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ИЛИМ ҲАМ ТӘЛИМ**

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**IMPROVEMENT OF FORCE AND SPEED-FORCE QUALITIES OF HIGHLY QUALIFIED FREESTYLE WRESTLERS**

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**Summary:** *This article considers the improvement of power and speed-force training of highly qualified freestyle wrestlers. Developed a set of exercises for the development of general and special physical training of wrestlers.*

**Key words:** *wrestling, training load, physical training, complex exercise.*

**Introduction.** Actuality. In the rapidly growing trend of development of the world sport and the role of freestyle wrestling increases. In particular, the share of men in the growth of freestyle wrestlers is constantly increasing. This, in turn, places high demands on their preparation. These processes require the development of improved methodologies based on new approaches to training wrestlers. Physical training of the wrestlers is an important task. Planned reforms are being carried out in our Republic with regard to the further development of sports wrestling and the increase in the number of sports involved. In particular, the tasks are set to conduct organizational and practical and promotional work to attract to the activities of freestyle wrestling and their development as professional athletes» [1].

In the freestyle wrestling, strength and speed-force exercises are of particular importance, which are an important factor in improving the skills and special indicators of wrestlers. The problem of rationalization of means and methods of strength and speed-force training of athletes is constantly taken into account by scientists and practitioners (Verkhoshansky Yu.1988, Karimov F. 2020, Salamov R.S. 2018, Ivankov K.E. 2019, G.S. Tumanyan 2009) [2,3]. Recently, a number of aspects have been updated concerning the optimal ratio of loads in different directions, the sequence of their inclusion in the speed-force training of freestyle wrestlers of different skill levels and training [4].

**The purpose of the study** - Improving the strength qualities of 18-20 year-old qualified freestyle wrestlers in different weight categories at the stage of sports development.

**The object of the study** is the process of training qualified 18-20 year-old freestyle wrestlers engaged in the School of Higher Sports Excellence of the city of Nukus.

**Methods and organization of research:**

Literature analysis; Pedagogical supervision; Theoretical analysis; Pilot evaluation;  
Pedagogical experiment-test; Mathematical statistics;

**Research findings and discussion.** It is known that the strength and speed of freestyle wrestlers are important to achieve high results. However, in strength training, it is advisable to use the right training load, so that the muscles of the wrestlers are not only adapted to loads, but also have a high speed. To improve the physical training of wrestlers, we proposed a set of control exercises.

The first mesocycle - training sessions with weights, starting with the preparation of the athlete's body mass. When working with a bar, the weight and number of repetitions vary to some extent. Optimal repetitions are minimal when performing exercises on large scales. During exercise, it is important to keep body and breathe properly. Recommended weights are required to increase muscle strength. And repetitive exercises with low weight have little effect on muscle stimuli [3].

The second mesocycle is an aerobic period. At this time, the training load increases by 10-15%. Exercises of varying intensity and alternating cycles in one workout lead to less fatigue, with little effect on the nervous system. According to sports medicine researchers, the use of long-term aerobic work to moderate improves ATF resynthesis in the athlete's body, increasing the energy substrates of the body. Therefore, light weight wrestlers are the most endurance [4].

The third mesocycle is aerobic-anaerobic training. During this period, the fighters work on both special and general physical training. Analyzing the first mesocycle, we developed a set of exercises for weight wrestlers and on gym. The complex consists of a series of exercises affecting the limbs, muscles of the back, legs. In the following table we recommend to include weightlifting exercises in the training of wrestlers.

At the stage of pedagogical experiment, special exercises were widely used during the physical training of wrestlers in increasing the strength qualities of freestyle wrestlers and their physical condition (strength) was improved and introduced into practice.

In view of the above, a survey was conducted among athletes engaged in highly qualified freestyle wrestlers. The questionnaire involved 70 respondents (35 qualified trainers and 35 qualified freestyle wrestlers. Below you can find the questions of the questionnaire (see. 1 table.).

**Table. 1**

***Results of questionnaire conducted with respondents consisting of qualified freestyle wrestlers and coaches***

№	Questionnaire	Responses			
		C - n=35		S - n=35	
		Yes	No	Yes	No
		S/%	S/%	S/%	S/%
1.	Is the period of general physical training of qualified athletes significant?	20/57	15/43	24/66	11/34
2.	Is the introduction of new training programs for general physical training of qualified athletes effective?	21/60	14/40	19/54	16/46
3.	Is the role of general physical training of the athlete significant in competitive activity?	30/86	5/14	32/91	3/9
4.	Does the planning of the general physical training period affect the physical state?	20/57	15/43	25/71	10/29
5.	Is the correct organization of general physical preparation trainings on achievements in international competitions of qualified athletes?	25/71	10/29	25/71	10/29
6.	Would it be advisable to devote the bulk of general physical preparation training to the training of qualified athletes?	20/57	15/43	35/100	0/0
7.	Do you consider special weightlifting exercises useful in developing the strength of the muscles of the legs and hands?	29/83	6/17	30/86	5/14
8.	Do you consider it effective to carry out exercises with weights during general physical training?	30/86	5/14	31/89	4/11
9.	Is the sport of weightlifting high in increasing the speed and strength qualities of qualified athletes during the general physical preparation?	19/54	16/46	25/71	10/29
10	Do you think that the introduction of special weightlifting exercises into the training program will help improve physical qualities in the preparation of qualified athletes?	30/86	5/14	100/0	0/0

