

ACQUIRING BALANCE SKILLS ESSENTIAL FOR TENNIS

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One of the most important things in becoming a good tennis player is to be in the correct position to hit the ball. Not only does your footwork have to be good to be able to get to the ball, but you also have to be *balanced* once you get there. Therefore, a player needs to learn to master and control his/her body.

Research in junior competitive tennis has shown that losing balance while hitting causes 80% of all errors. Usually reasons such as hitting the ball too close or too far away from the body, bad elbow position, too high shoulders, etc. are given; when the real reason is that all these problems are caused by loss of balance. We tell players to maintain their balance, easier said than done. As coaches, we have to train some players how to be balanced. My experience has been such that balance training has either solved the corrective technique problem or magnified the problem and therefore making it easier to solve the problem.

Balance training must, from the start, be very carefully incorporated into the technique learning process. Top players almost never lose balance, and if they do, then they usually hit the ball like any other amateur player, because they are subject to the same laws of mechanics as the great mass of amateur players. Of course, the very top players will manage to save many situations thanks to their artistic ability, but this talent is rare, and is an exception rather than the rule.

By undertaking a simple balance-training program, a player will know how their head, upper body and leg positions will improve their balance.

A player doesn't have to be still in order to be balanced. "Dynamic Balance" is when a player maintains balance on the move. The concept of keeping your body and racquet under control while you are moving is referred to as *dynamic balance*. Of course this will not always be possible, especially when you are pulled wide on a shot. The key is to keep control of your center of gravity as much as possible while you are playing. The center of gravity is best described as the point about which your body balances most perfectly.

During an actual point in a match, your center of gravity may even fall outside of your body in certain points. Reaching or lunging pulls the body off balance which slows the next movement and keeps you from producing power on your shots. Keeping the center of gravity in line with your base of support gives optimum balance and, lowering your center of gravity, makes you more stable.

The position of the **center of gravity** is very closely dependent on **balance**. There are **three main factors** involved in **maintaining balance**:

HEAD POSITION

UPPER BODY POSITION

LEG POSITION

HEAD POSITIONING

The organs of balance are situated in the head (more precisely in the ears). Twenty percent of the nerve fibers that leave the eye go to those areas of the brain concerned with balance. Vision and balance are thus connected:

When the body is thrown off balance, the brain demands that the eyes contribute information to help get the body back under control. The average adult head weighs 12-15 pounds. When we move our head excessively in order to see, we risk throwing the whole body out of balance.

UPPER BODY POSITION

The upper body is the heaviest part of the human linking system. As a rule, it accounts for 43.46% of the total body weight. The head accounts for 6.94%, the arms 4.94% and the legs 19.86%.

This weight ratio strongly implies that any strong inclination of the upper body near the shifting of the body's center of gravity must lead to instability. Thus, it can be stated that the head and the upper body form a unit.

LEG POSITION

The legs play a very important role in maintaining body balance. The leg position will be discussed later in this article.

The goals of this article are to demonstrate a simple on-court balance-training program that will highlight *what I consider* to be the key fundamentals of balance; help a player develop neuromuscular control and improve a player's state of equilibrium; and help a player know how their head, upper body and leg positions will improve their balance. Numerous drills that I will share in this article have been acquired from various coaches and players throughout my coaching career.

BALANCE

For the BEGINNER (1.0-2.5 NTRP) or less coordinated player

To check balance, imagine 2 "Balance Lines" running through your body.

The first runs from TOP OF THE HEAD TO GROUND. Avoid bending at the waist or leaning over when reaching for the ball. The goal is to get your center of gravity (COG) to the ball not just your racquet.

The second line runs LEVEL ACROSS THE SHOULDERS. The goal is to keep this line level and avoid "tipping". Level shoulders help to make a stable racquet path.

This "Barbeque Stick" must be kept straight for maximum balance.

Balance drill for beginners:

Start with a mini-tennis rally. Both players cooperate to get team points. Give the team 1 point for contacting with both “Balance Lines” straight and 1 point for getting it in the court. This drill can be done against another team too.

Call out when points are achieved (“1 point”, “3 points”, etc.) When both players reach 20, the drill is over.

Progress to $\frac{3}{4}$ court, then to baseline to baseline. Next, have one player at the net hitting volleys and play again.

THE BALANCE TRAINING PROGRAM

The training program involves the following set of exercises broken down into four levels.

