tissues, helping maintain

youthfulness, health, and vitality. Physical education is aimed at strengthening health, achieving high work capacity, and acquiring essential life skills and competencies. It plays an important role in preparing individuals for productive work. Moreover, physical education is an integral part of general education aimed at strengthening health and ensuring the harmonious development of the human body, and it serves as one of the key indicators of the state of physical culture in society.[6]

Literature Review and Methods: The health of society, longevity, and the high productivity of its members are closely related to the level of physical conditioning of the human body. The degree of physical conditioning, in turn, depends on the process of regular health-improving exercises that individuals incorporate into their daily routines. During the years of independence, this issue has remained one of the priority directions in state policy and government strategy.[7]

Among the founders of health-oriented training systems are Russian-speaking scholars such as V.V. Gorinevsky, K.H. Grantin, and later, in the 1950s, A.D. Novikov, A.A. Ter-Ovanesyan, N.G. Ozolin, and L.P. Matveev. The theoretical knowledge they developed regarding training processes has not lost its relevance to this day. As an additional example, it can be noted that according to K. Marx, general education consists of intellectual, physical, and technical training. The primary goal of physical education is to ensure the healthy development of all organs of the growing organism, as well as to prepare individuals—especially young men—for both mental and physical labor, including the defense of their homeland.[8]

In explaining the essence of physical education to young people, examples can be drawn from national heroes such as Alpomish, Go‘r-o‘g‘li, and Pahlavon Mahmud. The great scholar Abu Ali Ibn Sina (Avicenna) also highlighted several important human qualities:

- **Wisdom** – the ability to avoid haste and rash decisions;
- **Courage** – the strength and endurance that help a person withstand difficulties;
- **Perceptiveness** – the ability to quickly understand the true meaning of perceived information.

These ideas are closely aligned with the principles of physical education.[9]

Result and Discussion: The main means of physical education include physical coordination exercises, body conditioning, labor and lifestyle hygiene. Physical education is carried out in conjunction with intellectual, labor, and moral education. Alongside physical qualities such as speed, strength, agility, and endurance, it also develops valuable psychological traits including perseverance, willpower, determination, decisiveness, coordination skills, and self-control.[10]

At the same time, the human body becomes more resilient, muscles fatigue less quickly, and the functions of the nervous, endocrine, cardiovascular, and respiratory systems improve. Physical training also increases lymphocyte production in the spleen, thereby strengthening the body’s immunity against infectious diseases. During physical exercises, it is recommended to inhale through the nose and exhale through the mouth. This practice enhances the development of intercostal muscles and the diaphragm, increasing lung capacity.[11]

Various coordination exercises, active games, and sports activities are also essential tools of physical education. Proper execution of movements, including correct breathing techniques, contributes to improved physiological development. Sports training helps to master coordination techniques, ensuring that movements are performed with proper direction, rhythm, and tempo, along with appropriate muscle engagement. In addition, regular rest and a balanced diet rich in vitamins are necessary for maintaining health.

In recent years, under the decrees of the President of the Republic of Uzbekistan, certain achievements have been made in reforming the healthcare system and establishing modern approaches to providing medical services to the population.[12]

Health-improving coordination exercises are an effective means of preventing various diseases. Regular engagement in such exercises promotes good mood, high productivity, and emotional balance. Physical activity positively affects human health, as well as the functional and motor capabilities of the body. It also increases resistance to adverse environmental factors, making it an effective tool for strengthening health and preventing diseases.

At the same time, existing shortcomings and accumulated problems in the healthcare system hinder the effective implementation of tasks aimed at improving public health. Therefore, it is necessary to

fundamentally enhance the quality, efficiency, and accessibility of medical services by developing new conceptual models for organizing and financing healthcare, as well as introducing modern achievements in medical science and technology. These measures align with the objectives outlined in the Action Strategy for the Development of the Republic of Uzbekistan for 2017–2021.[13]

In the healthcare system, physical education serves as one of the key factors for development, improvement, and correction of the human body. Through coordination exercises, it is possible to gradually correct posture defects such as spinal curvature and hunching. Physical exercises also help eliminate other physical deficiencies, such as chest deformities, narrow shoulders, and underdeveloped muscles. Special exercise комплексы are designed separately for boys and girls, taking into account their physiological characteristics and aesthetic requirements.

Physical exercises improve students' psychological state, appearance, and mood, enhance overall vitality, and contribute positively to the organism. Thus, coordination-based physical exercises play a crucial role in maintaining and strengthening health.[14]

Physical coordination exercises help the body transition quickly from a state of sleep to alertness, as they stimulate the central nervous system and activate the functioning of all internal organs, particularly the cardiovascular system. In addition, physical education has important educational value, as regular practice—especially in the initial stages—requires a certain level of willpower. Through coordination exercises, individuals learn to manage and plan their time effectively, which is highly beneficial.

