

Method of Training the Speed and Endurance of Track and Field Athletes' Muscles Based on Human Anatomy

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Abstract: With more and more attention being paid to track and field athletes, the training methods of muscle speed and endurance of track and field athletes are gradually attracting people's attention. However, there are some shortcomings in training methods. Therefore, a method of training speed endurance of track and field athletes' muscle based on human anatomy is proposed. Referring to the training method of speed and endurance of track and field athletes' muscles, this paper correspondingly studies the methods of training muscles speed, the combination of sensitivity and speed as well as the combination of endurance and speed, in order to carry out specific exploration of the methods of training the speed and endurance of the track and field athletes' muscles.

Keywords: Human anatomy; Track and field athletes; Speed and endurance of muscle; Training methods

1. Introduction

With the continuous development of society, more and more attention has been paid to the development of sports industry, and the track and field industry has gradually entered the public's vision. Track and field sport can be said to be the easiest one to be operated and practiced among all sports, but track and field requests relatively higher physical ability of athletes. Muscle level of different parts of each athlete's body is the most direct and key factor affecting the results of track and field competitions. The major colleges and universities in our country are becoming more and more strict with sports training. In track and field training, colleges and universities have adopted many new and effective methods. But with the passage of time, as a whole, the teaching methods and content are still lack of innovation, and the results are not as good as before. In order to make track and field sport wins the support of the public and people can consciously accept it and apply it to daily life, relevant explorations have been made. The method of training speed and endurance of track and field athletes' muscles based on human anatomy has become an effective way to break through the bottleneck period of track and field development. In traditional training methods, coaches usually do not have a thorough understanding of their own trainees' personal characteristics, resulting in training being not targeted. There are no effective training results as a whole. More often, the training is useless as all. Sometimes, athletes may even suffer physical injury during these trainings. Targeted training based on human anatomy can reduce the occurrence of this situa-

tion to a great extent. Muscle strength is the source of all sports strength, but also an important guarantee for track and field sports to achieve good results. Therefore, through the research on the methods of training speed and endurance of track and field athletes' muscles based on human anatomy, this paper explores the ways of increasing the speed and endurance of track and field athletes' muscle. In order to further explore the muscle strength characteristics of track and field athletes, a scientific and reasonable exploration has been made, and a feasible method is provided for coaches to train relevant athletes [1].

2. Method of Training Track and Field Athletes' Muscle Endurance Based on Human Anatomy

It is the most important thing for the method of training athletes' muscle endurance based on human anatomy to train endurance which usually refers to the ability to do one thing for a long time. In track and field training, endurance is usually divided into general endurance and special endurance [2]. The ability to use medium or low intensity to keep the human body engaged in track and field for a long time is called general endurance, and the standard of measuring general endurance is the result of long-distance running. The ability of the human body to perform uninterrupted and intensive track and field sports at a certain time is called special endurance. It is obvious that special endurance needs to be based on general endurance. Only when general endurance has laid the foundation, can the promotion of special endurance be rea-

lized. The ability to enhance cardiovascular and muscular endurance is generally called general endurance, which is usually trained in the early stages of track and field sports. General endurance can be developed through long periods of small intensive exercise, such as walking, jogging and swimming. The development of special endurance is usually carried out in spring, which is based on the long-term training of general endurance. The devel-

opment of special endurance also needs long-term training to achieve. Coaches can lead relevant athletes to carry out simulate competitions or other exercises with great intensity for many times. Coaches should hold a certain proportion in training athletes' muscle endurance quality and special skills, and only in the appropriate proportion can they get better results, as shown in Table 1.

Table 1. The proportion of athletes' muscle endurance quality and specific skills

Item	Training Methods	One-time load	Combination of Connections	Rest mode
aerobic training	intermittent exercises	as many as possible	sectional connection	Positive
anaerobic training	intermittent exercises	200m-600m	sectional connection	Positive

