



# COACHING & SPORT SCIENCE REVIEW

The Official Tennis Coaching and Sport Science  
Publication of the International Tennis Federation  
22th Year, Issue 63, August 2014

[www.itftennis.com/coaching/sportsscience](http://www.itftennis.com/coaching/sportsscience)  
ISSN: 2225-4757

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The Official Coaching and Sport Science Publication of the International Tennis Federation

## EDITORIAL

Welcome to issue 63 of the ITF Coaching and Sport Science Review. The articles in this issue cover a variety of topics including parenting and mentoring young tennis players, an analysis of wheelchair tennis technique and resilience in tennis.

The ITF Coaching website has been launched in French. Resources are now available to download directly from the new website including the latest Coaching and Sport Science Review. Please click [here](#) to view content now available in French.

The ITF/OS Regional Coaches Conferences by BNP Paribas form a very important element of the ITF's Coach Education Programme. The events are organised in conjunction with the Regional Associations and are often supported by Olympic Solidarity. The Conferences feature top-level international speakers and are designed to provide a forum on coach education for the top coaches from each region. The conference will include presentations by leading experts in the game including regional and national experts. Coaches who are interested in attending the events should approach their [National Associations](#). This year the events will be held in Asia, Southern Africa, Northern Africa, South America, Central America, Caribbean and Europe. Information and full details of these events is available by clicking [here](#).

In 2007 the ITF officially launched a global campaign aimed at increasing tennis participation worldwide. The [Tennis Play and Stay](#) campaign aims to promote tennis as easy, fun and healthy, and to ensure all starter players are able to serve, rally and score from their first lesson. Fundamental to the campaign is the use of slower balls by coaches working with starter players, ensuring that their first experience of tennis is a positive one, where players are able to play the game. The programme consists of a series of supporting programmes that introduce tennis to the starter player and club based programmes to retain and encourage increased activity. These programmes include [Tennis10s](#) for children 10-and-under, and [Tennis Xpress](#) for adults.

[Tennis10s](#) is a fun way to start tennis and makes it easy for children to play the game, develop good technique and tactics and a love for the sport. [Tennis10s](#) is tennis for players aged 10-and-under, played on smaller courts with slower Red, Orange and Green balls. Using the slower balls helps players to develop the most efficient technique and to be able to implement advanced tactics that in most cases could not be performed using the Yellow ball on the full court. There are three stages of [Tennis10s](#) that allow players to start at the suitable level for their ability - Red (Stage 3), Orange (Stage 2) and Green (Stage 1). Click [here](#) to find out more about the three stages.

[Tennis Xpress](#) is also part of the ITF's Tennis Play and Stay campaign. It continues to be implemented in nations around the world, with over 20 nations implementing the programme since the programme was introduced in 2013. These nations include Argentina, Brazil, Germany, Great Britain, India, Latvia, Malta, New Zealand, Norway, Poland and Portugal. [Tennis Xpress](#) is an easy, active and fun coaching programme for adults which uses the slower balls. The aim of the course is to enable starter adults to serve, rally and score from the first session and to ensure that by the end of the course all adults know the basic techniques, tactics and the Rules of Tennis, so that they are able to play competition using the Green ball on a full court.



As readers will be aware, [Tennis iCoach](#) is the official coaching platform of the ITF. It is a resource available aiming to educate parents, coaches and players by offering both practical coaching and tennis specific sport science content on technique, tactics, biomechanics, psychology, sports medicine and coaching methodology. It is designed to provide specialist information to optimise coaching knowledge and enhance player development. Material is showcased through articles, videos and interviews with some of the leading experts in the game. If you would like to join Tennis iCoach please visit [www.tennisicoach.com](http://www.tennisicoach.com) to sign up for just \$30. Coaches can also contact their [National Association](#) to enquire if their country currently holds a national payment plan which can allow unlimited coaches from those nations to join for free.

We hope that you enjoy this issue of the ITF Coaching and Sport Science Review.

**Dave Miley**  
Executive Director  
Tennis Development

**Miguel Crespo**  
Research Officer  
Tennis Development/Coaching

**Abbie Probert**  
Assistant Research Officer  
Tennis Development/Coaching

# Off-court battle with binge eating: Coaches must be part of the solution not the problem

Janet A. Young (Victoria University, Australia)

ITF Coaching and Sport Science Review 2014; 63 (22): 3 - 6

## ABSTRACT

*“Food was the only way to silence my demons. I’d walk into the kitchen, grab a bag of crisps and a bowl of chocolate ice cream, then head to the couch and eat in front of the television” (Monica Seles, 1999). This paper reviews binge eating by examining Monica Seles’s account of her off-court battle with this disorder. Implications and recommendations for coaches are discussed.*

**Key words:** binge eating, eating disorder, coach

Article received: 20 April 2014

**Corresponding author:** janet\_young7@yahoo.com.au

Article accepted: 14 June 2014

## INTRODUCTION

In Monica Seles’ autobiography ‘Getting a Grip’ the tennis legend detailed an intimate account of her nine-year battle with binge eating. It was a condition that consumed her daily thoughts and caused her tremendous turmoil and trauma. As she articulates in an interview, “I always loved to eat but eventually eating overtook my life. I could control a tennis match. This I could not control at all” (McNeil, 1999, p. 9). What led Monica Seles from the lofty heights of World No. 1 to binge eating and how she regained health and happiness are covered in this paper. Further, the implications for coaches of this fascinating yet harrowing journey are explored. Before addressing these items, the definition of binge eating should be considered.

### What is binge eating?

Binge eating is an eating disorder defined as the recurrent (at least two days per week) and persistent (at least over a six month period) overeating of large quantities of food (American Psychiatric Association [APA], 1994). The disorder is associated with a lack of control, emotional distress and persistent concerns about body shape or weight. Those who are binge eaters often suffer from multiple co-occurring problems including obesity and other medical issues, low self-esteem and poor athletic performance (Sundgot-Borgen & Torstveit, 2010; Wilson, Grilo & Vitousek, 2007). As such, binge eating is akin to a form of addiction with obsessive thoughts about food and a preoccupation and strong compulsion to eat followed by feelings of guilt and angry regret. Possible warning signs that may indicate binge eating are listed in Table 1.

| Warning Signs That May Indicate Binge Eating                           |
|--|
| -A preoccupation with food, weight and kilojoules                      |
| -Eating alone and avoidance of eating in public                        |
| -Always going on a diet ‘tomorrow’                                     |
| -Dramatic weight gain over a relatively short period of time           |
| -Mood swings   |
| -Negative thoughts about oneself or guilt especially after over-eating |

Table 1. Warning signs that may indicate binge eating (adapted from Garner & Rosen, 1991; Sherman & Thompson, 2001).

### Prevalence of binge eating

The incidence of binge eating in sport is difficult to ascertain with limited research conducted amongst tennis players (Martin & Love, 2010). One of the reasons for the difficulty of getting statistics is the secretive nature of the binge eater. Overeating is often done in private, and indeed in secrecy, as individuals attempt to hide their eating habits from others (Sundgot-Borgen & Torstveit, 2010). Due to the lack of research evidence, it is reasonable to assume that Monica Seles is not an isolated case of binge eating among tennis players.

