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

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Abstract
Based on the theoretical analysis of the data of scientific and methodological literature, the main directions and features of the training of qualified short-distance runners are determined. It is established that the main condition for determining the content of training programs is the choice of the leading components of athletes' training.

Keywords: Sprinters, speed and strength training, runners, annual cycle, speed abilities.

Introduction

At present, the sports achievements of runners of the Republic of Uzbekistan specializing in sprint running are several years inferior to the results of foreign athletes. This requires coaches together with scientists to search for new ways to rationalize and increase the effectiveness of the educational process, the possibility of improving the traditional forms and principles of its construction.

Recently, a lot of positive experience has been accumulated in sports practice in the development of speed and strength qualities of short-distance runners. However, the dynamics of the growth of modern sports skills requires the search for new, more effective ways to increase the level of special physical fitness.

Speed and 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 amount of exercises in various intensity zones. Textbooks should contribute not only to the development of the necessary motor qualities, but also to the ability to use them in the motor structure of a specialized exercise.

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.

Literary sources contain extensive material on the factors affecting the speed of a sprinter. B. B. Babarakhmatov considered 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 coach to create a program for individual correction of the training process.

The development of speed-strength qualities can be effectively carried out with the help of speed-strength and actual strength exercises. Among the numerous means that contribute to their manifestation, jumping exercises are considered the most common.

The problem of choosing training tools adequate to training tasks is becoming more and more relevant today. The achievement of new frontiers of sports results is associated with the need to

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perform such training work that would correspond to and even slightly exceed the influence of the main competitive exercise. All this indicates the need for further improvement of the traditional system of using means and methods of speed-strength training of short-distance runners in the annual training cycle.

Results of the study

A high level of development of speed and strength qualities is a necessary condition for the training of qualified short-distance runners. Speed-strength training covers the entire variety of available means and methods aimed at developing the ability of the athlete to overcome significant external resistance at maximum speed. It should ensure the development of quality, speed and strength in a wide range of their combinations.

Strength training

The task of developing the strength of the muscles involved in the performance of the main exercise is solved. Weight or resistance ranges from 80% to maximum, and the nature and pace of exercise varies from 60% to the fastest. As a result of these exercises, the highest indicators of absolute muscle strength are provided, which is also facilitated by the manifestation of volitional qualities in the athlete.

When performing special exercises, the following methodological rules should be followed:

- control 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 force and elasticity of pre-tense muscles;
- know that the faster the change of direction of movement, the transition from flexion to extension, from "twisting" to "untwisting" and the shorter the braking distance, the greater the impact in this exercise can withstand the musculoskeletal system of athletes;
- remember that the number of repetitions in one set should continue until you feel slightly tired, but should not exceed 25-30 in jumping exercises and without weights, 10-15 in exercises with light weights or efforts 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 and strength training

The problem of increasing muscle strength and speed of movement is solved. Basic exercises or their 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 repeated jumps; running, jumping against the wind, downhill, increasing the distance between obstacles, increasing the height of obstacles. Exercises are performed as quickly as possible and alternate at a given speed, as a result of which the greatest strength of movement is achieved and the full amplitude is maintained.

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Speed training

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

Scientists recommend facilitating the conditions for performing these exercises:

- running from a low start, acceleration with a decrease in the length of steps, the distance between obstacles, increasing their pace;
- running or multiple jumping down from a height of 5-10 cm;
- use of special frontal deadlift simulators that lighten the body weight by 10-15% (when pushing off and running). Movements should be performed as quickly as possible (and not the main exercise or its element) and alternate at a given speed - 95-100% of the maximum.

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

At present, many specialists adhere to the following methodological provisions when using exercises in the process of developing special speed-strength abilities: in order to create conditions for further increasing the level of development of speed-strength abilities of individual muscle groups, that is, increasing the 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 having a high level of this potential of individual muscles is one thing, and being able to demonstrate it during competitions is another. 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 overcoming value of resistance is equal to the competitive value.

A significant drawback is that as the skill of the athlete increases, the dynamics of shifts in the level of use of speed and strength potential in the performance of 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 slows down the further increase in speed and the use of speed-force potential.

We emphasize that special speed and strength qualities in qualified athletes at any stage of year-round training are developed in conditions of high intensity exercises. 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, to use a variable approach.

Findings

1. Three variants of training athletes of different directions, which are used in speed and strength training, have been identified, and groups of exercises aimed at the development of speed and strength abilities have been determined.

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2. It has been established that the most important condition for determining the content of training programs is the choice of the leading components of speed and strength training.
3. To improve the training methodology, it is necessary to determine the rational composition of training means for various primary areas to maintain and maximize the special training of qualified short-distance runners.

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