

**THIS CONTENT IS A PART OF A FULL BOOK - TENNIS FOR
STUDENTS OF MEDICAL UNIVERSITY - SOFIA**

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Tennis technique

I. Basics of technique. Essence of the technical training

Tennis is a sport that develops primarily at the expense of improving the technique. Even the most developed motor skills, mental toughness, fighting, etc. cannot replace or compensate for its lack (Todorov 1985). Therefore, according to specialists, it should prevail in the training process as its main component (Scorrudduva 1985).

Technique in sports is understood as ways of performing motor activities. "A man never moves at all, but always acts" (Bernstein 1962). In its whole, the technique represents the "exit door" to show the overall sports training. It is defined as "a specialized system of simultaneous and consecutive movements towards a rational organization of the interaction between internal and external forces acting on the athlete's body with the aim of their fullest and most efficient use to achieve the highest possible result" (Djaichkov 1967). It includes in itself both the form and content of the athlete's movements. There are no movements unrelated to their own quantitative and qualitative aspects (Васильев 1961).

The game has usually three phases: offense - when one side controls the ball; defense - the other side does not control the ball, and intermediate - when both sides act without a ball (Ports 1986). It is played on the basis of certain established technical habits - automated elements of the conscious activity, which includes active search, information processing, mental solution and its physical implementation (Porton 1986). This is a goal that determines the success of the students' learning process as well as during play. It is necessary to "practice all the simple game actions and to perform them really well" (Vuds, Fernandez 2004; Reiter, Groppe 2004).

The technique of tennis has recently evolved towards the earliest possible "striking" - hitting the ball immediately after the bounce before it has reached the highest point of its trajectory. The relative "immobility at the moment of impact - staying sideways to the net" is replaced by hitting shots on the run with "frontal movement on the court". The defense against the approaching-the-net opponent has become "active defense - a counterattack with low sharp passing shots, low short diagonals, shots in the air on a flying and falling ball, and others" (Gayman 1977).

Such type of diverse and varied technique of the game is practiced and studied by both the male and female students, and is manifested (Gayman 1977) in:

1. The ability to perform a set of all seven stroke groups: serve, shots on a bounced ball, volleys, groundstrokes and ?? ball, overheads, lobs and drop shots.
2. The mastery of flat, topspin and sliced variations of the shots from mild to powerful performance at three different levels - high, medium and low, in various directions and shape of trajectory, under different conditions, and so on.
3. Variation of player's technique depending on the different court surfaces.

The basic technical requirement in each game action is the ability of students to accurately and via controlled power send the ball in the desired direction and place on the court, depending both on their own and the opponent's position, as well as their movement at the moment of impact. The implementation of each one requires a high accuracy when performing the strokes movements, in combination with:

- a) Maximum effort of the neuromuscular apparatus to reach the ball sent by the opponent.
- b) Playing each ball with the necessary force and accuracy.
- c) Execution of the movements: 1) at the moment of player's constantly growing fatigue, and 2) despite the ever changing playing conditions - high temperature, sun, wind, etc.
- d) Hitting the striking movements when thinking of the instant result and the final outcome of the rally.

The requirements for accuracy and power of the impact movements during competition are determined by the level of technique, which imposes its improvement to a degree of automation.

II. Tennis shots technique

Tennis is a game whose technique consists of movements and actions of different shapes, speed, amplitude and strength – basic stances; holding of the racket; starting, stopping and moving in the necessary direction and with the corresponding speed; performing various and numerous ball hits and so on.

II.1. The grips of (ways of holding) the racket are one of the most important elements of the game's technique. They are characterized by: the specific way of holding the racket at each stroke, stability in the "hand-racket" system and the angle between them - almost straight.

They differ in the position of the angle between the thumb and the index finger relative to the surface and edges of the handle, which is oriented towards the player. Holding differences also occur in the lateral inclination of the racket's head to the terrain, which directly affects the technique of executing the strokes and the ball's flight. Types of grips are:

- (a) **Eastern forehand grip** - considered to be fundamental in the initial stages in tennis and is accepted as the most universal. With this grip, the tip of the angle between the thumb and index finger is located on the center of the upper surface of the handle (Figure 15). The face of the racket's head is oriented vertically-perpendicular to the ground, i.e. "ready to shake hands". The training of beginner students starts with this grip. It is convenient for performing shots on the forehand side of varying heights and strength, and can also be used for forehand volleys and lobs.