3. Method of Training Track and Field Athletes' Muscle Speed Based on Human Anatomy

Method of training muscle speed of track and field athletes based on human anatomy is to improve the speed of athletes. The ability to accomplish the corresponding amount of tasks in a relatively short time is called speed in our daily life. In track and field sports, speed includes moving speed, action speed and reaction speed [3]. The strength of the athlete's muscles and the flexibility of his or her own central system determine the speed of the athlete in the race, that is, the speed of running which we are most concerned about. Sprint speed usually determines a person's running speed. The most important thing to develop this speed is to improve the overall quality of athletes, especially the elasticity of their muscles. And the corresponding explosive force should be good

enough. Every part of an athlete's body must have enough coordination and adaptability, and be flexible enough. Improving the performance of sprint is a very important index to improve the speed of running, which can be improved through exercises such as starting, accelerating, marching interval, high-intensity repeated running in different sections, variable speed running, intermittent running and other intensive training [4]. The amount of training of athletes' muscles must be large and the intensity should be high so as to achieve the contraction of athletes' muscles. Only in this way can the competitiveness of athletes be enhanced. Coaches should grasp certain methods in the training of muscle speed of track and field athletes based on human anatomy. Only under reasonable methods can they achieve better results than expected. The methods of training athletes' muscle speed are shown in Table 2.

Table 2. Methods of Training Athletes' Muscle Speed

age (years old)	10-20	20-30	30-35
General quality	40	50	55
Special quality	50	60	50
Special techniques	55	40	50

4. An Effective Training Method of Combining Muscle Speed and Sensitivity of Track and Field Athletes

The method of training muscle speed and sensitivity of track and field athletes based on human anatomy is to mainly develop to human's sensitivity which refers to the ability to cooperate when a person completes a task as well as the time to complete the task. The development of sensitivity cannot be separated from the development of coordination, which is the coordination of the body agencies to complete the work. Gymnastics, skills, martial arts, balls, games, rope skipping, high jump, long jump, hurdling and all-round sports are the main ways to achieve the construction of sensitivity and coordination in general [5]. If track and field athletes want to have a

long-term development, they must carry out the training on their muscle sensitivity based on human anatomy, which can lay a good foundation for their development. Track and field athletes' stride length and running frequency during the competition will have an impact on their final results. Only by improving its step length and step frequency can the performance of track and field competitions be improved naturally. But if we only focus on these two data indicators, there will be some other problems. So in reality, in the training of track and field athletes, it is necessary to train them by using the method based on human anatomy to train their muscle sensitive. Only by improving the physical quality of different athletes with certain aims, can we really improve the speed and sensitivity of athletes' muscles.

5. Effective Training Method of Combining Muscle Speed and Endurance of Track and Field Athletes

The effective training of muscle speed and endurance of track and field athletes based on human anatomy is to enhance their muscle speed and endurance, which is a necessary strength for athletes to achieve long-distance running. Muscle speed and endurance are the basic strength of athletes engaged in sports industry, which have a decisive impact on their daily training and competition. The realistic characteristics of track and field require athletes to mobilize the whole body cells in a short period of time, to achieve maximum strength, and to quickly exert all body strength, which requires the training of muscle speed and endurance of track and field athletes. The most common way to improve the muscle speed and endurance of track and field athletes is weight-

bearing exercise. In practical training, most coaches will adopt barbell practice. Usually, coaches also ask athletes to increase the amount of sprint training. According to the professional quality of relevant athletes, targeted and scientific training can be carried out, so that the training method structure can be continuously optimized. The effective training of athletes by coaches using the method of training muscle speed and endurance based on human anatomy cannot only avoid ineffective training, but also stimulate the athlete’s passion to a certain extent. However, coaches should grasp reasonable and feasible methods in the training of muscle speed and endurance of track and field athletes based on human anatomy. Only by scientific methods can they get the support of athletes, and the positive cooperation of athletes can make the training really achieve relevant results. The effective training method of combining muscle endurance and speed of track and field athletes is shown in Table 3.

Table 3. The Training Method of Combining Muscle Endurance and Speed of Track and Field Athletes

	Times	Distance	Ratio	Energy supply situation
Sprint fast running	120 times	4000 m	19%	Aerobic endurance
Medium speed jogging	160 times	5600 m	81%	Anaerobic endurance
Others	Various technical actions	Various technical actions	Various technical actions	anaerobic endurance takes the first place

6. Conclusion

This paper analyses the training methods of muscle speed and endurance of track and field athletes based on human anatomy, and realizes the design through carrying out detailed exploration on the training methods of muscle endurance of track and field athletes based on human anatomy, the training methods of muscle speed and sensitivity of track and field athletes based on human anatomy, and the effective training methods of the muscle speed and endurance of track and field athletes based on human anatomy. The concrete explorations show that the method designed in this paper is highly effective. It is hoped that this study can provide theoretical basis for the methods of training muscle speed and endurance of track and field athletes based on human anatomy.

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