### Causes of binge eating

The literature indicates that the causes of binge eating for athletes are many and varied. According to Sundgot-Borgen and Torstveit (2010), elite athletes often feel pressured to achieve the ‘ideal’ physical body and improve performance. These authors contend that many elite athletes feel that their weight, shape and size are constantly evaluated by coaches. Indeed, some coaches may directly contribute to an athlete’s disordered eating by applying pressure and/or telling an athlete to lose weight believing this will enhance an athlete’s performance. Further, it is thought that significant life stressors, for example death of a family member or serious illness, can often act as triggers to binge eating (Sundgot-Borgen & Torstveit, 2010).

### What insight does Seles provide as to the cause of her binge eating?

According to Seles she ‘plunged into a fog of darkness and depression’ following the now infamous and horrific stabbing incident when playing a match in Hamburg against Magdalena Maleeva on 30 April 1993. When leading 6-4, 4-3 and while she was towelling off during a changeover she was assaulted by a man who plunged a nine-inch serrated boning knife into her left shoulder. While the physical scars took several months to heal, Seles’ ‘darkness’ grew with concerns about her father’s diagnosis with cancer and her own self-doubts as to whether she was able to, or wanted to, return to tennis. Further adding to her fragile mindset were concerns that her attacker, Gunter Parche, never spent a day in prison (only receiving a two-year suspended sentence for causing grievous bodily harm and subsequently undergoing psychiatric treatment). Her failed lawsuit against the German Tennis Federation for inadequate security was a costly and unfair outcome. Seles also alluded to the fact that she felt pressure from well-meaning coaches, trainers and nutritionists in her attempts to regain her ‘world-best’ status in the game. She turned to food as solace and comfort in exceptionally challenging times both on a professional and personal level.

### Monica Seles’s strategies to combat her binge eating

In her book Seles describes a number of strategies that she adopted to address her binge eating. These make for fascinating reading because she abandoned simply relying on others for solutions and turned her thoughts inward. ‘I made a few big changes in (my) thinking which then affected some deep-seated behaviors... I stopped looking for answers on the outside and starting listening to the quiet voice inside of me. Suddenly I knew that the problem wasn’t what I was eating. It was what was eating me’ (Seles, 1999, p. 259).

Key strategies adopted by Seles in her successful recovery are listed in Table 2.

### Key Strategies Adopted by Seles to Combat her Binge Eating

- Replaced the words 'diet', 'allowed' and 'forbidden' with 'moderation'
- Adopted the 'less is more' principle
- Adopted the '20-second rule'
- Accepted and empowered herself to make positive choices at meal times
- Integrated walking into daily routine
- Found new interests
- Gave herself permission to grieve her father's death
- Bought 'The Little Black Dress'
- Took control where it was possible to do so
- Referred to her food journal

Table 2. Key strategies adopted by Monica Seles to combat her binge eating.

#### Replacing the words 'diet', 'allowed' and 'forbidden' with 'moderation'

No longer was Seles 'on a diet' where foods were classified as either 'allowed' or 'forbidden'. Instead she adopted a new lifestyle habit by eating a range of foods (including cake, cookies and pasta) in moderation, and taking time to savour each mouthful. As described by Seles, she refused to say she was on a diet, and learned to live 'in the liberating and calming grey area of moderation' (Seles, 1999, p. 260).

#### Adopting the 'less is more' principle

Seles realised that there was truth to the 'less is more' principle in relation to food intake and exercise. Having always been one to believe she had to do more training and practice to achieve success in her tennis, Seles learned to let go of excessive or extreme behaviours. As she says, she learnt 'how to live (my) life more fully by choosing less' (Seles, 1999, p. 260).

#### Adopting the '20-second rule'

Seles realised that she used food to cope with her emotions so she adopted the '20-second rule'. Rather than turn to food for comfort when distressed about a problem, Seles would slowly count to 20 thereby giving her time to think about how best to tackle the problem. Most times she would find an answer before the count of 20.

#### Integrating walking into daily routine

Taking a daily 45-minute walk became a saviour to Seles. Walking was her time for reflection, rebuilding and exercise. As such, it was her therapy and 'time out' when faced with the temptation of food or feeling anxious about problems. Most significantly, walking gave Seles the opportunity to really get to know her true self that had been difficult to achieve when she had played on the circuit and had been required to travel extensively, attend media conferences, fulfil sponsor requirements, train, practise and compete. As explained by Seles, 'My walks helped me heal the rift between my mind and my body. These soothing walks did more to quiet the demons in my head than any of the punishing workouts I endured' (Seles, 1999, p. 261).

#### Accepting and empowering herself to make positive choices at meal times

Allowing time to really understand her true core, Seles realised that, whilst she had perfectionistic tendencies (e.g. setting extremely high standards with little tolerance for mistakes) she was also a person to love and respect. Meal time subsequently became a time to reinforce her positive image of herself as it was a regular opportunity for her to make liberating decisions by choosing sound nourishment and balance (i.e. reasonable portions of food) over self-destruction (i.e. over-eating large volumes of food).

#### Finding new interests

Seles embarked on new activities including a parachute jump, wandering around Paris and organising the photographs her father had collected of her 20-year career into photo albums. In doing so,

Seles found meaning, satisfaction and enjoyment in a range of new pursuits that filled her days (and alleviated the boredom she felt when away from the tennis circuit).

#### Giving herself permission to grieve for her father

There was no denying the devastating loss Seles felt when her father died. He had been her 'rock', inspiration, coach, mentor and friend before succumbing to cancer. Seles allocated time to grieve for her father and, in doing so, gained an acceptance that she would be able to cope on her own and she could live with the fact that she may never win another Grand Slam title. Seles realised it was possible to find new meaning in life without her adored father and tennis.

#### Buying 'The Little Black Dress'

When visiting New York for treatment on a foot injury, Seles bought the black dress of her dreams. Although it was size four, and Seles was several sizes heavier at the time of purchase, the dress became an inspiration. As described by Seles, 'that little black dress became a symbol of reclaiming the real me – my true core' (Seles, 1999, p. 259).

#### Taking control where it was possible to do so

Seles adopted a new philosophy to control what she could and let go of those things that she could not control. While she could not control her father's death or the stabbing incident in Hamburg for example, she realised that she could control the way she treated her body and herself. She would now do this with 'kindness' (versus criticism) and adopt nutritious eating habits as something she chose to do rather than being forced or told to do so. Eating sensibly was now a personal choice that she initiated and controlled.

#### Referring to her food journal

Seles kept a food journal in which she recorded her food intake, exercise regime, resolutions and other personal thoughts. She would read this journal when she needed additional inspiration or motivation claiming 'I read some of my old journals and it helped me realise that I did not want to go back there' (Wertheim, 1999, p. 98).





