

Methodology for determining the level of physical activity readiness of first-year students

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Abstract. This paper presents methodological recommendations for determining the level of physical fitness of first-year students. The conducted research has shown a general tendency in a decrease in the level of development of such physical qualities as speed, general endurance, strength and speed-strength qualities. The methodology of conducting classes aimed at changing this situation is given.

Keywords: improving the quality of education, physical culture, control standards for physical culture, physical qualities.

In modern Russian higher education, the issue of improving its quality is very acute, for which various means are used: updating the regulatory framework, giving broad powers to supervisory bodies and public organizations that are called upon to monitor the level of general education.

To improve the quality of education, new educational programs are being developed, the number of hours is changing, additional disciplines are being introduced, much attention is paid to the independent and scientific work of students.

This tendency is present in universities in all areas of training, but, unfortunately, it does not always lead to positive changes.

As modern researches show, "the level of physical fitness of students entering the first year is steadily decreasing" [1]. Testing of first-year students, conducted at the beginning of each academic year, also shows low results when passing control standards.

All this testifies to the insufficiency of the work carried out in schools in physical education classes.

To determine the level of physical fitness of students who entered the first year of the Samara State Technical University (SamSTU), 4 test tasks were used, which revealed the degree of development of basic physical qualities:

1. Speed, was assessed by the result in the 100 meters sprint. The run was carried out in a stadium with asphalt, from a low start, the result was recorded with an accuracy of a tenth of a second.
2. Endurance, determined by the result in running 1000 meters. The race was carried out on an asphalt stadium from a high start. The result was recorded in minutes and seconds.
3. Speed-power qualities were assessed according to the results in the long jump from the spot. The test was carried out on a rubber cover, the result was recorded in centimeters.
4. Strength was assessed according to the result in boys in the exercise of flexion-extension of the arms in the hanging on the crossbar, the number of repetitions was recorded with the correct technique, in girls, the number of repetitions was recorded for lifting the trunk from a prone position, with fixed legs in 30 seconds, in girls.

Both boys and girls passed the tests. For a more accurate analysis, all students were divided according to the profile of study.

The economic and humanitarian profile included students studying in the direction of training: economics, management, state and municipal administration, etc.

All engineering and technical specialties were included in the engineering and technical profile: oil and gas business, automation, information technology, architectural and construction activities, electrical engineering and energy, mechanical engineering.

In just the last three years, 1210 students who belong to the main medical

group have been tested. As a result, the following results were obtained (tab. 1).

Table 1.

The results of physical fitness of students,
enrolled in the I year SamSTU

Profile	Sex	Running 100m (sec)	Running 1000m (min sec)	Long jump (cm)	Force (number of times)
2019					
Economic and humanitarian	W	19.1±1.5	4.46±18.2	161.8±12.4	27.2±3.2
	M	14.2±1.8	4.12±20.2	188.6±10.1	8.6±1.9
Engineering and technical	W	17.6±3.2	5.12±10.8	165.6±15.1	26.2±1.8
	M	13.8±0.9	4.10±10.1	205.4±12.6	12.4±3.1
2020					
Engineering and technical	W	17.2±1.8	4.57±28.6	163.4±21.6	24.3±2.6
	M	14.2±2.0	4.32±11.2	220.4±22.6	9.5±2.8
Economic and humanitarian	W	17.8±1.4	4.42±14.0	162.5±12.8	23.2±3.4
	M	14.2±0.5	4.24±2.2	212.2±14.5	8.3±1.2
2021					
Economic and humanitarian	W	18.4±2.6	4.35±12.6	172.4±8.6	28.2±1.6
	M	14.7±1.8	4.18±8.7	206.2±15.4	10.2±2.1
Engineering and technical	W	20.2±2.1	4.24±15.2	169.6±7.4	26.4±3.6
	M	14.3±1.7	4.12±5.6	212.5±12.5	11.4±3.2

To analyze the data obtained, the norms of the All-Russian Physical Culture and Sports Complex (VFSK) "GTO" can be used, according to the age of the students. This is stage VI - the age is from 18 to 29 years old, or rather the riser is from 18 to 24 years old.

Parameter "100 meters run" - for men the result is 14.4 seconds, according to the test standards of the VFSK "GTO", and for women - 17.8

seconds.

Comparing the results obtained, we can conclude that almost all men, regardless of the profile of training, met this result.

Among women, the majority of groups of female students also met this standard.

However, analyzing the qualitative characteristics of the obtained parameters, it should be concluded that the students have insufficient development or almost complete absence of the sprint running technique.

The technique is present only in those involved in athletics. The bulk of students run sprints with gross mistakes - they do not know how to start correctly and gain starting acceleration, they have gross errors in the work of their legs and arms, they also do not know how to finish and do not know running tactics. All this ultimately leads to low results when passing control standards.

Parameter "Running for 1000 meters" - here men run 3000 meters, women run 2000 meters. In this case, the extreme result was obtained for men - 4.50 minutes, and for women - 6.35 minutes, which, of course, is a very bad result.

The data obtained indicate a low level of development of general endurance, this is due to the fact that students do not like to perform long monotonous work, they do not have stable skills for such work. In addition, they are not always proficient in long-distance running technique. High results are shown only by those students who are involved in any kind of sport (athletics, swimming, cross-country skiing, martial arts).

The parameter "Long jump from a spot" - according to the standards, the extreme result for men is 210 cm, for women - 170 cm.

Comparing these standards with the results obtained, one can also note an insufficient level of development of speed-strength qualities.

There is also another negative factor - the overweight of some students and female students, which does not allow jumping as far as possible.

The parameter "Flexion-extension of the arms while hanging on the bar" - here men must lift the torso from a supine position in 30 seconds, for women this standard is passed in 1 minute.

Comparison of these standards with the results obtained shows that most groups of men did not cope, and all women showed very high results, since they are familiar with this exercise, and they perform it perfectly.

As a result, we can conclude that in men there is an insufficient development of strength abilities, this is due to the overweight of a significant number of students.

In addition, very often during testing, the following picture is observed: one part of the subjects performs the test exercise 15-18 or more times, and the other part of the subjects could not pull up even once. As a result, the average group indicators are very low.

Thus, the main task of physical education teachers in the classroom with first-year students is to increase their level of physical fitness, help in successfully passing control standards, as well as strengthening the health of young people and preparing them for service in the Armed Forces of the Russian Federation.

Reference

1. Shilko T.A. Monitoring of physical fitness of bachelor students who entered the 1st year of Tomsk State University / T.A. Shilko, G.I. Golovko, E.V. Lawson // Bulletin of Tomsk State University. – 2019. – № 440. – P. 190–194.