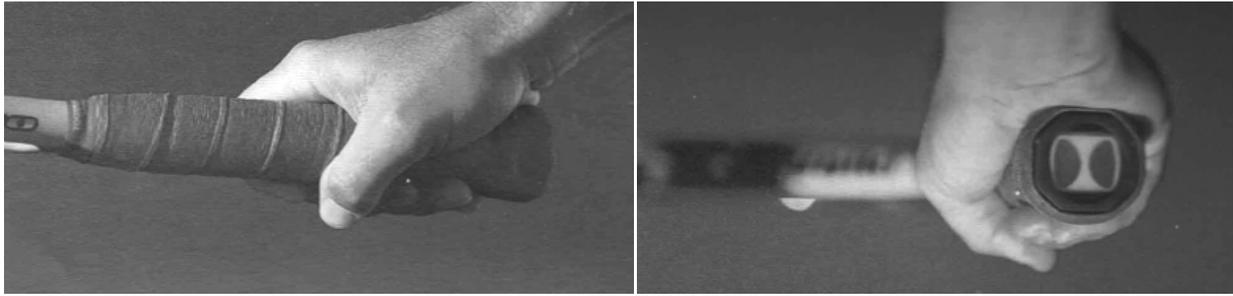


Fig. 15. Eastern grip

b) Continental (universal) grip - the angle between the thumb and index finger is located at the edge between the top and middle left side racquet (Figure 16). The face of the racquet's head is neutral, "as if you're holding a hammer." This grip significantly increases the acceleration of the racquet when serving. It is deemed to be the most convenient for the serve and overhead shots. Advanced players use it for both the forehand and backhand volley. It is also considered to be the universal grip in the groundstrokes training of novice players.

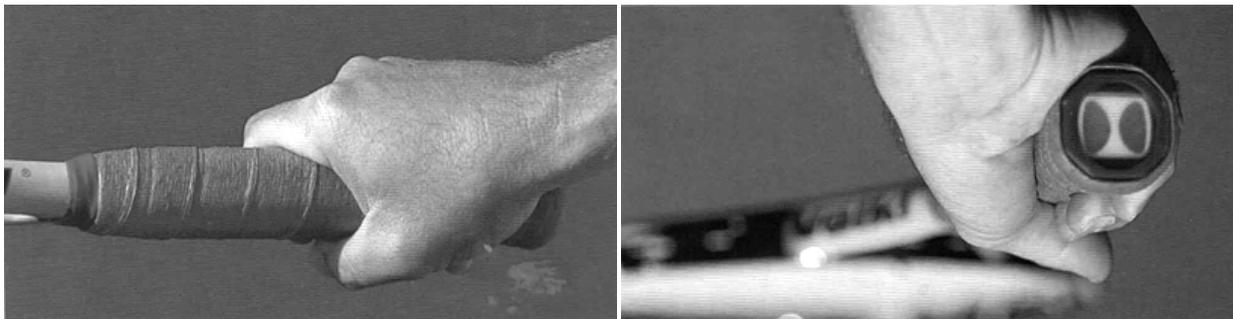


Fig. 16. Continental grip

C) **Semi-western forehand grip** – designed for hitting fast-bounced balls. It's not suitable for playing low balls and shots from the air. The angle between the thumb and index finger is on the right upper semi-surface of the racquet handle (Figure 17). It is used mostly for hitting shots at above-the-waist height and for aggressive topspin shots on the forehand.