## IMPLICATIONS FOR COACHES

What can coaches glean from Seles's story of her battle with binge eating?

| <b>Recommendations for Coaches</b>  |
|---|
| -Become educated about binge eating to increase awareness   |
| -Emphasise proper nutrition and healthy eating and exercise to players (versus focusing on weight and appearance)   |
| -Use role models with normal body weight  |
| -Focus on and emphasise skill development instead of body weight as a means to achieve performance goals  |
| -Be careful of choice of words (e.g. weight, diet)  |
| -Avoid singling out players with regard to body weight or shape   |
| -Eliminate individual and group weigh-ins   |
| -Dispel the myth that 'thinner is better'   |
| -Be sensitive to a player's feelings especially in relation to traumatic life-events and comments about their body  |
| -Gain a fuller understanding of the relationship between weight and performance and be mindful that decreasing weight does not guarantee improved performance   |
| -Lead by example by adhering to a balanced and nutritious eating program  |
| -Take an individual approach to determine optimal training and competition program for each player  |
| -Discuss with the player if binge eating is noticed or suspected – this approach needs to be done early, directly and confidentially especially with respect to other players. Gain consent from player for referral to a specialist (dietician/nutritionist, psychologist) |
| -Be a positive team member (including parents, psychologist, trainer, nutritionist) to support a player who has a binge eating disorder   |
| -Consider possible postponement to coaching a player if severe health risks are evident   |

*Table 3. Recommendations for coaches in relation to minimising the risks for eating disorders (adapted from Arthur-Cameselle & Battzell, 2011; Garner & Rosen, 1991; Sherman & Thompson, 2001; Sundgot-Borgen & Korstveit, 2010).*

### Prevention of binge eating

• Awareness of binge eating stems from an understanding of the disorder. Coaches may need to become better educated about the causes and manifestations. Such information, together with resources about balanced and optimal nutrition, is available from many National Coaching associations and/or the International Tennis Federation website;

<http://www.itftennis.com/scienceandmedicine/health/eating-disorders.asp>.

• Given that the pressure to be thin is a critical risk factor for binge eating (Sundgot-Borgen & Torstveit, 2010), coaches should avoid applying pressure telling a player to lose weight. One of the best ways to de-emphasise weight is to avoid comments about weight but rather focus on performance enhancement via psychological, technical and physical skill development. Words are extremely powerful so coaches need to choose these wisely and prudently. Singling out players because of their body shape or weight should be avoided.

• It is important that a coach takes a 'holistic' approach in working with a player. Coaches should be mindful that a player's tennis can be greatly affected by life's issues and pressures. No two players are alike and, accordingly, care needs to be taken to understand the individual as a person and not just as a tennis player. This is best achieved if a coach can try to see things 'through the eyes' of the individual player. Comparisons with other players should be avoided and the interests of the individual player, and what is best for him/her, should be foremost at all times. Understanding, empathy and support are critical at times when a player suffers a severe disruption or loss in his/her everyday life.

• Coaches may wish to reflect on their own philosophy of coaching. Does he/she believe that weight loss or reduced body fat will enhance performance despite the fact that research in this area is equivocal (Sherman & Thompson, 2001)? Rather than advocating the fact that weight or body fat determines success, coaches can assure players that better nutrition, and subsequent better health, should improve performance. A player who is properly nourished and hydrated will likely outperform one who is not, as will a player who is not depressed and obsessed with eating, food and weight related issues. In this context coaches can emphasise skill development over body weight as a means of achieving playing success.

• Coaches can lead by example and embrace nutritious and balanced eating habits. Given coaches are often critical role models for players this can be most effective in reinforcing the importance of proper nutrition.

### Detection of binge eating

• Coaches are in a prime position to monitor their players' behaviours and reactions (Sundgot-Borgen & Torstveit, 2010). Accordingly, coaches need to be on the alert for warning signs of binge eating including significant increases in a player's weight and dramatic changes in mood or emotion (refer to Table 1). These changes in combination may well be indicative of binge eating and coaches should consider arranging a private meeting with the player to discuss their concerns. It is important for coaches to be direct but supportive in discussing the nature of their concerns. It is also important to advise the player that discussions will remain confidential and referral to a specialist will only be done with that player's consent. To some extent the actions of coaches are limited if a player is in denial (of binge eating) or does not wish to consult a specialist (e.g. nutritionist/dietician, psychologist). In these circumstances a coach can continue to be supportive and vigilant until such time as the player is ready to seek professional help. In some instances players are fully capable of finding their own solutions to their binge eating. To this end coaches can adopt a facilitating, supportive and collaborative role, one which empowers a player to discover for him/herself the answers that lie within the individual (versus 'telling', 'instructing' and/or 'directing' the player to get help). It is however vital that players understand that help is available if required and pursuing help might be the single most important thing that can be done to achieve or preserve success (Garner & Rosen, 1991).

• If a player is under 18 years of age, and there is evidence that a player is experiencing symptoms of binge eating, then coaches should take their concerns to the player's parents. As noted above, coaches should inform parents that discussions are confidential and the player's well-being and health are their primary concern.

### Management of binge eating

• Coaches can play a strong supportive role in a team that includes a trainer, nutritionist, parents and psychologist (Sherman & Thompson, 2001). To this end coaches can be good 'sounding boards' and listeners who show empathy, concern and understanding by not being critical of the player's eating behaviour. Focusing on the future and what can be achieved with the player's tennis can be very inspirational for a player suffering from binge eating.

## CONCLUSIONS

As exemplified in Seles's story, binge eating is far more profound and far-reaching than merely a choice to find comfort in difficult times. Binge eating is a totally dysfunctional, distracting and destructive disorder that almost destroyed Seles's happiness, health and tennis pursuits. Fortunately Seles drew inner strength and resolve to develop a new mindset and find answers to a condition that saw her weight balloon and her spirits plummet. In doing so, Seles fought back and rediscovered happiness and well-being.

Coaches will be aware that Seles's struggle with binge eating is unlikely to be an isolated case and other players may well be inflicted with, or at risk of developing, the disorder. It would be an ideal practice for coaches to know what to look for and how to approach and support a player who may have these difficulties.

Given pressure to lose weight and traumatic events are primary risk factors to the onset of binge eating, coaches need to know that they have a pivotal and positive role to play in its prevention, detection and management. Most significantly, coaches have a duty of care to minimise the risk of (unknowingly) contributing to a player's binge eating with inappropriate emphasis on weight, body shape and 'thinness'. It is imperative that coaches are part of the solution to binge eating and not the problem. A player's health, well-being, happiness and tennis achievements may well depend on it.

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## RECOMMENDED ITF TENNIS ICOACH CONTENT (CLICK BELOW)

**Tennis*i*Coach**

# Neuromuscular fatigue in tennis: Mind over muscle?

Olivier Girard (University of Lausanne, Switzerland)

ITF Coaching and Sport Science Review 2014; 63 (22): 7- 9

## ABSTRACT

To successfully endure tournament competition, tennis players must accelerate, decelerate, change direction, move quickly, maintain balance and repeatedly generate optimum stroke production during several hours. This review paper outlines how fatigue manifests during prolonged match play and discusses the neural and muscular factors that may compromise tennis skill and performance. Scientific findings are presented as the basis for practical recommendations to help players to better resist fatigue during intense and extended matches.

**Key words:** neuromuscular function, tiredness, performance alteration

Article received: 10 January 2014

**Corresponding author:** oliv.girard@gmail.com

Article accepted: 8 June 2014

## INTRODUCTION

Muscle fatigue is often quantified as a reduction in the maximal force that a muscle can exert, but its aetiology is complex, especially under conditions of high-intensity intermittent exercise involving the whole body such as playing tennis. The inability to produce and/or maintain the required force, which has the potential to alter on-court movement and stroke production, can be attributed to several potential mechanisms occurring within cortical regions to muscular contractile elements. However, the neuromuscular adjustments to fatigue in tennis have received little attention until recently.