LEVEL 1: HEAD POSITION EXERCISES

LEVEL 2: UPPER BODY POSITION EXERCISES

LEVEL 3: LEG POSITION EXERCISES

LEVEL 4: STROKE-SPECIFIC BALANCE EXERCISES

LEVEL 1: HEAD POSITION EXERCISES

Purpose: to help players identify and feel the head position during strokes.

The best preconditions for good body-stability are an upright and still head position. The more the head is inclined in a given direction, the more unstable the body position will be. This means that in as many shots as possible, the head should be kept upright. The head should remain over the center of gravity and stay relatively still almost all the time. The more your head is over your center of gravity, the more efficient your visual tracking, balance, strokes and recovery.

a. General head positioning

The head should remain above center of gravity and stay relatively still at all times. The more your head is over your center of gravity, the more efficient your visual tracking, balance, strokes and recovery. If the head gets too far off the center of gravity as you move to the shot, you will have difficulty hitting in balance, control and recovery.

- Keep the head still and in front
- When moving or recovering, keep the head above the center of gravity
CUE: HEAD OVER BELLY BUTTON
- Minimize “bobbing” up and down when running
- Minimize moving the head laterally back and forth

b. Head positioning for tennis strokes and drills

- a. Hit balls with non-dominant hand on head (to keep head still)
- b. For groundstrokes, both players place a folded towel on their head and attempt to rally. If towel falls off, they lose point.
- c. For volleys, put one-hand behind their back, this helps “feel” balance in their

- body.
- d. For serves and overheads, keep the head up (non-dominant hand kept up until follow-through
Tip: catch ball with a cone in the non-dominant hand (like an outfielder in baseball). This helps keep the head up.
- e. Play points with a pencil behind the player's ear. If the pencil falls off at anytime during the point, the opponent wins the point. This helps a player with the pencil behind the ear, focus on keeping their head still while playing points.

LEVEL 2: UPPER BODY POSITION EXERCISES

Purpose: to help players identify and feel the upper body position.

Care should be taken that, while hitting the ball, the upper body is kept in as upright a position as possible.

SHOULDERS & HIPS:

- Minimize bending at the waist
- Minimize shoulder tilt on the groundstrokes and volleys

The non-dominant hand plays an important role in balance during stroke production. Just as a tightrope walker uses his hand to maintain balance, so does a tennis player. The non-dominant hand helps to facilitate upper body rotation and enhances a good center of balance by countering the racquet arm.

What I would like to do is to explain the position of the non-dominant hand for the various strokes.

a. Serve

- Initial tossing position:

- ball is on the finger tips, not palm-for control of toss
- pretend the player is holding an "ice cream cone" for firm wrist

DRILL: Use a polyspot with a ball on it. Toss ball and see how close the ball lands near the polyspot.

-Release of the ball:

- keep arm up and look over the arm to see opponent's court
- DRILL: Water cup and table- "lift up off the table"

-Follow-through:

- catch finish (tip: transfer racquet to non-dominant hand or knock a pyramid of balls placed on the ground beside the foot in which the follow-through will finish).

b. Backhand groundstroke

i. One-hander

- **Ready position:** cradle racquet with non-dominant hand and this also helps

with the necessary change grip

- **backswing:** Non-dominant hand takes racquet back and helps with the preparation phase of the stroke
- **Follow-through:** The non-dominant moves back toward the back fence

ii. Two-handed backhand groundstroke

The non-dominant hand can be passive in movement or aggressive in movement.

-Passive: this occurs when the dominant hand is aggressive. This occurs when the non-dominant hand is on the racquet just going for the ride.

This passive nature of the non-dominant hand is generally used for wide, low or fast balls

-Aggressive: this occurs when the non-dominant hand is more aggressive in movement than the dominant hand.

This aggressive nature of the non-dominant hand is used for heavy topspin and sharp angle shots.

c. Forehand

The non-dominant hand plays a crucial role in achieving upper body balance and freedom of movement in the forehand.

Players are either **The Pretzel** or the **Dead Arm**

The Pretzel: This occurs when the non-dominant hand crosses underneath the dominant arm, which swings the racquet. In effect, one side of the body fights the other, causing unnecessary tightness and inhibiting proper extension through the shot.

The Dead Arm: This refers to the non-dominant arm that lies limply by your side during a forehand, neither getting in the way nor assisting in the follow-through process. The Dead Arm is not as severe a problem as the Pretzel, but it's still far from optimal use of the body.

