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STRUCTURE AND IMPROVEMENT OF SERVING MOVEMENTS IN TENNIS

Structure and improvement of serving movements in tennis. The article reveals the features of improving movements during serving in big tennis. The development and implementation of new technologies for increasing the efficiency of the training process is a necessary condition for achieving success in modern sports. In recent years, scientific and technical progress has had a growing influence on the development of big tennis. The level of physical fitness of tennis players has significantly increased, which significantly increases the tempo of the game and the speed of the ball's flight. All this significantly affects the change in the technical and tactical equipment of tennis players. Therefore, the task of studying the specifics of the structure and improving the movements when serving in big tennis is definitely relevant.

So, in training, it is necessary to ensure that the athlete has the opportunity to play with a partner to whom the ball flies at a high speed. This task is easily solved in the training of girls by inviting a man as a sparring partner. In the training of young men, the game of one against two should be used more often - with greater suddenness of the appearance of the ball. We can recommend a game of one against two, a game with two balls that are introduced at the same time, as well as various mobile games and sports: volleyball, basketball, handball, football, hockey and their modifications; reducing the distance between players. To do this, you can bring the ball into play while standing on the back line, from the rebound make the next shot between the back line and the serving lines, then on the serving line, and so on, continuing to move towards the net. This exercise can be started by performing only kicks from summer. Start it by standing on the serving line, getting closer to the net with each shot.

Key words: *physical education, students of higher education, technique, great tennis.*

Лукачина А. В., Бурлака І. В. Структура та удосконалення рухів при подачі у тенісі. *В статті розкрито особливості удосконалення рухів при подачі у великому тенісі.* Розробка та впровадження нових технологій підвищення ефективності тренувального процесу є необхідною умовою для досягнення успіхів у сучасному спорті. Останніми роками в розвитку великого тенісу зростаючий вплив надає науково-технічний прогрес. Значно підвищився рівень фізичної підготовленості тенісистів, що суттєво підвищує темп гри та швидкість польоту м'яча. Все це помітно впливає на зміну техніко-тактичної оснащеності тенісистів. Тому, безумовно, актуальним є завдання щодо вивчення особливостей структури та удосконалення рухів при подачі у великому тенісі.

Ключові слова: фізичне виховання, здобувачі вищої освіти, техніка, великий теніс.

Formulation of the problem. The development and implementation of new technologies to improve the efficiency of the training process is a necessary condition for achieving success in modern sports

In recent years, the development of tennis has been increasingly influenced by scientific and technological progress. The use of synthetic and composite materials for the production of rackets. Computer simulation that allows you to create more and more new types of rackets with unique aerodynamic and elastic properties, different configurations, head area and controllability. Of great importance is also the introduction into practice of a variety of tennis court surfaces: grass lawns, synthetic carpets, plastic, concrete, soil, wood, etc. A significantly increased level of physical fitness of tennis players significantly increases the pace of the game and the speed of the ball. All this significantly affects the change in the technical and tactical equipment of tennis players. Therefore, of course, the task of studying the features of modern technology of the main blows in tennis is relevant.

According to many experts, the serve is one of the most important and most difficult techniques of a tennis player's technique. Each point is played with a serve. The quality of the serve, the success of its application depends only on the server. The results of the matches of the strongest tennis players in the world in modern tennis are determined primarily by the efficiency of the serve [1].

Like the game as a whole, the pitch has improved over the past decade and has reached a level that was previously unimaginable. Taller and stronger tennis players, who play with modern powerful rackets and have good control over their bodies, often have a “supersonic” first serve in their arsenal.

In addition to this powerful serve, players are proficient with dangerous cut and twist serves.

A number of works of both domestic and foreign authors are devoted to the study of filing. However, in recent years, significant changes have occurred in the impact technique itself. At the same time, an analysis of the serves of Russian tennis players showed that in some respects they are inferior to their main foreign rivals. Therefore, it is very relevant to further study the delivery - a complexly coordinated technique and improve the methodology for teaching it.

It should be especially noted that knowledge of the biomechanical patterns of the execution of a technique, according to many tennis experts and coaches, is crucial for success on the court, allowing a tennis player or his coach to decide which

characteristics of the game need to be changed and which should be left unchanged [3].

Due to the great importance of effective serves in the modern game, the study of the technique of serves from biomechanical positions, the determination of the role of individual elements of movement in their execution, as well as the identification of differences in the features of the performance of strokes by tennis players of various qualifications provides the necessary information for the formation and improvement of modern technique of serves.