### Manifestation of fatigue - Activity-specific protocols

During the last decades, several studies have provided scientific evidences to support the observations made by coaches that fatigue impairs performance as shown by mis-timed shots (i.e. power and precision) and altered on-court movements (i.e. speed, positioning to the ball). Fatigue-inducing protocols have been developed to determine the effects of fatigue on stroke production in specific conditions close to competition (Davey et al. 2002; Hornery et al. 2007a; Vergauwen et al. 1998). These studies have reported conflicting results regarding change in stroke velocity and accuracy. For example, Davey et al. (2002) observed a large decrease in the accuracy of shots played (69% and 30% for groundstroke and serve, respectively) during an exhausting tennis simulation test, whereas conversely the accuracy was only slightly reduced (groundstroke) or unchanged (serve) after a two hour on-court strenuous training session (Vergauwen et al. 1998). However, the lack of sensitivity and the large variability in selected variables limit considerably the generalisation of these findings. Another shortcoming is that fatigue levels experienced by players failed to reflect those recorded in match play (i.e. format of the protocol, using a ball machine to administer pre- and post-fatigue on-court skill assessment (Davey et al. 2002). For example, it is questionable how an intermittent test leading to volitional exhaustion in 35 minutes could induce a comparable degree of physiological strain as in actual competitions.

### Matchplay

To overcome these limitations, several investigators have evaluated the effects of fatigue on performance during simulated match conditions. For example, Mitchell et al. (1992) reported that fatigue after a three hour tennis match is manifested by a decreased velocity of the serve and longer time to complete tennis pattern shuttles. Girard et al. (2006) recently reported progressive reductions in maximal voluntary strength (10-13% in quadriceps) and leg stiffness highly correlated with increases in perceived exertion and muscle soreness throughout a three hour tennis match, whereas explosive strength was maintained and decreased only after the exercise. Immediately after the exercise, similar (-15%) in strength loss was observed for plantar flexors using the same match protocol (Girard et al. 2011). However, the time course of these adaptations differs between knee extensors (progressive) and plantar flexors (biphasic pattern with a marked loss after 90 min) muscles (Figure 1).

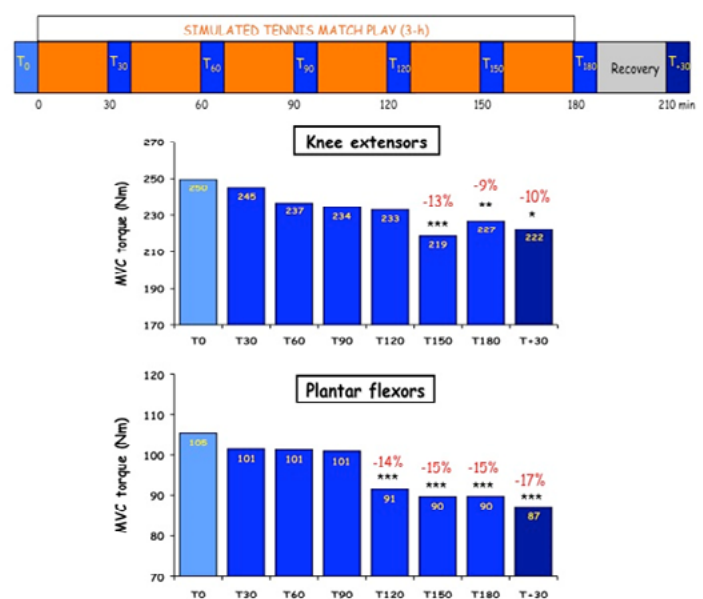


Figure 1. Maximal isometric voluntary contraction (MVC) torque of the knee extensor and plantar flexor muscles before (T<sub>0</sub>), during (T<sub>30</sub>: 30th min; T<sub>60</sub>: 60th minute; T<sub>90</sub>: 90th min; T<sub>120</sub>: 120th min; T<sub>150</sub>: 150th min), immediately after (T<sub>180</sub>), and 30 minutes after (T<sub>+30</sub>) a three hours tennis match (see Girard et al. 2008 and Girard et al. 2011).

## FACTORS RESPONSIBLE FOR FATIGUE

### Defining and quantifying neuromuscular fatigue

Fatigue is a complex phenomenon, which aetiology depends on the characteristics of the task performed (task dependency principle). The inability to produce/maintain the required force can be attributed to several potential mechanisms from cortical region (neural factors) to contractile elements (muscular factors). Each of these stages is a possible limiting factor for force production and eventually on-court performance. The traditional approach used to identify the causes of muscle fatigue has been to distinguish 'central' (i.e. an exercise-induced decrease of muscle force due to a reduction in recruitment) and 'peripheral' (i.e. decrease in force due to a decrease in muscle fibre contractility induced predominantly by metabolic events within the muscle) mechanisms. This can be performed by applying an electrical stimulus to the peripheral nerve (tibial or femoral nerve) and analysing changes in electromyograms (EMG), voluntary and evoked forces (Figure 2). By using this approach, it has been possible to show that both nervous (impaired muscle activation) and contractile (muscle contractility) mechanisms contribute to the alteration in neuromuscular function as match progresses after three hour tennis (Girard et al. 2008; Girard et al. 2011).



### Central vs. peripheral fatigue mechanisms

Reduced central activation has been linked to changes in neurotransmitters metabolism or in response to afferent sensory feedbacks (i.e. inhibition of motoneuron excitability), possibly due to changes in metabolic and/or mechanical properties within the muscle (Gandevia, 2001). Practically, a suboptimal neural drive to the muscle might impair the rate of force development (i.e. ability to reach higher levels of muscle force within the initial phase of muscle contraction) believed to be a crucial determinant of fast limb movements. Several factors including decreased phosphocreatine availability, increased muscle acidity, decreased muscle carbohydrate (glycogen) stores or a low blood glucose level have been suggested as causes of fatigue at the muscle level (Fitts, 1994). Fatigue observed temporarily after the periods of exhausting exercise as long or consecutive intense rallies is probably linked directly to disturbances in muscle ion homeostasis, impaired excitation of the sarcolemma (increase in extra-cellular potassium) or accumulation of metabolites (i.e. phosphocreatine, lactate).



### CONCLUSION

Fatigue impairs tennis performance, and can be manifested by mistimed shots, altered on-court movements, wrong cognitive (i.e. tactical) choices. The aetiology of muscle fatigue is a complex phenomenon (i.e. distinction between temporary fatigue and fatigue occurring in the final stage of a competition) that might involve impairment in both neural (suboptimal muscle activation) and contractile (accumulation of metabolites) processes.