It is known that the process of training qualified freestyle wrestlers at the stage of sports development involves the development of individual functions and systems of the body based on consideration of gender and sensitive periods of development of motor qualities and functional capabilities freestyle wrestlers. Therefore, the individual approach to training should ensure the level of biological maturity, functional state and level of physical fitness, as well as the ability of the athlete to adapt to loads of different orientation, volume and intensity. [5]

To assess the level of development of speed-force and strength qualities the most important control standards: 100 meters, pull-up on the turnstile 20 sec, push-ups 20 sec, long jumps from place (cm), shuttle run 3 10 m (s), run on the bridge 5 times, flip on the bridge 5 times, throw over the hip, throw over the shoulder, mill throw.

**Table 2**

**At the beginning and end of the experiment experimental group of free style wrestlers in sports improvement groups.**

№	General physical preparation and special physical training indicators	Early in the experiment			At the end of the experiment		
		X	$\sigma$	V%	X	$\sigma$	%
1	100 m run	13	0,2	1,8	12,4	0,2	2,2
2	Pull-up on the bar 20 sec	8,4	1,07	12,7	10,5	0,97	8,4
3	Push-ups 20 sec	12,5	1,08	6,9	13,8	1,03	5,8
4	Long jump from place (cm)	211,2	6,4	3,03	217	4,6	2,1
5	Shuttle running 4x10 m (s)	6.9	0.7	10.4	6.7	0.5	8.95
6	Coups on the bridge 5 times	7.4	0,3	4,7	6,5	0,4	6
7	Jump on the bridge 5 times	8.02	0,3	4,7	6,9	0,4	6
8	Throw over the hip	10	0,9	9,4	11,6	0,5	4,4
9	Throw over the shoulder	11	0,8	7,4	12,5	0,8	6,6
10	Mill throw	8	0,6	8,3	10	1,3	13,3

**As the tables show, before and after the experimental group the physical fitness of freestylewrestlers has increased reliably:**

- the average of 100 m run improved from 13 seconds to 12,4 seconds
- pull-up on the bar 20 sec from 8.4 to 10.5 seconds
- push-up 20 sec from 12.5 to 13.8
- long jump from place (cm) from 211.2 to 217'
- shuttle running 4x10 m (sec) from 6.9 to 6.7
- coups on the bridge 5 times from 7,4 to 6.5
- jump on the bridge 5 times from 8.02 to 6.9
- throw over the hip from 8.02 to 11.6
- throw over the shoulder from 11 to 11.5
- mill throw from 8 to 10.

Methods and means that increase the effectiveness of training invisibly increasing the volume and intensity of activities contributes to the full development of functional reserves of the athlete's body. This provision provides for the need to use systemic and structural approaches in the development of power and speed-force abilities of qualified athletes, in the generalization of experimental information, confirming the effectiveness of scientific research and training methodologies for athletes. The use of the method of circuit training with regular exercises with a rest period is defined as an effective method for developing speed and strength qualities.

Analysis of the dynamics of the obtained results shows that in the physical training of 18-20 year-old wrestlers from weightlifting exercises with the help of statistical and dynamic exercises in accordance with traditional means and with the help of special exercises, developed by us has made it possible to develop very effective power abilities.

**Conclusion:** The conclusion of the lesson plan studied during the experiment allows to improve the quality of strength and endurance of 18-20 year-old qualified freestyle wrestlers. During the general physical preparation period, the recommended workout plan is a convenient and effective tool. For the organization of the training process designed to improve the strength of the wrestlers of the School of Higher Sports Excellence of the city of Nukus, the use of the following:

As a condition to improve the attitude to training exercises should be given priority to competitive activities. The introduction of this into the educational process can significantly increase

the interest in the classes of 18-20 year-old qualified freestyle wrestlers. Competitions and competitive exercises should be convenient for each student, not requiring special effort, interesting and expedient emotional organization.

**List of references:**

1. Decree of the President of the Republic of Uzbekistan dated July 29, 2022 336 «On measures for the further development of the Olympic sports wrestling».
2. Bakhodirovich, J. U. (2024). The methodology of developing the strength qualities of qualified young freestyle wrestlers.
3. Telmon Achilov, Timur Zufarov // <http://sersec.org/journals/index.php/IJAST/issue/view/292> 1913 – 1917
4. Improvement of combined actions of greco-roman style wrestlers taking into account the specifics of competitive activity