Proximus Journal of Sports Science and Physical Education
Volume 1, Issue 3, March, 2024
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

THEORETICAL ASPECTS OF SPEED-STRENGTH TRAINING OF SHORT-DISTANCE RUNNERS

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Annotation. Based on a theoretical analysis of data from scientific and methodological literature, the main direction and specific features of the training of qualified short-distance runners were determined. It has been established that the main condition for determining the content of training programs is the selection of the leading components of athletes' preparedness.
Key words: sprinters, speed-strength training, runners, annual cycle, speed abilities.

Introduction. Currently, the sporting achievements of runners of the Republic of Uzbekistan specializing in sprint running are several years behind the results of foreign athletes. This requires trainers, in collaboration with scientists, to look for new ways to rationalize and increase the effectiveness of the training process, the possibility of improving traditional forms and principles of its construction [5, 7, 8]. Recently, sports practice has accumulated a lot of positive experience in developing the speed and strength qualities of short-distance runners. However, the growth dynamics of modern sports skills require finding new, more effective ways to increase the level of special physical fitness [1, 3, 4].
Speed-strength training, during which special physical qualities are developed, occupies one of the leading places in the training program of short-distance runners and requires a large volume of exercises in different intensity zones. Training aids should contribute not only to the development of the necessary motor qualities, but also the ability to use them in the motor structure of a specialized exercise [2, 6, 9].
Literature review. Most experts believe that physical qualities such as strength and speed are closely related, while others determine the dependence of mastering the technique of the chosen sport on the level of strength and speed [10, 11].
Literary sources contain extensive material regarding the factors influencing the running speed of a sprinter. B. B. Babarakhmatov [12, 13, 14, 15] reviewed the most frequently recommended means and methods for improving the main components of running. He determined which aspects of physical fitness limit the development of speed. This will allow the trainer to create a program for individual correction of the training process [17, 19, 20].
The development of speed-strength qualities can be effectively carried out with the help of speed-strength and actual strength exercises [18, 21, 22]. Among the numerous means that contribute to their manifestation, jumping exercises are considered the most common [23].
The problem of choosing training tools that are adequate to training tasks is becoming increasingly urgent today. Reaching a new frontier of sports results is associated with the need to perform such training work that meets and even slightly exceeds the influence of the main competitive exercise [24, 26]. All this indicates the need for further improvement of the traditional system of using means and methods of speed-strength training for short-distance runners during the annual training cycle [25].

Research results. A high level of development of speed and strength qualities is a necessary condition for the preparation of qualified short-distance runners. Speed-strength training covers the entire variety of available

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means and methods aimed at developing the athlete's ability to overcome significant external resistance at maximum speed of movement. It should ensure the development of the quality of speed and strength in the widest range of their combinations [5, 7].

Strength training. The problem of developing the strength of the muscles involved in performing the main exercise is solved. The weight or resistance ranges from 80% to the maximum, and the nature and pace of the exercises varies - from 60% to the fastest. As a result of performing these exercises, the highest indicators of absolute muscle strength are ensured, which is also facilitated by the athlete's manifestation of volitional qualities. When performing special exercises, you should follow the following methodological rules:

- monitor the amplitude, tempo, and angular values of the manifestation of maximum muscle efforts for selective and most accurate impact on certain muscle groups in accordance with the working phases of the competitive exercise;
- use the reflex strength and elasticity of pre-stretched muscles;
- know that the faster the change in direction of movement is performed, the transition from flexion to extension, from "twisting" to "unwinding" and the shorter the braking path, the greater the impact the musculoskeletal system of athletes can withstand in this exercise;
- remember that the number of repetitions in one approach should continue until you feel slightly tired, but not exceed 25-30 in jumping exercises and without weights, 10-15 in exercises using light weights or effort on machines, 3-5 in exercises with medium weights or efforts;
- 1-2 - in exercises with large and maximum weights. The more repetitions, the more strength endurance develops.

Speed-strength training. The problem of increasing muscle strength and speed of movement is solved. Basic exercises or its individual elements are used, as well as their combinations without weights or with small weights in the form of a belt, vest, cuffs in running, jumping, and multi-jumps; running, jumping against the wind, downhill, increasing the distance between barriers, increasing the height of obstacles. The exercises are performed as quickly as possible and alternate at a given speed, as a result of which the greatest power of movements is achieved and the full amplitude is maintained.

Speed training. The problem of increasing the absolute speed of performing the main exercise (running, jumping) or its individual parts (various movements of the arms, legs, body) and their compositions (starting acceleration, acceleration, distance running) is being solved.

Scientists recommend facilitating the conditions for performing these exercises:

- running from a low start, acceleration with a reduction in the length of steps, the distance between barriers, increasing their pace;
- running or multi-jumping downhill, taking off from an elevation of 5-10 cm;
- use of special front traction simulators that lighten body weight by 10–15% (during push-off and running).

Movements should be performed as quickly as possible (rather than the main exercise or its element) and alternate at a given speed - 95-100% of the maximum.

Speed of movement is achieved by improving coordination of movements and consistency in the work of muscle groups. With continuous repetition of the exercises, the speed can be increased to maximum gradually, which will maintain relaxation and range of motion. These exercises should be performed at the beginning of the training session after warming up, having thoroughly warmed up the muscles in the previous repetitions (at low speed).

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Currently, many specialists adhere to such methodological provisions when using exercises in the process of developing special speed-strength abilities [5,10]: in order to create conditions for further increasing the level of development of speed-strength capabilities of individual muscle groups, that is, increasing speed-strength potential, local exercises are used in which resistance is overcome, which is 80% or more of the maximum with extreme and extreme intensity.

It is known that it is one thing to have a high level of this potential of individual muscles, and another to be able to demonstrate it during competitions. To increase the degree of use of this potential in the process of sports training, special and basic competitive exercises are used, in which the resistance value overcome is equal to the competitive value.

A significant drawback is that as the athlete's skill increases, the dynamics of shifts in the level of use of speed-strength potential when performing the main exercise decreases. This is explained by the following: when performing special and basic exercises, the athlete repeats them at the same speed. The body gradually adapts to it and favorable conditions are created for the formation of the so-called speed barrier, which sharply inhibits further increases in speed and the use of speed-strength potential.

We emphasize that special speed-strength qualities in qualified athletes at any stage of year-round training develop under conditions of high intensity of exercise. Therefore, in order to avoid stressful phenomena, it is necessary to systematically, taking into account the individual characteristics and functional state of the body, alternate large volumes of training work with medium and small ones in a weekly cycle, that is, use a variable approach [9].

Conclusions. 1. Three options for training athletes of different directions, which are used in speed-strength training, have been identified, and groups of exercises aimed at developing speed-strength abilities have been identified.

2. It has been established that the most important condition for determining the content of training programs is the selection of the leading components of speed-strength readiness.

3. To improve the training methodology, it is necessary to determine the rational composition of training means of different primary directions to maintain and maximize the special preparedness of qualified short-distance runners

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