### Practical applications

- Neural factors are largely responsible for the training-induced strength gains after electromyostimulation and/or resistance programs. By respecting the movement patterns and specific demands of the game (Bennie and Hrysomallis, 2005), such training modalities could be efficient in improving tennis-related variables and in delaying central fatigue.
- Tennis players are required to repeatedly generate large amounts of power during explosive stroke actions and fast on-court movements. Therefore, improving the structural (e.g. hypertrophic adaptations) and biochemical processes (e.g. regulation of plasma potassium, twitch contractile properties) at the muscle level is expected to offer an advantage for fatigue resistance (Behm and St Pierre, 1998).
- The use of pre-fatiguing situation (e.g. bouncing, in-depth jumping, plyometric exercises, medicine-ball) followed by on-court high-intensity interval-training would be efficient for reducing the observed impairment in muscle contractility (excitation-contraction uncoupling).

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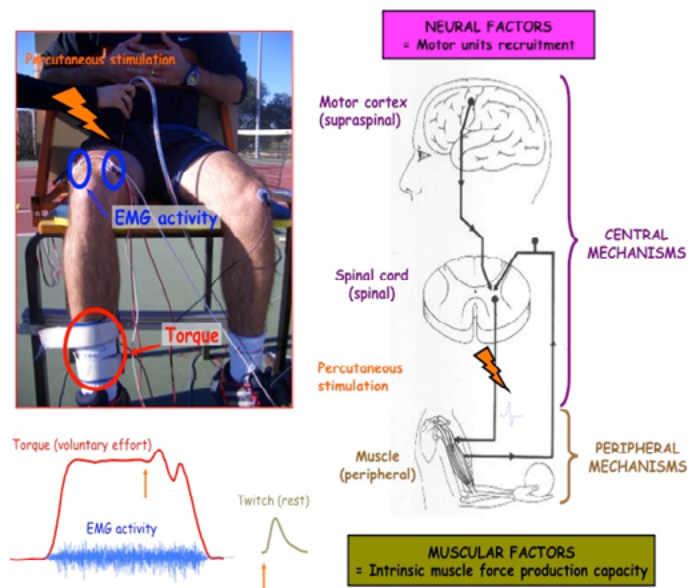


Figure 2. Reliable assessment of muscle fatigue can be studied using the neuro-stimulation technique. By comparing the twitch superimposed to a maximal voluntary contraction and the twitch evoked on the relaxed muscle (i.e. femoral nerve percutaneous, supra-maximal stimulation), the twitch interpolation technique in conjunction with surface electromyography (EMG) can be a reliable non-invasive technique to characterise muscle activation (neural factors). In examining modification of resting twitch it is possible to clarify whether a loss of muscle contractile properties (muscular factors) can also contribute to the impaired neuromuscular function (see Girard and Millet, 2008).

### Additional homeostatic perturbations

Hot environments and dehydration are worsening fatigue factors whereas carbohydrate supplementation before or during competitions would eventually contribute to delay fatigue (Hornery et al. 2007b). When tennis is played in the heat, it is likely that the attainment of a high core temperature ( $> 38.5^{\circ}\text{C}$ ) can impair central nervous system function, resulting in a reduced level of central cognitive or neural drive to the muscle (e.g. wrong tactical choices, strength losses). Leg stiffness regulation is believed to be another important determinant in the optimisation of locomotor performance (sprint running). The progressive reduction in leg stiffness throughout three hour tennis match play suggests that some of the observed fatigue-induced decrements in on-court tennis movements might be partially explained by alterations in the mechano-characteristics of the muscle-tendon complex (Girard et al. 2006). Moreover, Hornery et al. (2007c) reported a significant increase in circulating creatine kinase, which appears to be indicative of acute muscle damage. Thus, muscle damage invoked by the numerous eccentric contractions associated with on court-movements might represent an important factor underlying the fatigue observed during tennis.



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[RECOMMENDED ITF TENNIS ICOACH CONTENT \(CLICK BELOW\)](#)

**Tennis*i*Coach**

# Coach resilience: What it means, why it matters and how to build it

Janet A. Young (Victoria University, Australia)

ITF Coaching and Sport Science Review 2014; 63 (22): 10 - 12

## ABSTRACT

*'Resilience evokes the promise of something good resulting from misfortune, hope embedded in adversity. Life rarely deals gently with humans on an indefinite basis. Sooner or later, we all grapple with some harsh issue.'* (Dyer and McGuinness, 1996, p.276). This paper reviews resilience, defined as an ability to withstand and rebound from disruptive life challenges. The nature, associated attributes and significance of resilience are discussed. A number of suggestions to recover from, and indeed, thrive in the face of adversity are highlighted.

**Key words:** resilience, adversity, coach

Article received: 1 January 2014

**Corresponding author:** janet.young@vu.edu.au

Article accepted: 21 February 2014

## INTRODUCTION

Coaching can be a rewarding and satisfying yet challenging and demanding profession (Martens, 2004). Invariably coaches will encounter a variety of difficulties during their careers, ranging from daily nuisances to major life events. There are coaches who seem to 'bounce back' effectively from negative events or situations, whereas others do not recover and are unable to move on or adapt to the changing demands of stressful experiences. An understanding of why some coaches are able to withstand, and indeed thrive on the pressures they experience can be found in 'resilience', a term that depicts an ability to positively adjust to adversity. The purpose of this paper is to examine resilience, its definition, its significance and how coaches might develop and nurture it. An understanding of coach resilience is thought to be very significant given it facilitates recovery and growing from adversity and enhances well-being.

## WHAT IS RESILIENCE?

### Defining resilience

The word resilience originates from the Latin verb *resilire* 'to leap back' or 'rebound' and is defined in the Oxford Dictionary of English as being 'able to withstand or recover quickly from difficult conditions' (Soanes & Stevenson, 2006, p. 1498). Numerous definitions of resilience have since been proposed in the literature with a common focus on the notions of adversity and positive adaptations. Two popular definitions of resilience are:

- 'The capacity to move on in a positive way from negative, traumatic or stressful experiences' (Tugade & Fredrickson, 2004, p. 320)
- 'The ability to bounce back or cope successfully despite substantial adversity' (Rutter, 1985, p. 599).

### Attributes associated with resilience

A number of qualities are associated with resilience that facilitates individuals withstanding strain and hardship and adapting to the challenging circumstances they encounter (Giordano, 1996). These qualities include resourcefulness, perseverance, self-confidence, self-discipline, level-headedness, flexibility, positivity, positive relationships and problem-solving and coping abilities. As described by Giordano, 'When we think of resilient people we usually describe them as resourceful, flexible and having large repertoires of problem-solving strategies. Resilient people remain organised when they experience change or stress and they recover after traumatic experiences. They are self-confident, curious, self-disciplined and adaptable' (Giordano, 1996, p. 1032).

Interestingly, optimism is thought to be one of the key factors that distinguish those who are resilient. As explained by Seligman (2011), individuals "who do not give up have a habit of interpreting setbacks as temporary, local and changeable 'It's going away quickly; it's just this one situation, and I can do something about it' (Seligman 2011, p. 102). Resilient individuals recognise there is still hope in the midst of difficulty and persist despite setbacks.

## Nature of resilience

Resilience is not an innate capacity but rather develops over time. Everyone is thought to have 'resilience potential' that can be developed at any point in one's life (Tugade & Fredrickson, 2004). Resilience is, to a large extent, developed and shaped by challenging experiences. As explained by Walsh (2003), 'resilience refers to strengths under stress, in response to crisis, and forged through dealing with adversity' (Walsh 2003, p. 52). Further, resilience is considered 'fluid' meaning that individuals may react positively to adversity at one point in their lives but may not necessarily do so at other times.