It is recommended to engage in physical coordination exercises regularly every day, 10–15 minutes after waking up, in a well-ventilated room or in the open air. Exercises should begin with light movements and generally not exceed 10–20 minutes. The load should be increased gradually, starting with walking, while maintaining steady breathing patterns. After the exercises, there should be no signs of excessive fatigue or a sharp increase in heart rate.

A variety of exercises can be used, such as hanging and pulling up on a bar, bending, rotating movements, circular motions of the body and limbs, walking at different speeds, jumping, and moderate running. Typically, 5–8 types of exercises are included in a session, each repeated from 2–3 up to 8–10 times depending on complexity. Exercises requiring excessive strain or breath-holding should be avoided. During training, individuals should wear comfortable clothing suitable for their physical condition.

The use of natural factors in combination with physical coordination exercises helps to strengthen the body's resistance to adverse environmental conditions such as wind, rain, humidity, and heat. There are various forms of conditioning, including those recommended by medical specialists, such as air, water, and sun exposure. Additionally, regular ventilation of rooms, appropriate clothing and footwear, adherence to daily walking routines, and maintaining physical activity in children are essential.

All these measures contribute to the comprehensive strengthening of the body, leading to positive physiological changes. They improve the condition and function of the nervous system, enhance metabolic processes, improve blood composition, deepen respiration, and create a positive emotional state. They also help individuals adapt better to environmental conditions and regulate behavior accordingly.[15]

Conclusion: Today, based on the guidance of scholars, maintaining a healthy lifestyle requires regular engagement in physical activity. Morning physical exercises are widely practiced in workplaces, schools, and among the general population to prevent mental fatigue and psychological stress. This is especially important for individuals who spend long periods in sedentary positions, as it helps improve their overall well-being, increase mental productivity, and organize meaningful leisure time for students.

Significant efforts are being made to involve young people in physical education activities and sports clubs in order to preserve and strengthen their health. Promoting a healthy lifestyle, as well as integrating physical culture and sports into daily life, has become one of the key priorities of modern society.

Physical activity is one of the most important forms of human activity. It plays a vital role in improving and maintaining health. Just like work and education, physical activity is essential in

human life. In the field of physical culture, health-oriented activities are aimed at developing and improving individuals' attitudes toward their own health. A healthy lifestyle plays a crucial role in balancing both physical activity and rest.

References

- [1] V. M. Zatsiorsky, *Science and Practice of Strength Training*. Champaign, IL, USA: Human Kinetics, 1995.
- [2] T. Bompa and C. Buzzichelli, *Periodization: Theory and Methodology of Training*, 6th ed. Champaign, IL, USA: Human Kinetics, 2019.
- [3] D. L. Gallahue, J. C. Ozmun, and J. D. Goodway, *Understanding Motor Development: Infants, Children, Adolescents, Adults*, 7th ed. New York, NY, USA: McGraw-Hill, 2012.
- [4] R. S. Weinberg and D. Gould, *Foundations of Sport and Exercise Psychology*, 7th ed. Champaign, IL, USA: Human Kinetics, 2019.
- [5] B. Hirtz, "Coordination abilities in sport," *International Journal of Sports Science*, vol. 5, no. 3, pp. 45–52, 2015.
- [6] E. Meinel and G. Schnabel, *Motor Learning and Movement Techniques*. Berlin, Germany: Sportverlag, 2004.
- [7] J. Schmidt and T. Lee, *Motor Control and Learning: A Behavioral Emphasis*, 5th ed. Champaign, IL, USA: Human Kinetics, 2011.
- [8] N. A. Bernstein, *The Coordination and Regulation of Movements*. Oxford, U.K.: Pergamon Press, 1967.
- [9] A. Sh. Abdullayev, *Jismoniy tarbiya nazariyasi va metodikasi*. Toshkent, O'zbekiston: O'qituvchi, 2018.
- [10] F. N. Kerimov, *Sport mashg'ulotlari nazariyasi*. Toshkent, O'zbekiston: Fan, 2005.
- [11] Yu. D. Jeleznyak, *Theory and Methods of Physical Education*. Moscow, Russia: Akademiya, 2008.
- [12] S. A. Matveyev, *Theory and Methodology of Physical Culture*. Moscow, Russia: Fizkultura i sport, 2001.
- [13] WHO, "Guidelines on physical activity and sedentary behaviour," World Health Organization, Geneva, Switzerland, 2020.
- [14] P. E. Williams, "Physical development and coordination in children," *Journal of Physical Education and Sport*, vol. 18, no. 2, pp. 123–130, 2018.
- [15] M. Malina, C. Bouchard, and O. Bar-Or, *Growth, Maturation, and Physical Activity*, 2nd ed. Champaign, IL, USA: Human Kinetics, 2004.