



Developing balance in 10 & under tennis players

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ABSTRACT

*This article discusses balance, one of the six coordination skills the International Tennis Federation (ITF) mentions in its book *Strength and Conditioning for Tennis*. First, this capacity is discussed, together with the importance of its development in tennis at an early age. Then, two types of balance fundamentals are described, and some examples, and some research carried out on balance in young tennis players are included. Finally, different balance exercises which can be used with beginner players are presented.*

Key words: balance, coordination, infancy, development.

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INTRODUCTION

Balance has been defined differently by different authors. Thus, for (Meinel & Schnabel, 2004), balance is the capacity of keeping the desired position of the body, either in a static position or in movement, always keeping a centre of gravity, a support base and an inertia movement.

In its turn, the USTA (2016) considers that balance is the capacity of a player to control his/ her balance or stability.

For other authors, balance is the capacity to keep a body position in control, during the execution of a task, sitting at a table, walking on a balance bar, or stepping on an edge. In order to work effectively in different backgrounds and tasks, it is basic to have the capacity to keep controlled body positions during static (fixed) and dynamic (in movement) activities Kids Sense Child Development,(2016).

In order to better understand the importance of balance in tennis, it is necessary to make a brief description of the sport, and also to know its biomechanical demands.

Tennis is a sport of opposition, where one of the targets of the players is to move the opponents for them to hit the ball, as uncomfortably as possible, so as to make them fail, or, should the ball bounce in the court, try to keep the advantage of the situation so as to be able to win the point with the next stroke.

From the biomechanical point of view, tennis is a sport with high motor activity, where the racket, through the arm, at the last moment, executes a complex movement that sets several muscles in action, both from the upper, and the lower limbs. One of the targets of training is to activate the muscles in a coordinated fashion, so as to get efficient strokes and movements to be able to hit as accurately as possible.

Correct balance helps the child to practice sport with reasonable success, since it will help them to execute those fluent movements which are necessary for physical performance. If children aged 10 and under can perform body movements appropriately, and in a controlled way during the execution of the different tasks that sport activity demands, they will be able to reduce the energy they use, and therefore, they will be minimizing fatigue.

Besides, when movements are made in good balance, the possibilities of injury decrease, since the child is using the appropriate posture as (and when) it is necessary. Likewise, balance allows a correct body posture for the different tasks, in gross and fine motor functions.

As we have explained, balance will play a key role, hitting in balance helps to direct the ball accurately, and this will help, on

the one hand, to create an attacking situation to take the upper hand, and win the point, or on the contrary, try to defend as much as possible, trying to revert the situation, in order to take the lead and, while attacking, try to win the point.

TYPES OF BALANCE

When describing balance, we note that it can be classified into static and dynamic balance. In the case of static balance, (Chu & Rolley, 2001) define it as the skill to keep balance when the centre of gravity is placed on a support basis. As to dynamic balance, these same authors describe it as the skill to stay on our centre of gravity while the body is moving.

In daily life, static balance is the capacity of keeping a stationary position with control (for instance, staying "frozen" or playing to be a "statue") while dynamic balance is the capacity of keeping balance whilst in movement (for instance, running, jumping, or riding a bike).

For the USTA (2016), all coaches need to know and understand both types of balance and the possible examples that can occur during the game of tennis. So, the player will be in static balance, this being the capacity to control the body while it is stationary, when it is getting ready to serve, while the player will be in dynamic balance, that is the capacity to control the body during movement, when they change the direction after a stroke.

Khasawneh, (2015) studied the relationship between anthropometric measure and its relation with static and dynamic balance in junior tennis players. The experimenters came to the conclusion that the factor that best contributes to static balance is the width of the pelvis, while the circumference of the calf and the width of the ankle were the most significant for the dynamic balance.

RESEARCH ON BALANCE FOR TENNIS IN YOUNG PLAYERS

Andreasi, Michelin, Elisa, Rinaldi & Burini, (2010) examined the differences between sexes in primary school children in static balance and its relation to anthropometric measures, and came to the conclusion that static balance relatively depends on body weight and longitudinal measures.