Most noteworthy, resilience enables some individuals to emerge stronger out of adversity, with capacities that they may not have otherwise developed (Jackson, Firtko & Edenborough, 2007). For others, repeated exposure to stressful experiences can wear down their resilience. A key factor appears to be the individual's appraisal of stressful challenges or events. For those who realistically expect and accept life's difficulties are more likely to blossom and find meaning and purpose in adversity. In this context adversity can be likened to a 'wake-up call or epiphany – jolting (individuals) into the realisation of how important loved ones are, reorientating their lives and revitalising relationships' (Walsh, 2003, p. 65).

## Consequences of resilience

The beneficial outcomes of resilience can include effective coping, a sense of control, achievement and accomplishment, personal growth and well-being (Fletcher & Sarkar, 2013). Resilient individuals have optimistic, zestful and energetic approaches to life and are less prone to burnout, depression and other stress-related health conditions. This is not to say that resilient individuals are not upset by a loss or adverse event, they are not invincible and do not pass through adversity unscathed or simply just bounce right back. Rather, they will experience pain and suffering in the process. What, however, distinguishes resilient individuals is their ability to tap into existing, latent or new resources to meet the challenges. As a result they develop strengths, new perspectives on life and stronger relationships because of the challenges (Walsh, 2003).



## Research of resilience in sport

To date, resilience has yet to be extensively investigated in sport, with the notable exceptions of two studies of 12 Olympic champions (Fletcher & Sarkar, 2012) and ten US college and professional athletes (Galli & Vealy, 2008). In the latter study the researchers concluded, 'Positive outcomes mentioned by athletes included learning, gaining perspective, gaining motivation to help others, gaining a realisation of their social support and generally being strengthened and improved because of their adversity' (Galli & Vealy, 2008, p. 327).

A review of the sport literature suggests no studies have been conducted on resilience in tennis players or coaches. Notwithstanding, there appears to be substantial anecdotal evidence that many high profile players possess a high degree of resilience. Two illustrations that come readily to mind are Rafael Nadal's comeback after knee injuries to capture his 8th French Open title and Serena Williams' 2013 French Open victory after losing in the first round of the same event the previous year and also overcoming some serious health issues.

## Strategies for building and strengthening resilience in coaches

Recently Seligman (2011) reminded us that 'the remarkable attribute of resilience in the face of defeat need not remain a mystery. It is not an inborn trait; it can be acquired' (Seligman 2011, p. 30). So what can coaches do to build and nurture resilience? Here are some suggestions that are adapted from the resilience literature (e.g. Earvolino-Ramirez, 2007; Jackson et al., 2007). Coaches may wish to tailor these to their own specific needs and circumstances. Suggested strategies include:

- Seek and nurture relationships and professional networks as lifelines and sounding boards - turn to, and call on, helpful others who not only offer comfort and support but also encourage your best efforts and believe in your potential to overcome difficult situations
- Share your experience(s) and help others - set up a support group, or adopt other means, to alert others to difficulties that can happen, how best to respond and what can be gained from effectively responding to adversity
- Learn to accept what has happened and cannot change - realise that events in the past simply cannot be changed. See what can be learned from the past and any mistakes/failures that may have precipitated a loss, trauma or unpleasant event
- Give yourself a purpose and develop a game plan - set clear and meaningful goals. Give yourself a reason to be motivated each day and do the best you can. Develop a set of strategies that will take you from where you are currently to where you want to be
- Get the facts - get information and establish the facts (where possible) in order to best understand difficulties, why they have arisen and what can be done
- Put in perspective - consider the worst-case scenario of any difficulty and work from this position forward. Keep things in perspective
- Take time and space - be mindful there may be no 'quick fixes' and give yourself time and space (as required) to heal and recover from pain and suffering
- Adopt 'the glass is half-full' and solution-focused approach - be optimistic and hopeful. Look for positives in what has happened and then direct your attention to, and energies on, solutions, possibilities, opportunities and positive outcomes that will (invariably) emerge from any situation however bleak it may appear at the time
- Embrace the 'never-say-die' philosophy - commit to never giving up no matter what life throws up at you
- Practice problem-solving skills - engage in activities (e.g. crossword puzzles, card games) that keep your mind active and alert
- Audit strengths and capabilities - make a list of your personal strengths and capabilities (e.g. flexibility, courage) and regularly update the list

- Recall past successes - recall and write down those times you have displayed resilience and refer to these accounts when difficulties arise again
- Get physically fit and healthy - exercise regularly, eat a balanced diet and get sufficient sleep. Ensure balance in your life by engaging in sport and other activities of interest outside of work
- Undertake professional development - regularly upgrade your skills and qualifications (e.g. attend coaching course, presentations or tournament) Access relevant resources (e.g. Seligman's [1990] book on Learned Optimism)
- Emulate trauma survivors - take inspiration and heart from those who have endured insufferable hardship and found ways to continue with life (e.g. Nelson Mandela, survivors of terrorist attacks or natural disasters)
- Adopt humour - a smile and good laugh can be just the right tonic in testing moments.

## CONCLUSIONS

Resilience refers to effective coping and adaptation although faced with hardship, loss, stress, adversity, change and negative life events. Coaches are not immune from such experiences. While some coaches are more fortunate than others, all coaches are likely to go through very traumatic experiences such as verbal abuse from parents, financial pressures, job loss, relocation, relationship breakdown, discrimination, unexpected loss of a loved one or illness. How coaches deal with these situations can make all the difference. Many coaches are able to bounce back from adversity and successfully get on with their lives. For others these experiences bring lingering and cascading negative thoughts and feelings.

This paper highlights how to build resilience within coaches. It requires tenacity, hope, courage, optimism and, most critically, a positive mindset that accepts the inevitability of difficult situations but at the same time sees opportunities, potential, possibilities and solutions arising from such. The rewards however can be great and include (re)discovering strengths, relationships and well-being.

Could it be that adversity is a 'blessing in disguise'? Those who possess a high degree of resilience might well concur that they learned and grew from painful experiences. Coaches may well achieve something that they might not otherwise have, had adversity not struck, and had they not rallied to meet it. This is not to suggest that coaches should seek adversity but rather, when in difficult situations, they should seize the opportunity to recover and further develop competencies and skills that characterised them before facing the difficulty. Surely resilience is a worthwhile pursuit for all coaches.

In conclusion, coaches are reminded of the critical significance of resilience by Walsh (2003) who proposed resilience refers to 'making the best of things in the worst of times, seizing every opportunity' (Walsh 2003, p. 70). The worst of times can bring out the very best in a resilient coach.