TIP: To promote a more fluid swing, practice swinging with your non-dominant arm behind your back.

A player will have to play around with the timing of this until it feels comfortable. When you put the non-dominant hand behind your back, it opens up your shoulder and allows your body to turn more fully while finishing the stroke. After this, I tell player to use the non-dominant hand to place their non-dominant hand at the 3 'o' clock position (for a right-handed player. The clock is around the player- 12 'o' clock directly in front of them and 6 'o' clock directly behind them. On the follow-through, I tell the player to finish at 6 'o'clock.

d. Volleys

i. forehand: I tell players to hold a cup of water in their non-dominant hand.

ii. backhand: The non-dominant hand separates/moves back on point of impact.

For fast balls, **there** should be less separation between the non-dominant hand and the dominant hand

For slow balls there could be more separation between the hands for added power.

e. Overheads: The non-dominant hand is kept up.

LEVEL 3: LEG POSITION EXERCISES

Purpose: to help players identify and feel the leg position during

This article will touch on:

- a. **General leg position**
- b. **Hitting stances**

a. General leg position

- FEET SHOULD GENERALLY BE SHOULDER WIDTH APART OR WIDER TO GENERATE A GOOD GROUND FORCE REACTION
- STANCE SHOULD ALLOW FOR GOOD ROTATION AND SOME WEIGHT TRANSFER
- A LOW CENTER OF GRAVITY

Coaches talk of the ideal athletic height. In tennis, this is how tall you are while standing in the ready position. With lowering your hips and bending your knees, a player should drop their height by ONE FOOT.

So, if you are 6 feet tall, your ideal athletic height should be 5 feet.

Drill: Imagine a chalk line around both feet in the shape of a rectangle. Player's goal is to keep their belly button over the center of the rectangle during stroke production.

b. Hitting stances

The hitting stance should be a wide stance, knees bent

Which stance should a player use, the sideways or open stance? My belief is whichever student likes as long as the unit turn is performed (i.e. pivot feet, hips and shoulders and racquet is taken back in the preparation phase).

Here is a list of the two stances, you pick...

HITTING WITH A *SIDEWAYS STANCE*

- *Recommended for a one-handed backhand*
- *This method helps to improve footwork and to hit with better control,*

HITTING WITH AN *OPEN STANCE*

- *It gives you more time*
- *Player has to be slightly closer to the ball and move quicker to get into position for the swing*
- *Good for one-handed forehand and two-handed backhand*

REMEMBER: *The higher the POINT OF IMPACT (based on the grip used), the closer your feet should be to each other.*

LEVEL 4: STROKE-SPECIFIC BALANCE EXERCISES

Purpose: to develop a player's neuromuscular control and improve a player's state of equilibrium for specific strokes.

1. Serves

DRILL: Two-ball collision

Have a ball in each hand. Mimic the serve motion and release both balls to try to make the two balls hit each other. Great for synchronization of the hands on the serve

DRILL: Eyes-shut and server

Player starts the serve with their eyes shut and throughout the serve motion. The player's goal is just to hit the ball with the racquet.

2. Return of serve

DRILL: Player has a cap down with the brim covering his or her face. On hearing the ball being struck on the serve, the player look ups and attempts to return the serve

DRILL: 360-degree turn

As the server tosses the ball getting ready to strike the serve, the player spins around (360 degrees) and attempts to return the serve.

3. Groundstrokes and Volleys

DRILL: Rapid-fire feed

Balls are fed to the player at a very fast pace with very little time in-between feeds, player attempts to hit all the balls (whether it is the groundstrokes or the volleys)

DRILL: One-legged volleyer

Volley rally with hopping on one leg.

4. Overheads

DRILL: Cup o' water

Player hits overheads with a cup of water in their non-dominant hand. The player's goal is avoid spilling water from the cup.

In summary, balance training must, from the start, be very carefully incorporated into the technique learning process. Top players almost never lose balance, and if they do, then they usually hit the ball like any other amateur player, because they are subject to the same laws of mechanics as the great mass of amateur players. Of course, the very top players will manage to save many situations thanks to their artistic ability, but this talent is rare, and is an exception rather than the rule.

This article serves as just an example on how to train balance for tennis. Each coach or player should try to develop a balance-training program to fit the needs of his/her players so that the player can learn to master and control his/her body.