Conclusions. According to researchers, motivations that evoke a unique sense of satisfaction from muscular activity and an aesthetic appreciation for the beauty, precision, and dexterity of one's movements play a significant role in attracting young people to university sports. This includes the desire to demonstrate courage and determination in complex athletic exercises, as well as to achieve specific results, prove one's mastery, and become strong, fit, and healthy. However, these guidelines and conditions are insufficient for the full and widespread development of student sports. In my opinion, today, it is also essential to implement theoretical and methodological support for enhancing the importance of sports among young people and to develop physical education pathways for future specialists during their university studies. Thus, today it is necessary to study the problems of student sports in order to identify and develop the academic aspects of organizing student sports and its priority areas for the development of physical education and sports. Modern life processes often push physical education into the background, especially for students who are busy with studies and work, which can negatively impact their health. Physical education, on the other hand, has a positive impact on performance and overall health. Students who participate in sports are active, self-controlled, and have self-control. They become more hardworking and goal-oriented, which helps them in their work and social life. At the same time, trends and prospects for the development of physical education in the educational environment during the period of distance learning were identified. One of the most encouraging trends is the integration of digital technologies and interactive content into the physical education process. The use of interactive approaches can attract students' attention and motivate them to regularly engage in sports. Recent scientific research emphasizes the importance of using innovative technologies in the field of physical education in educational institutions. Information technology opens up new opportunities for engaging young people in physical education, making the process more interactive and engaging.

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STRUCTURE AND ORGANIZATION OF INDEPENDENT STRENGTH TRAINING OF SECOND-YEAR STUDENTS AT THE NATIONAL TECHNICAL UNIVERSITY OF UKRAINE IGOR SIKORSKY KYIV POLYTECHNIC INSTITUTE

Physical education significantly impacts on students' health, being an important aspect of their overall well-being. Maintaining physical activity not only improves physical fitness but also helps them adapt to academic life. Research shows that students who actively participate in sports are more likely to report higher levels of productivity and energy, which is directly related to their academic performance. It is important for higher education institutions to create the necessary conditions for regular physical education, as this is essential for maintaining a healthy lifestyle for students. Sports have a positive impact not only on their physical fitness but also on their psycho-emotional well-being. Physical education is developing as an important aspect of general culture, encompassing both individual and collective practices. It encompasses physical education, athletic achievement, and a variety of physical activities, forming a holistic system. The key components of physical education are the development of physical qualities, health promotion, and preparation for professional activity, which underscores its importance in education. Individual physical education encompasses not only a set of physical skills but also aspects of moral and ethical preparation. It encompasses areas of knowledge and attitudes toward sports and other types of physical activity. Thus, the formation of this culture is influenced not only by physical activity but also by the environment,

including the availability of sports equipment and access to various physical activities. Investments in physical education contribute to the formation of a healthy nation, where physical activity becomes an integral part of the educational process. Ultimately, strong and healthy youth will be able to adapt to the constant challenges of the modern world, making physical education relevant and essential in the educational environment. Physical inactivity, also known as physical inactivity, is becoming a pressing issue among students, leading to numerous negative health consequences. Data shows that insufficient physical activity increases the likelihood of serious illness and worsens overall well-being. Approximately 3.2 million people die annually due to physical inactivity, making it one of the leading causes of mortality. Research shows that over time, particularly from the first to the third year of university, the average level of physical activity among students declines. This decline is linked to several factors, including academic pressure and lifestyle changes, which can lead to chronic illnesses and poor mental health. Another important issue is that a lack of physical activity leads to increased levels of stress, anxiety, and depression among students. The psychological problems caused by physical inactivity can negatively impact academic performance and social interactions, limiting students' opportunities. Special programs and sports events aimed at motivating students to be physically active are essential measures to address this situation.