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[RECOMMENDED ITF TENNIS I COACH CONTENT \(CLICK BELOW\)](#)

**Tennis*i*Coach**



# Mentoring programmes: A case study with Tennis Coach Ireland

Peter Farrell (Tennis Coach Ireland, Ireland) & Merlin Van de Braam (ITF, Ireland)

ITF Coaching and Sport Science Review 2014; 63 (22): 13 - 14

## ABSTRACT

*Mentoring is a powerful educational tool that is used across many disciplines ranging from business and medicine through to sports coaching. The process provides accelerated learning and helps inexperienced practitioners on the path to becoming an expert in the field. The present article discusses Mentoring in the context of the initiatives taken by Tennis Coach Ireland, whereby the primary purpose of the Mentoring Programme was to be part of a support system for those coaches who are dedicated to developing professionally and maximising their coaching potential.*

**Key words:** Mentoring, continuous professional development, licensing

Article received: 21 March 2014

**Corresponding author:** peter.farrell@tennisireland.ie

Article accepted: 31 June 2014

## WHAT IS MENTORING?

Mentoring is a powerful educational tool that is used across many disciplines ranging from business and medicine through to sports coaching. The process provides accelerated learning and also prevents inexperienced practitioners from falling into the many 'pitfalls' that exist on the path to becoming a real expert in the field. Mentoring covers many different types of experiences and relationships which have been described in the literature on a continuum from informal relationships or friendships at one end, to more structured Mentoring programmes which form part of a qualification programme or continuous professional development initiative (Stafford, 2011). Mentoring should not simply be a one way process whereby the Mentor provides information. The process of Mentoring should be a two way dialogue focusing on co-learning where both parties develop skills.

Mentoring in the context of tennis coaching refers to a situation where an experienced and knowledgeable coach acts as a guide to a less experienced coach, in order to assist that person to develop professionally. For the purposes of this article, a Mentor is someone who uses his or her knowledge and experience to guide another coach. Conversely, a mentee refers to the 'less experienced' coach wishing to maximise their potential. The present article discusses Mentoring in the context of the initiatives taken by Tennis Coach Ireland.

### Mentoring vs coaching

Although there are many similarities, Crawford (2009) outlines some key distinctions. In particular, coaching typically involves instruction, support and timely feedback whilst Mentoring is more based on learning, experience and inspiration. In addition to this, coaching aims to improve performance in a specific area at a specific time, whereas Mentoring aims more to prepare the mentee for a future role or performance requirements.

### Tennis Coach Ireland's Mentoring programme

In 2007 Tennis Coach Ireland began implementing a formal Mentoring programme in response to a survey of the 250 coaches present at the Tennis Coach Ireland National Coaches Conference. With over 41% of coaches expressing a keen interest, work began immediately to research and then establish the programme to support coaches. Mentor profiles were pulled together from the most experienced coaches in the nation into one document, which would eventually be sent to all coaches upon the launch of the Programme.

| Mentor profile: John Smith  |  |
|---|--|
| <p><b>Contact Details:</b><br/> <b>Tel:</b> 087 912 5112<br/> <b>Email:</b> JSmith@outlook.com<br/> <b>Based In:</b> Dublin City North<br/>                     I am interested in mentoring coaches from any part of Ireland on any, with a particular focus on Tennis10s and Play and Stay</p>  |   |
| <p><b>Biography:</b><br/>                     A level 3 Performance Coach with over 25 years experience teaching the game. I have held the position of Head Coach and Director of Coaching at clubs in both Ireland and the UK. Over 23 years of full time coaching I have accumulated a vast amount of experience in every aspect of coaching from starter players to high performance. I am also vastly experienced in club programming and club development.</p> | <p><b>Below are my specific areas of experience:</b></p> <ol style="list-style-type: none"> <li>1. Mini Tennis Schools Programmes</li> <li>2. Mini/Midi Club Programmes</li> <li>3. Recreational Club Programmes</li> <li>4. Wheelchair Tennis programmes</li> </ol> |

Figure 1. Sample Mentor profile.

### Who can Mentor who?

In the context of the Tennis Coach Ireland Mentoring programme, it was agreed that a Mentor should only work with a coach who holds a lower level of qualification than the Mentor. In the Tennis Ireland coach qualification scheme, this translates as follows:

| Who I can I mentor?    |                      |                      |               |               |
|------------------------|----------------------|----------------------|---------------|---------------|
|                        | Tennis Assistant One | Tennis Assistant Two | Level 1 Coach | Level 2 Coach |
| <b>A LEVEL 2 COACH</b> | Yes                  | Yes                  | Yes           | No            |
| <b>A LEVEL 3 COACH</b> | Yes                  | Yes                  | Yes           | Yes           |

Figure 2. Mentoring levels available to coaches holding different levels of qualification.

### Initiating the Mentoring process

Tennis Coach Ireland recommended that the potential Mentee make initial contact to establish the relationship. If the objectives of the Mentee are aligned with the Mentor, and a set of goals subsequently established, the next important stage is to outline details of the relationship. This can include a number of areas, which are outlined below:

- (i) How often both parties need to meet
- (ii) Other methods of communication that will be utilised – phone calls, Skype, emails, visits to each other’s clubs/classes
- (iii) Frequency and parameters for the above (e.g. no phone calls after 9pm)
- (iv) Start and finish date for this Mentoring relationship
- (v) Method of ending the relationship at any point if either party desires
- (vi) Fees and arrangements. Each relationship is unique in terms of the level of engagement required of the Mentor e.g. one coach might simply want to discuss a particular issue with a Mentor for an hour; another might seek to ‘shadow’ a Mentor over an extended period of time with detailed follow up meetings. Therefore in the present case study, fees would be entirely up to Mentor and coach. Neither Tennis Coach Ireland nor Tennis Ireland would be involved in this negotiation process.

### Mentoring arrangements, activities and contexts:

Precisely what activities might the two parties engage in, in order to fulfill the objectives of the Mentoring Programme?

- (i) Face to face meetings
- (ii) Telephone or Skype discussions
- (iii) Correspondence through email
- (iv) Mentor observations at coach’s club
- (v) Coach observes Mentor in their coaching environment.
- (vi) Review of the coach’s lesson plans (for lessons at which the Mentor is not present)
- (vii) Meet at an open tournament to observe, discuss, chart and profile players
- (viii) The Mentor recommends appropriate books, DVDs, websites etc
- (ix) The Mentor sets agreed tasks for the coach to accomplish, with deadlines for completion
- (x) The Mentor assists the coach to improve in terms of playing/ demonstrating ability
- (xi) All documents generated by either party during the Mentoring process should be collated and developed into a ‘reflective logbook’. This is designed to provide a written record of what occurred, and also to allow both parties opportunities to continue their own development and learning opportunities in their respective roles.

### Benefits of Mentoring

| Mentee   | Mentor   |
|--|--|
| <ul style="list-style-type: none"> <li>•Learn and experience first-hand inspiring coaching styles and approaches</li> <li>•Build confidence through encouragement</li> <li>•Develop sport specific knowledge that may have taken the Mentor years to acquire</li> <li>•Begin positive working relationships in the field</li> <li>•Accelerate the learning process</li> <li>•A more flexible process compared to formal courses</li> </ul> | <ul style="list-style-type: none"> <li>•Mentors will add another skill to their range of competencies, leading to an enhanced reputation</li> <li>•Growth, self-reflection and personal development as an educator</li> <li>•Mentors will gain insights from the perspectives of other coaches</li> <li>•Satisfaction of fostering the professional development of other coaches</li> <li>•It is an opportunity to work with the ‘next generation’ of coaches</li> <li>•Mentors will be paid a fee, as agreed with the coach they are assisting</li> </ul> |

Figure 3. Benefits of Mentoring.