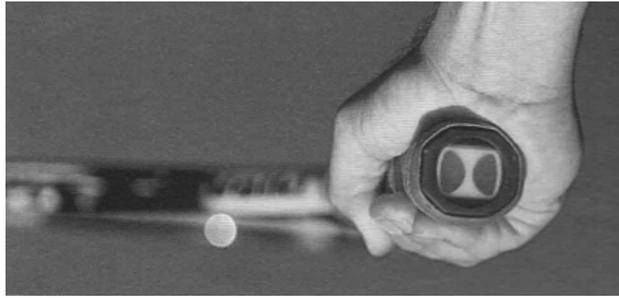


Fig. 17. Semi-western grip

d) Eastern backhand grip - used mainly for executing a one-handed backhand from beginner and advanced players. With this grip, the thumb holds the racquet very firmly underneath (figure 18), which is why it is believed to be one of the strongest grips in tennis. It provides considerable freedom of action and control in playing low balls, but on the other hand, it is difficult to play the high ones.

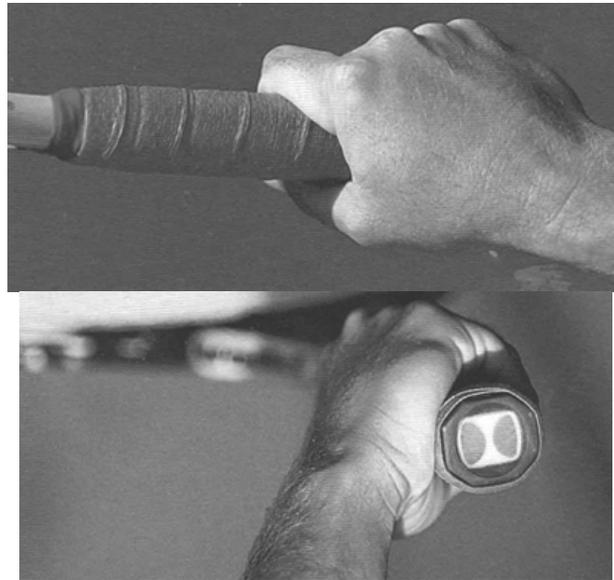


Fig. 18. Eastern backhand grip

d) Semi-western backhand grip - it is the same as the semi-western forehand grip, but on the reverse side (Figure 19). The tilt of the racquet's face is below 45 degrees facing downwards, making it extremely suitable for one-handed, heavy topspin balls from the baseline, high-bouncing topspin and defensive play from the baseline.

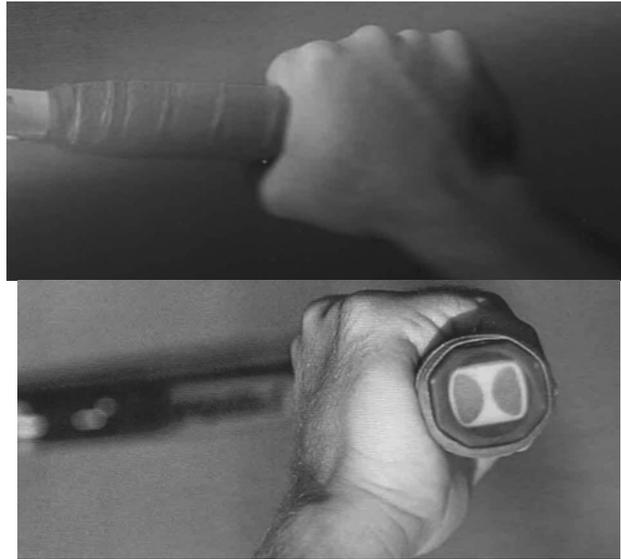


Fig. 19. Semi-western backhand grip

- e) **Two-handed backhand grip** - the two hands are placed "glued" one above the other. The ideal way to position them on the racquet's handle is when the dominant hand is in continental while the non-dominant hand is in the semi-western grip (Figure 20). The positive feature of this grip is the opportunity to hit a strong and solid shot on the backhand, for which the player needs to make better and more precise adjustments.



Fig. 20. Two-handed backhand grip

II.2. Stroke preparation

Phases sequence in learning and executing of each stroke:

- Starting position (initial set-up);
- Preparatory phase - preparation for the impact motion;

- Execution phase - contact point and actions on the ball in the immediate execution of the impact motion;
- Final phase – movement after the impact and return to the starting position.