Key words: *students, athleticism, strength training, impact, benefit.*

Мартинов Юрій, Гаврилова Наталія. Структура та організація самостійних силових тренувань студентів другого курсу в Національному технічному університеті України «Київському політехнічному інституті імені Ігоря Сікорського». *Фізичне виховання суттєво впливає на здоров'я студентів, будучи важливим аспектом їхнього загального благополуччя. Підтримка фізичної активності не лише покращує фізичну підготовку, але й допомагає їм адаптуватися до академічного життя. Дослідження показують, що студенти, які активно займаються спортом, частіше демонструють вищий рівень продуктивності та енергії, що безпосередньо пов'язано з їхньою успішністю. Важливо, щоб вищі навчальні заклади створили необхідні умови для регулярних занять фізичною культурою, оскільки це необхідно для підтримки здорового способу життя студентів. Спорт позитивно впливає не лише на їхню фізичну підготовку, але й на їхнє психоемоційне благополуччя. Фізичне виховання розвивається як важливий аспект загальної культури, охоплюючи як індивідуальні, так і колективні практики. Воно охоплює фізичне виховання, спортивні досягнення та різноманітні фізичні активності, утворюючи цілісну систему. Ключовими компонентами фізичного виховання є розвиток фізичних якостей, зміцнення здоров'я та підготовка до професійної діяльності, що підкреслює його важливість в освіті. Індивідуальне фізичне виховання охоплює не лише сукупність фізичних навичок, але й аспекти морально-етичної підготовки. Воно охоплює сфери знань та ставлення до спорту та інших видів фізичної активності. Таким чином, на формування цієї культури впливає не лише фізична активність, а й навколишнє середовище, включаючи наявність спортивного спорядження та доступ до різних фізичних занять. Інвестиції у фізичне виховання сприяють формуванню здорової нації, де фізична активність стає невід'ємною частиною освітнього процесу. Зрештою, сильна та здорова молодь зможе адаптуватися до постійних викликів сучасного світу, що зробить фізичне виховання актуальним та необхідним в освітньому середовищі. Фізична не активність, також відома як гіподинамія, стає актуальною проблемою серед студентів, що призводить до численних негативних наслідків для здоров'я. Дані показують, що недостатня фізична активність збільшує ймовірність серйозних захворювань та погіршує загальне самопочуття. Приблизно 3,2 мільйона людей щорічно помирають через фізичну не активність, що робить її однією з провідних причин смертності. Дослідження показують, що з часом, особливо з першого по третій курс університету, середній рівень фізичної активності серед студентів знижується. Це зниження пов'язане з кількома факторами, включаючи академічний тиск та зміни способу життя, що може призвести до хронічних захворювань та погіршення психічного здоров'я. Ще одним важливим питанням є те, що відсутність фізичної активності призводить до підвищення рівня стресу, тривоги та депресії серед студентів. Психологічні проблеми, спричинені фізичною не активністю, можуть негативно впливати на успішність та соціальну взаємодію студентів, обмежуючи їхні можливості. Спеціальні програми та спортивні заходи, спрямовані на мотивацію студентів до фізичної активності, є важливими заходами для вирішення цієї ситуації.*

Ключові слова: *студенти, атлетизм, силові навантаження, вплив, користь.*

Formulation of the problem in general form. In the university physical education system, there are two forms of organizing classes: in-class and extracurricular. In class classes are held under the direct supervision of a teacher physical education specialist with theoretical knowledge and professional teaching skills. Here, student initiative and independence are minimized. Full responsibility for the results of the educational process rests with the teacher. Extracurricular classes are primarily independent. Students train on their own initiative, exercise regimen using recommendations from physical education teachers and their more experienced peers, as well as theoretical knowledge gained from educational and methodological literature and the internet. This form of organizing training requires increased independence, self-organization, and discipline from students. Depending on the goals and objectives, three types of independent physical exercise can be distinguished: morning hygienic exercises; individual exercises throughout the school day; training sessions.

Analysis of literary sources. The topic of strength training and its effect on the body of students was studied by the following authors: Zenina I.V., Kuzmenko N.V., Uskova S.M. [1], Khoruzheva L.E., Yunak V.G., Dotsenko L.Z., Vyatchanina S.V., Mykhailenko, V.M., Zhuravlev S.O. [2]. Syrovatko Z.V. [3], Tymchyk S.G. [3].

Review of previously unsolved parts of the overall problem. We will consider only the latter type of independent training, as significant progress in strength training can be achieved only through training. Independent training sessions can be conducted individually or in a group of 1-2 or more people. Group training is preferable for several reasons: 1) it's always

easier to spot a fellow participant's technique errors; 2) there are a number of exercises that require spotting and assistance from partners; 3) peers can provide valuable advice during the session on various aspects of training methodology; 4) group training for young people always creates an element of competition, which contributes to improved training results.