Analysis of recent research and publications. Great tennis is not just a game, it is a kind of sport, a kind of whirlwind spirit of super-nativity, a sense of leadership and collectiveism at once. Tenis trains character, attaches strimanity and at the same time allows emotions to splash. Tse hoarsely sight, tse gra, which grows into life. Once holding the racket, її not so easy to miss. Gravtsi, who run across the field and try to drive the ball like they found it, so that the supernik did not catch it, cry out for the hoarding, stink in their own strength of character, maturity of thought and, of course, physical beauty. Tenis, as if it were any other kind of sport, forms a beautiful statue, casts m'yazi and encircles the contours. Even in the 18th century, tenis vazhavshis thunder of the intelligentsia, only the elite could afford it. Once tennis became more accessible, but not less addictive. At the tennis courts, they play on sports maidanchiks, at the yards they play at picnics, it's amazing, groaning and having a wonderful time. But it's not so easy to learn how to play the great tennis, it's not stupid to wave rackets, it's art, it's necessary to be smart with your heart and understand your mind [1, 2, 5].

Presentation of the main research material. The initial stage of learning to play tennis is more difficult than in many other sports. Sometimes you have to spend a lot of time to learn to hit the ball through the net several times in a row. Not only the technique and the ability to form new, increasingly complicated forms of movements, as well as differentiating the amplitude and timing of movements by different parts of the body is important when playing tennis. An important role is played by the ability to quickly and appropriately transform movements and forms of action during the competition.

Here they strive to bring the coordination abilities corresponding to the specifics of sports specialization to the maximum possible degree of perfection. The technique of developing the accuracy of movements consists of a complex of strength, speed, dexterity and flexibility training of the player's movements. At the same time, it is necessary to take into account the individual approach to a specific person, the age criterion, the time of rest, the degree of stress and experience.

Tennis is a complex game, full of nuances and mysteries, which must be understood in order to feel the full power of this sport. But, despite all its complexity, tennis is a game that everyone can master. In order to learn to play great tennis, you don't have to have super natural abilities, you don't have to have a rare talent or an amazing gift. Tennis makes high demands on physical and mental abilities. During training, the player develops reaction speed and impact power with special components for endurance, dexterity, as well as reactive and coordination abilities to manage their technical and tactical actions [4].

General characteristics of human coordination abilities In modern conditions, the volume of activities carried out in probabilistic and unexpectedly arising situations, which requires the manifestation of ingenuity, speed of reaction, ability to concentrate and switch attention, spatial, temporal, dynamic accuracy of movements and their biomechanical rationality, has significantly increased. All these qualities or abilities in the theory of physical education are associated with the concept of dexterity - the ability of a person to quickly, efficiently, expediently, that is, in the most rational way, master new motor actions, successfully solve motor tasks in changing conditions. Agility is a complex motor quality, the level of development of which is determined by many factors. Highly developed muscle sensation and the so-called plasticity of cortical nerve processes are of the greatest importance. The degree of manifestation of the latter depends on the urgency of the formation of coordination ties and the speed of transition from one attitude and reaction to another. Coordination skills are the basis of dexterity. Motor coordination abilities mean the ability to quickly, accurately, expediently, economically and resourcefully, that is, to solve motor tasks (especially complex and unexpectedly arising) in the most perfect way. Combining a number of abilities related to the coordination of movements, they can be divided into three groups to a certain extent. The first group. Ability to accurately coordinate and regulate spatial, temporal and dynamic parameters of movements. The second group. Ability to maintain static (posture) and dynamic balance. Third group. Ability to perform motor actions without excessive muscle tension (stiffness) [2].

An important quality of motor acts is their accuracy, which also changes significantly with age: up to 5 years old, it is difficult for children to make precise movements; in the elementary school period, the accuracy of movements increases significantly, and from about 9-10 years old, children are able to perform movements with the accuracy of adults. Mastering the accuracy of movements is associated with the maturation of the higher centers of regulation of motor actions and with the improvement of reflex pathways, namely with the processes of myelination of nerve fibers. Along with the development of accuracy of movements, children develop the ability to coordinate the level of muscle tension. In younger schoolchildren, this quality is not yet sufficiently developed, and it is finally formed only at the age of 11-16. Mastering calligraphic handwriting, performing complex labor operations (working with plasticine, sawing, etc.), as well as special physical exercises in physical education classes, such as gymnastics, table tennis, games and exercises with a ball. An important quality of children's physical development is the formation of their endurance, including the endurance of skeletal muscles. Endurance for dynamic work in children of primary school age (7-11 years old) still remains very low and only from 11-12 years old it begins to gradually increase, reaching approximately 50-70% at 14 years old, and 80% of that endurance at 16 years old , which is owned by adults. Endurance for static efforts in children gradually increases from 8 to 17 years, and it happens most intensively in younger schoolchildren. At 17-18 years of age, static endurance reaches 85% of that of adults. Finally, endurance to dynamic and static efforts reaches a maximum in 25-30 years. The development of all types of endurance is facilitated by long walking, running, swimming, sports games (football, volleyball, basketball, etc.). The manifestation of coordination abilities depends on a number of factors, namely: uman ability to accurately analyze movements; activity of analyzers and especially motor; complexity of the motor task; level of development of other physical abilities (speed abilities, dynamic strength, flexibility, etc.); courage and determination; age; are engaged in general preparedness (that is, a stock of various, mainly variable motor skills and skills) and others [3]. Physical recreation mainly solve health problems. This is facilitated by various forms of its implementation, which