Starting position. Each action begins from the starting position. This is a specific stance that players take in anticipation of the ball hit by their opponent. Aspects of the game such as a preparation for the return of serve and initial reaction speed for the groundstrokes depend on it.

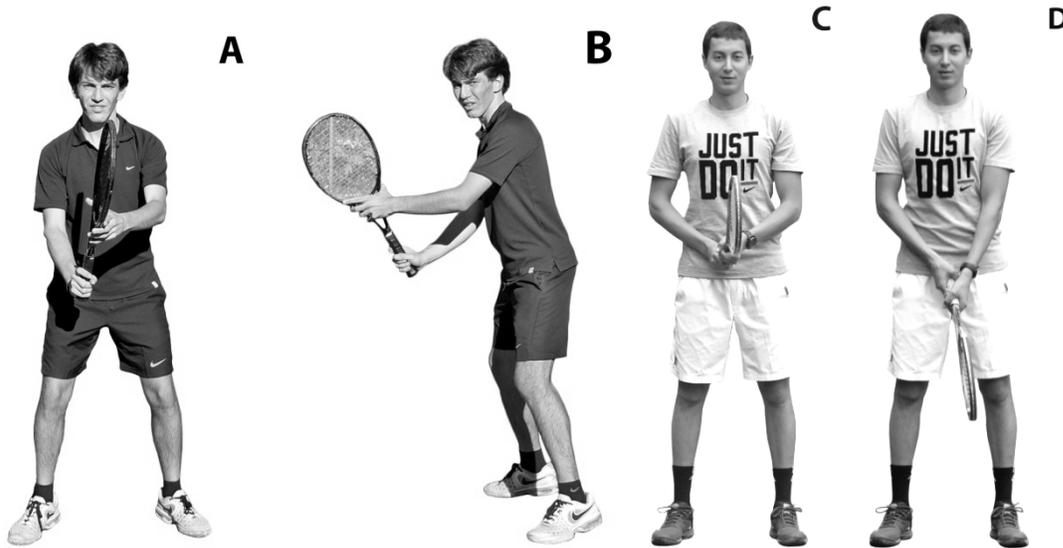


Fig. 21. Starting position

The player stands on the baseline of the court facing the net (Figure 21). The shoulders are parallel to it, the body is slightly tilted forward, and the chest is relaxed. The legs are spread shoulder-width apart and are slightly bent in the knee and hip joints. The racquet is in front of the body at an angle to the ground. It is held with an eastern grip and the fingers of the other hand hold its neck. The face of the racquet is oriented perpendicularly downwards. The purpose is to respond in a timely and the most correct manner to hit back.

The posture is in preparation for the upcoming actions, rather than static, and occurs before each stroke.

Mistakes in learning and executing the starting position in tennis:

- The body is tilted very far downwards from the waist or is too upright (Figure 21c).
- The legs are too close or very wide open (Figure 21a).
- The head of the racquet is facing sideways or downwards (Figure 21d).

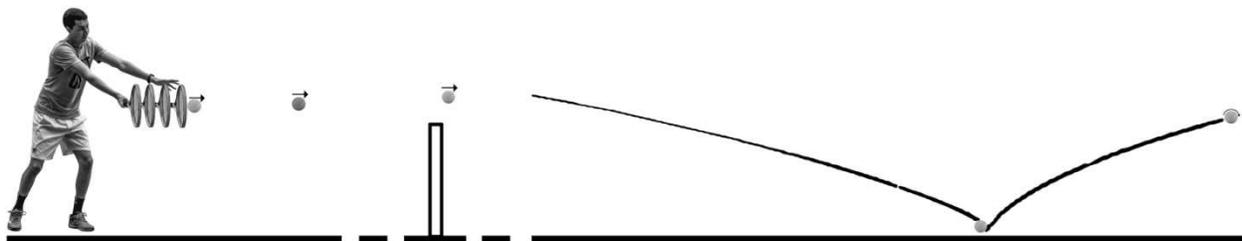
Game stance. This is an anticipatory action in which the tennis player awaits the ball. It is different for each stroke and player. Preparing and beginning the impact motion on the pending stroke is carried out after the opponent has hit the ball. This is in holds until the ball lands on the

ground in front of the player. Until then, it is being watched. Once the ball bounces, it is hit either from the left or right side of the player.