The purpose of the study. The solution to various strength training challenges depends largely on the specific training regimens used for each exercise. These regimens include intensity of load; number of repetitions per set; tempo and style of exercise; rest between sets; and proper breathing. Particular caution should be exercised with exercises that target the lower back muscles (barbell squats, deadlifts, weighted bends, and more). It's important to remember that the lumbar spine is fully formed by around age twenty-five. Excessive strain on the lower back at a younger age can impair the natural development of the musculoskeletal system. In this case, there are two options. First, you can replace the exercise with one that doesn't put stress on the lower back. For example, to train the quadriceps (the quadriceps), you can use leg presses on a special platform instead of barbell squats. This exercise is just as effective, but it's performed lying down. Second, in exercises that place vertical load on the spine, the intensity should be reduced by 15-20%. For example, if exercises for other muscle groups use working weights of 70%, then for barbell squats, you should initially use weights no higher than 50-55% of your maximum. [3; 15].

Presentation of the main research material. Testing and diagnosing strength training levels play a crucial role in strength training sessions. This is a crucial element of training methodology, essential for planning the training process, particularly the load in individual exercises. Testing during strength training sessions determines the maximum number of repetitions or maximum weight for a specific exercise. In other words, it identifies the maximum intensity level (100%). The first indicator is easily determined: the participant performs the exercise to failure. This is the maximum intensity for that exercise (100%). The second indicator is used only in exercises with free weights, when their weight can be determined [1].

There are two methods for determining the maximum weight (100%): direct and indirect. The direct method involves performing the exercise once with the maximum weight the participant can handle. To achieve this, after a special warm-up, a weight that is clearly not the heaviest is selected, which the participant can easily lift once. The weight is then gradually increased until the athlete can handle it. The maximum weight lifted by the athlete is considered the maximum (100%). The direct method of determining the maximum weight is recommended only for experienced athletes or, at least, those in good physical condition with respect to strength training. This method is contraindicated for those new to strength training because their muscles, tendons, and ligaments are not yet sufficiently adapted to maximum strain [4; 6].

Furthermore, this method is contraindicated even for experienced athletes when performing an unfamiliar exercise with maximum weights. When exercise technique is not yet mastered, there is a risk of injury. For determining the maximum weight for beginners, the less injury-prone indirect method is recommended. It is based on the fact that inexperienced athletes can lift 60% of their maximum weight in approximately 6 repetitions, and 70% of their maximum in 10. These are empirically derived averages. Based on this, the athlete is advised to perform the exercise with added weight not for one repetition, but for six or ten.

A typical strength training session consists of three parts: preparatory, main, and final. This structure is quite common in any sport, but in athletics it has its own specifics. Preparatory phase. The main element of the preparatory phase is a general warm-up, designed to achieve the following goals: increasing the elasticity of muscles, tendons, and ligaments; improving joint mobility; developing smooth movements; increasing joint range of motion; and enhancing muscle performance. The general warm-up prepares the body psychologically and physiologically for the upcoming intense strength training. Ultimately, it is aimed at accelerating the body's adaptation to the specific load and at preventing injury. It is recommended to begin the warm-up with a leisurely jog or exercise on a stationary bike (exercise bike) for 3-5 minutes. Next, various warm-up exercises are performed for all large joints and major muscle groups (10-15 exercises) [2; 10].

Main Part. The main part of the workout is a set of strength exercises. Its content and duration depend on the primary training goal, the specific objectives of the given session, the participant's qualifications, their performance capacity, and the exercises included in the set. The set of strength exercises is developed according to two main principles: an anatomical atlas; (split) split training. The anatomical atlas principle involves compiling exercises for all (or at least many) major muscle groups in a single set. Typically, this principle is used in the initial stages of training by beginners or by experienced athletes after forced breaks in training. A set of exercises compiled according to the split training principle is widely used in bodybuilding and is a selection of exercises for a limited number of muscles with the aim of increasing the load on them. In this case, to prevent overload, each muscle will work sufficiently hard, but the set should be used no more than 1-2 times a week. To achieve this, work with muscle groups is divided into two or three parts, depending on the athlete's qualifications, their performance capacity, and the number of sessions per week. It seems that for a student who does strength training for non-athletic purposes, even with some training experience, it's sufficient to train 3-4 times a week using a routine in which exercises for the same muscles are repeated twice a week. For example, we've divided all the major muscle groups into two sections, labeled A and B. With two weeks training, each muscle is trained once, while with four-week training, each muscle is trained twice.