suggest changes in the nature and content of physical exercises depending on motives, interests and needs of students. But, despite the freedom of choice of content, character and forms physical exercises, a positive effect can be obtained only thanks to competent and skillful organization of activities and their impact on the young organism.

It is possible to significantly increase the speed of movement, the height and range of the jump, the force of the impact, improving the power capabilities of the muscles that perform the main load in these actions. When building strength, tennis players use general preparatory and special preparatory exercises, as well as training forms of competitive exercises. General training exercises are aimed at the comprehensive development of strength abilities, which, in turn, can become the basis for effective specialized training. These exercises must be selected taking into account game activities. In addition, among the means of general training, it is necessary to have those that could level the one-sidedness of development when playing tennis.

After all, it is no secret that tennis players have dramatically different development of hands, shoulders and other parts of the body. For general preparatory exercises on special simulators, with a barbell, stuffed balls, with dumbbells, regular squats and with weights. Special preparatory exercises include individual elements found in the game of tennis, or movements formed on their basis. Special preparatory exercises should have similarities in the kinematic structure and mode of muscle tension with technical techniques performed by tennis players [6].

The difference should be in the magnitude of these muscle efforts. Of course, it should be more in special preparatory exercises. The special preparatory exercises of tennis players include the imitation of all the main strokes of tennis players with dumbbells, weighted with rackets, shock absorbers, stuffed balls and on special training devices designed by I. Vsevolodov (candidate of pedagogical sciences, associate professor. Author of a large number of inventions, training devices , which must be used in the training process of tennis players to solve various training tasks, improve technique, and develop physical qualities). However, it is possible to imitate not only the entire stroke, but also a part of it, for example, the final phase of the stroke during serves, strokes to the right and left, etc.

Training forms of competitive exercises assume the execution of basic strokes on the court, at the training wall somewhat weighted with rackets. The weight of the load should be selected in such a way that the basic structure of the movement is not distorted. Some experts, for example, recommend using a weight of no more than 0.5 kg, attaching it to the middle part of the racket and hitting the wall from a distance of no more than 3-4 m, up to 10 hits in a series. Training forms of competitive exercises should include all types of blows performed with great force. The main methods of strength training include the method of repeated efforts (repeated performance of a strength exercise with unsaturated weights), the method of maximum efforts (one-time and repeated performance of a strength exercise with maximum and limit weight).

The method of repeated efforts is used by all athletes at the beginning of the preparatory period. If the athlete does not need to increase his own mass, he should do 5-6 repetitions in the approach, since 10-15 repetitions lead to a large increase in it. It must be said that the latent time of the motor reaction (reaction speed indicators) is not related to movement speed indicators. Therefore, you need to train them separately, using specific exercises and methods. The speed of a complex reaction to a moving object largely depends on the ability to see a ball moving at high speed.

Conclusions. Researchers have established that this ability to see is trained. Training is based on requirements for: increasing the speed of a moving object, in our case - a ball. So, in training, it is necessary to ensure that the athlete has the opportunity to play with a partner to whom the ball flies at a high speed. This task is easily solved in the training of girls by inviting a man as a sparring partner. In the training of young men, the game of one against two should be used more often - with greater suddenness of the appearance of the ball. We can recommend a game of one against two, a game with two balls that are introduced at the same time, as well as various mobile games and sports: volleyball, basketball, handball, football, hockey and their modifications; reducing the distance between players. To do this, you can bring the ball into play while standing on the back line, from the rebound make the next shot between the back line and the serving lines, then on the serving line, and so on, continuing to move towards the net. This exercise can be started by performing only kicks from summer. Start it by standing on the serving line, getting closer to the net with each shot. The speed of the selection reaction largely depends on the ability to choose a response action to the hit made by the opponent. It is necessary to instantly decide which shot should be performed on the ball, which countermeasure will be the most effective in a specific situation.

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