Strokes on a rebounded ball- Basic strokes. The bulk of the strokes are played on a bounced ball, as they are deemed major in the game. They also determine to a significant extent the outcome of the rallies. That is why, the way of their performance, effectiveness, strength, speed and direction of ball after impact are of utmost importance.

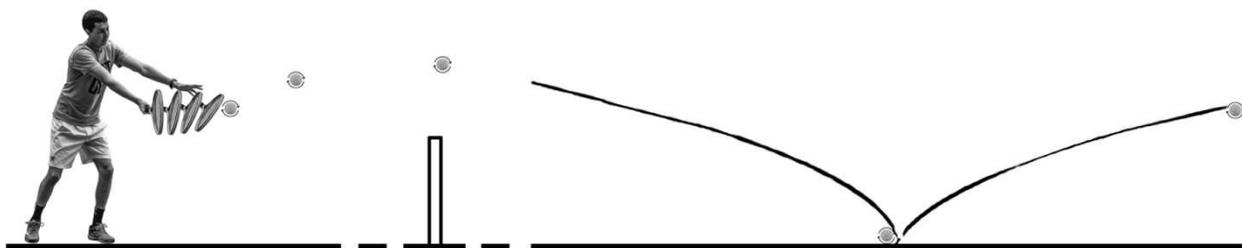
Types of ball rotation in the different strokes. After impact, each ball moves on a different trajectory and rotates around its own axis in the air until it reaches the opponent's side. For beginners, it is important and necessary to recognize the different spins of the ball, their effect after bouncing on the court and the possibilities for efficient use of its spin.

Ball without spin (flat ball)



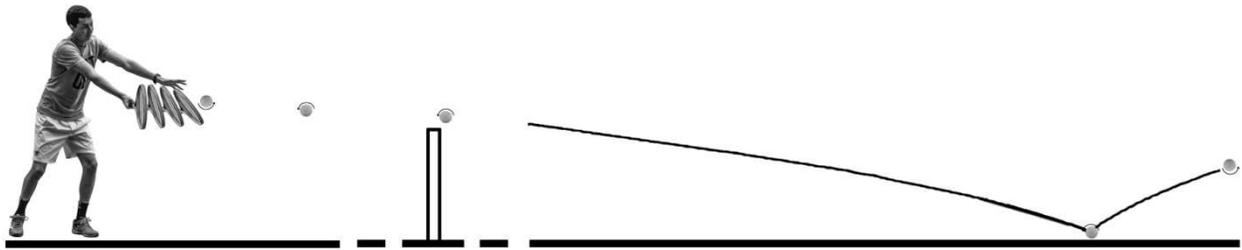
A shot with no spin is usually hit from the baseline when the player seeks to hit a winner or end the point. Flat-hit balls are efficient, they are deep and push the opponent so that s(he) can hardly play them back. The racquet's movement is mainly forward when executing the flat stroke. The bounce on the court is fast, but it's very difficult to control. It is recommended mostly for attacking towards the net from inside the court.

Topspin ball



This stroke is primarily used by a player who seeks to hinder the opponent with an added movement to a ball sent from the baseline. The racquet motion is from the bottom up and forward and gives the ball a strong spin. The bounce after hitting the ground is high forward. They are deemed to be the most used and challenging balls, since they keep the opponent away from the baseline and make him/her play until s(he) misses the ball.

Slice ball



This ball is hit with backspin (or underspin). It is usually performed with a continental grip on both sides with racket movement from top to bottom and forward. These strokes are safer than the flat, but more difficult to perform than the topspin ones. The bounce of the balls is low, which makes the opponent stand close to the net or use more topspin to return them back. Additionally, the slice shots are often used in attacking, for approaching the net, as well as for constant defensive play from the baseline.