While researching on the effect of balance training on young players, research by Malliou et al. (2010) concluded that fatigue generated by tennis practice during a long time has a negative effect on balance, so they suggest including a specific balance training programme during the tennis training sessions. For these authors, it is key that players keep their balance capacity during a long time, especially in long matches.

Additionally, a study by Sales et al. (2014) examined the relationship between balance and age, and found that balance is related to growth, since adults have more balance than adolescents. They also found that the height and the weight have significant impact on balance on children. However, they have no impact on balance in adolescents.

Besides, according to Sannicandro et al. (2014) balance training exercises have proven to be appropriate to reduce the asymmetry of strength in the lower limbs of young tennis players. They have concluded that all balance training programmes, as well as all tasks or games performed on unstable surfaces, will benefit the performance of tennis players.

PRACTICAL APPLICATIONS

Below are some different exercises to work static and dynamic balance with 10 & under tennis players. These exercises can be done on a tennis court, or on a multi-sport court. Sometimes, some basic material, which all coaches have available, may be required:

Static exercises:

- **Exercise 1:** Two players holding their rackets, will stand back to back with one leg raised. Players will rotate their core 90° to pass the ball to the other player. The exercise can be done rotating right or left as many times as the coach decides.



- **Exercise 2:** On-court exercise. The player will be on the service line with their racket in hand and feet in a closed position, but just leaning on the leg in which they have their weight placed. Should a right-handed player play a forehand, they will lean on their left leg. The coach will be at their side, just throwing a ball top down for the player to make a complete stroke trying to be in a balanced situation. Should there be more players on court, the coach will ask one player to make the stroke hitting the ball, and the rest will mirror the exercise. This exercise can be used, both for the forehand, as well as the backhand drive.



- **Exercise 3:** On-court exercise. The player will be on the service line with their racket in hand and feet in a closed position, but this time standing on an unstable platform. The coach will be at their side, dropping a ball down for the player to make a complete stroke whilst trying to be in a balanced state. Should there be more players on court, the coach will ask one player to make the stroke hitting the ball, and the rest will mirror the exercise. This exercise can be used, both for the forehand as well as the backhand drive. And, for hitting in closed as well as open positions.

Dynamic exercises:

- **Exercise 1:** Each player will need two throw down lines, like the ones used to mark the court (or any other material the players can stand on). The players, who will place their feet on each throw down line, will have to travel always on top of these elements, but since they will have only two throw down lines, they will have to use their hands to move the throw down line and to be able to advance.



- **Exercise 2:** The coach will place as many rings as they decide, and in the position that they consider convenient. Players will have to jump from one leg to the other, using only one leg. This exercise can be performed with either leg, going forward or backwards. The difficulty can also be increased if players are made to carry a ball on their racket.



- **Exercise 3:** Two player exercise - The coach will place 6 rings per player, one in front of the other one, so that each one will have a line of rings. There will be one ball per pair, for players to pass the ball from one to the other. The player who throws the

ball will do so while jumping on one leg from one ring to the other. In order to add variation, it can be done with the right leg and then with the left leg. Or, both, the player who receives and the player who throws, can be standing on one leg.



CONCLUSIONS

Balance is important in tennis and it has to be worked periodically, mainly, during developmental ages, so that the tennis player is able to act effectively in changing environments and tasks, such as the ones that occur during the game of tennis. According to (Groppel, 2003), beginner tennis players must understand that controlling the body is key for the right execution of the stroke. The way players move to make a stroke, the way they start moving forward, and how hard they hit the ball will impact on balance and on the control of the stroke in question.

So, we face a fundamental aspect that beginner tennis players have to master and in order to do so, coaches must plan different activities, games and exercises for the tennis lesson, to facilitate the acquisition of this capacity in a natural and fun way.

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