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Methods of developing strength abilities of students

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ADSTRACT
Physical culture at the university is carried out throughout the entire period of training of students and is carried out in various forms, which are interrelated and represent a single process of physical education of students. The learning process is organized depending on the state of health, the level of physical development and fitness of students, as well as taking into account the conditions and nature of the work of their future professional activity.

Keywords: physical culture of a student, autonomic dysfunction, physical performance, power load.

INTRODUCTION

Physical education of students is one of the topical issues of the modern university process. Its significant component is the use of elements related to power sports, giving the necessary payload, ensuring positive dynamics of physical development, quality of health, harmonization between physical and spiritual forces, since all this is extremely important for the student's educational activities, his daily well-being [2, p. 138].
Muscle loads have the property of a stimulating effect on the brain, a person's tone, give a feeling of vigor, reduce fatigue, promote quick recovery, resist injuries, overloads, increase efficiency and endurance, train the cardiovascular and respiratory systems, help fight overwork [3, p.144]. In addition, we must not forget that the motor activity of modern students without a special organization of classes tends to decrease due to a motionless lifestyle, time spent at gadgets. Russian universities have many years of experience in conducting academic studies with a forceful orientation, organizing various sports sections. In the course of work with students, exercises are used for external resistance, overcoming their own weight, isometric exercises, strength gymnastic, jumping athletics, exercises, exercises for overcoming various obstacles, etc. In their process, systems of muscle activity modes are used, depending on the magnitude of the load with lifting, lowering, holding weights in the bench press, standing, bending with a barbell on the shoulders, jerking and jerking pulls, lifting the bar on the chest, squeezing dumbbells, weights, static abdominal tension press and back muscles, oblique muscles of the trunk, abductors of the arms, muscles of the back of the thighs, adductors of the legs.
On the basis of scientific approaches in the course of the research, the goal was set: to conduct an experiment within the framework of physical education at a university and to establish the relationship between power loads and indicators of the state of students, and then formulate practical recommendations for correcting the work methodology.

EXPERIMENT DESCRIPTION

The study was carried out on the basis of the Siberian State University of Science and Technology named after academician M.F. Reshetnev. The experiment involved 45 female students aged 18 to 22 years. For health reasons, signs of autonomic dysfunction were identified and recorded in the course of a routine medical examination. As you know, taking into account health is extremely necessary when planning loads. [1]. Autonomic dysfunction manifests itself in varying degrees, so three subgroups were identified:
A. sympathetic division of ANS regulation (signs of sympathicotonia) - 18 female students;
B. failure of the sympathetic division of the ANS (signs of vagotonia) - 20 female students;

C. balance in the regulation of the ANS (signs of eutonia) - 7 students.

At the first stage, the student-participants were familiarized with the methodological and practical part of the research, its goals - the developed complexes of the forthcoming exercises. They received recommendations to determine the heart rate according to the optimal criteria using both palpation and heart rate monitors. Testing of indicators of general workability was carried out according to the methodology, the author of which is K. Cooper. The individual critical speed was also determined at the VO2 max level. All results obtained were strictly recorded in a comparative dynamic table.

Each lesson was prescribed a complex selective focus. We used outdoor games, treadmills, means of strength training, which made it possible to work with the cardio-respiratory system, neuromuscular apparatus, psychoemotional sphere of the participants. It is also important to emphasize that each lesson had its own specifics for one specific physical exercise. In addition, the correction of running, strength exercises, elements of outdoor games were carried out with a period of on-site training in the training schedule of the day and week, psycho-emotional level, depth of fatigue, etc.

RESULTS

As a result of the study, a multi-vertex physiological curve was constructed. The graph clearly demonstrated the dependence of physical activity in university studies of students with autonomic dysfunction. Regularities in states and loads were identified and an optimal schedule was built based on the alternation of running and strength complexes during classes, deeper planning with an individual approach.

As a result of orthostatic testing in girls with hemodynamic features, autonomic reactions of the cardiovascular system according to their typological groups, approaches to the correction and development of physical qualities were determined and differentiated, and recommendations were given.

Group A. Students of this group are recommended to disperse the power load during the whole lesson. For them, it is optimal to start with a steady run (about 50% of the VO2 max, duration about 7 minutes). The alternation of exercises of a dynamic, respiratory orientation, uniform running, outdoor games with medium and even reduced intensity are shown, and in the final part of the lesson. The lesson must be finished with a uniform jogging (the intensity is not higher than 50% of the VO2 max); apply exercises for flexibility, coordination, relaxation.

Group B. Students of this group, according to the peculiarities of their autonomic response to physical activity, are optimally divided in the fulfillment of loads. This is facilitated by static-dynamic exercises with isometric tension. They are necessary for the activation of extracardiac factors of blood circulation in order to facilitate the return of venous blood to the heart. Running loads should only be used then. It is recommended to use alternating running with alternating running distances in the mode of different intensity from the VO2. Medium-high intensity outdoor games, the relay load in the first half of the lesson should be limited to 10 minutes. At the end of the lesson, even running of at least 50% of the VO2 max is recommended, as well as walking.

Group C. During testing, the female students of this group had relatively high indicators of physical working capacity, therefore, the programmed running pace and exercise complexes were used.

On the basis of the research carried out, adjustments were made to the training program in terms of indicators for female students with medium and low levels of physical working capacity, the norms of optimal heart rate values at the stages of physical culture lessons were determined, that is, an individual-generalizing approach was used.

REFERENCES

1. Konovalov V.N., Skuratovich M.N. The development of physical qualities by means of running and strength training among students with disabilities in health // Bulletin of sports science. 2008. №. 3. P.45-47.
2. Kopylov V.A., Dotsenko Yu.A., Gavaga V.V. On the issue of strength training of students // Pedagogy, psychology and medico-biological problems of physical education and sports. 2009. №. 5. P. 138-140.
3. Shutyaev V.V., Khomenko R.V. Strength training in physical education of students // Bulletin of the South Ural State University. 2006. №. 3. P. 143-145.