The final part of the session is designed to ensure a smooth transition from intense strength work to a normal body state. Along the way, the goal can be to accelerate the initial recovery processes in muscle tissue. The following methods can be used for this purpose: calming exercises; relaxation exercises; stretching; aerobic exercises; and autogenic training.

Calming exercises are exercises from basic or athletic gymnastics with very low intensity, performed smoothly, with a wide range of motion. They are necessary for a gradual transition from active work to a normal state. Performing calming exercises at a slow pace and in significant quantities provides the muscles with an aerobic load, which will stimulate the utilization of lactate (lactic acid) by slow-twitch muscle fibers. Ultimately, this promotes faster muscle recovery. Relaxation exercises reduce muscle tone, thereby facilitating circulatory processes, blood flow, and lymph flow. With the capillary network still activated, performing these exercises accelerates anabolic processes. Like calming exercises performed in small numbers,

relaxation exercises help lower blood temperature. Stretching exercises lengthen muscles, which helps maintain or improve flexibility. They also help reduce muscle tone, resulting in all the benefits described above. Jogging for 2-5 minutes, cycling at a low intensity, or swimming slowly for 5-10 minutes are all aerobic exercises designed to utilize lactate in the muscles, relax skeletal muscles after intense training, and ensure a smooth transition of the vascular system from significant stress to normal [2; 8].

Autogenic training is a means of mental and muscular relaxation using appropriate posture, mindset, and verbal self-hypnosis. Inhibition of cortical centers and, in turn, activation of subcortical centers leads to self-regulation at the subconscious level. Verbal signals such as "my hands are warm," "my hands are heavy," and so on lead to deep relaxation, which accelerates the rehabilitation process (the body's recovery after strenuous work).

Conclusions. To enhance the training effect when developing strength qualities, methods can be used that intensify, increase the load, and prolong the time muscles remain under extreme tension. This saves training time, adds variety to the training process, and provides an emotional boost to trainers. However, these methods are not recommended for students with insufficient strength training experience. There is a high risk of muscle and especially tendon injuries, and there is also a risk of overexertion and health problems. In particular, first-year students who are lagging behind in physiological maturation may experience hypertensive shifts in blood pressure. Even with the most rational training method, an athlete can accumulate fatigue, which can lead to stagnation in results, provoke microtraumas, and reduce the desire to train. It is crucial to avoid overexertion, as it can lead to undesirable pathologies. Students who actively participate in sports report significant improvements in their emotional well-being and overall quality of life. This is because physical activity promotes the release of happiness hormones, which help them cope with the emotional stress of studying. One problem that students face is the high level of stress, which can hinder them from achieving their goals. Factors contributing to this stress include academic workload, social interactions, and uncertainty about the future. Regular exercise helps reduce anxiety and depression, as confirmed by the results of our student sociological survey. Students who actively participate in sports demonstrate better academic performance, as physical activity has a positive impact on concentration and cognitive function. Incorporating physical activity into students' daily lives helps them develop habits aimed at maintaining health and preventing future illnesses. Thus, physical activity is an important factor in improving students' health and their overall well-being. Physical activity has a significant impact on mental health, reducing levels of stress, anxiety, and depression, which is especially important during academic pressures. Strength is one of the most important indicators in both sports and life.

Strength determines a person's ability to overcome external barriers or resist them using muscle power. Strength is expressed through strength abilities. The main types of strength abilities are maximum strength, explosive strength, and strength endurance. Moderate exercise is essential to stimulate the body's metabolic processes. Exercise increases all metabolic processes in the body. In order for students to be able to study well, be resourceful and have high grades, pass the session with flying colors, and be at the top of the rankings, they absolutely need to be disciplined and have time for physical education.

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DEVELOPING STUDENTS' WORKING MEMORY IN PHYSICAL EDUCATION CLASSES AT THE NATIONAL TECHNICAL UNIVERSITY OF UKRAINE "IGOR SIKORSKY KYIV POLYTECHNIC INSTITUTE"

The level of physical, mental, and social well-being of students in today's world is very low and is deteriorating due to the difficult military situation, environmental conditions, and economic instability in the country. To improve the situation, in my opinion, during their university studies, efforts must be made to maintain not only students' physical but also mental health,