### A good Mentor

- Not just providers of information, a good Mentor is someone who engages with a candidate in a caring relationship based on guidance
- A Mentor should be able to critically reflect on themselves and their candidates – excellent communication skills therefore underpin a Mentor’s success.

### INTEGRATING MENTORING INTO A COACHES EDUCATION PROGRAMME

#### Offer Continuous Professional Development points

Offering professional development points is an excellent way to encourage the uptake of a Mentoring programme. In the case of Tennis Coach Ireland, a coach signed up to be Mentored would be credited with points under the Continuous Professional Development Scheme.

#### Assistance in passing formal coaching exams

Traditionally, candidates who were unsuccessful in their Level 1 or Level 2 coaching assessments were required to complete the training course again. Candidates now have the option to study and gain work experience with a Mentor based on areas that need improving in their coaching. At the end of the Mentoring period there would be an opportunity for the candidate to re-sit the assessment process. Indeed, this type of integration has become one of the more objective measures of the programme’s success: a very high proportion of candidates who entered into the Mentoring Programme, having been unsuccessful in the formal qualification assessment process, have subsequently qualified following a period of Mentoring.

### CONCLUSIONS

Formal Mentoring is a key tool that should be integrated as part of any coaches education programme that offers professional development. Nowadays it is considered an increasingly important element of any coach development programmes (Bloom et al., 1998). Mentoring can support people at any level and stage of experience so offers not only a meaningful development tool, but also a high level of flexibility. The Mentoring Programme introduced by Tennis Coach Ireland has proven to be a very useful addition to the overall training and development of tennis coaches in Ireland. Federations without one should therefore consider developing a Mentoring Programme for their coach education programmes. It is hoped the experiences of Tennis Coach Ireland outlined above can assist and benefit other Federations worldwide.

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### RECOMMENDED ITF TENNIS ICOACH CONTENT (CLICK BELOW)



# Analysis of competitive wheelchair tennis

Alejandro Sánchez-Pay (University of Jaén, Spain), Gema Torres Luque (University of Jaén, Spain) & [David Sanz Rivas](#) (Royal Tennis Federation of Spain, Spain)

ITF Coaching and Sport Science Review 2014; 63 (22): 15 - 17

## ABSTRACT

Since wheelchair tennis became a paralympic sport in Barcelona '92, it has developed professionally, and the number of scientific publications on this subject has grown accordingly. This article gathers the information that describes the temporal structure and the physiological demands of wheelchair tennis in order to improve the quality of the current coaching systems.

**Key words:** wheelchair tennis, competition, playing pattern, physiological demands

Article received: 3 January 2014

**Corresponding author:** a.s.pay@hotmail.com

Article accepted: 30 June 2014

## INTRODUCTION

Wheelchair tennis is one of the adapted sports that has developed the most in recent years. It is always played to the best of three sets, unlike conventional tennis in which some matches are played to the best of five sets. It is played on all three types of surface (clay, hard and lawn). The main difference with conventional tennis is that the regulations allow for the ball to bounce twice before it is returned (ITF, 2012).

Since it became a paralympic sport in Barcelona '92, it has grown professionally and institutionally, it is played in over 41 countries, with approximately 160 international tournaments in the NEC tour (Bullock & Sanz, 2010). This growth has increased the number of scientific publications in recent years, providing information about different areas such as physiology (Croft et al., 2010; Sindal et al., 2013; Sanz et al., 2005), tactics (Filipic & Filipic, 2009; Sánchez-Pay et al., 2013), or motor control (Reina et al., 2007). However, this article will highlight the most relevant demands in this sport, including temporary structure and physiological demands.

### Temporal structure for wheelchair tennis

The wheelchair tennis regulations allow for a maximum of 20 seconds between points and 90 seconds for change overs (ITF, 2012). When the temporal structure of a sport is analysed, the first thing to be considered is the total volume of work that the activity demands (Christmass, et al., 1995; Galiano et al., 1996). Generally speaking, the total playing time for a singles wheelchair tennis match is between 50 and 80 minutes (Croft et al., 2010; Filipic & Filipic, 2009; Roy et al., 2006; Sánchez-Pay et al., 2013; Sanz et al., 2008; Sindal et al., 2013); although the characteristics of the match will be greatly determined by the level of the participants, the kind of injury, or the playing surface among other things (Filipic & Filipic, 2006, 2009; Sindal et al., 2013; Sánchez-Pay et al., 2013).

Most international tournaments are played on two draws depending on the ranking of each player. This way, highest ranked players will play the Main Draw and the rest will play the Second Draw. Sindal et al. (2013) compared the total length of the main draw in international matches and the second draw in international matches, showing a range of 40.1 to 74.8 minutes per match and found no significant differences between the draws. Filipic and Filipic (2009) measured playing times in 22 simulated amateur matches, with an average length of 54.13 minutes.

Wheelchair tennis is present in all four Grand Slams. A study by Sánchez-Pay et al. (2013) compared the duration of US Open and Roland Garros matches over two consecutive years and found that matches were shorter on fast surfaces (US Open) (68.30 ± 23.32) than on slow surfaces (81.57 ± 29.83). Even though differences are not significant, the trend is the same as in conventional tennis, where the total duration of the match is longer on slower courts than on fast courts (Morante & Brotherhood, 2005; O'Donoghue & Ingram, 2001). Although more research is still necessary on this matter, there seems to be a difference on the data if we compare simulated matches, 54 minutes (Filipic & Filipic, 2006) with official competitions (Croft et al., 2010; Sánchez-Pay et al., 2013; Roy et al., 2006; Sindal et al., 2013) between 68-81 minutes.

Wheelchair tennis is an intermittent sport, within the total time there is a time to work and a time to rest, and this knowledge facilitates specific training. Research shows a real playing time of 15-20% of the total playing time, which equals working / ratios between 1:1 and 1:4 (Sanz, 2007; Filipic & Filipic, 2009; Roy et al., 2006).

Another important consideration is the duration of the point, like the previous parameter, it will create strategies to specifically improve coaching for competition wheelchair tennis players. There is little research, and research shows that times vary between four and 10 seconds. (Bullock & Pluim, 2003; Filipic & Filipic, 2009) (Table 1). More specifically, Bullock & Pluim (2003), analysed three matches in the Paralympics of Sydney 2000. The authors noted an average time per point of 9.65 seconds, with long intervals between a maximum (11.75 seconds) and a minimum (6.02 seconds). Filipic & Filipic (2009), noted that in 22 simulated recreational matches, the average duration of the point was 4.16 seconds, 70% of which lasted zero-five seconds (Filipic & Filipic, 2009). Although there is little research on the temporal structure of wheelchair tennis, there seems to exist a trend in the sport to becoming faster and faster (Bullock & Sanz, 2010). In this regard, the comparative study between the semifinal and final matches in the Paralympics of Athens and Pekin, proved that the playing times were getting shorter and that the number of players playing after the first bounce was significantly greater in Pekin (2008) than in Athens (2004) (Sanz et al., 2009).

| Author                    | Sample                                      | Matches                           | TT (min)                                | RT (min)               | DP (s)         |
|---------------------------|---|-----------------------------------|---|------------------------|----------------|
| Bullock & Pluim (2003)    | top 10 male players                         | 3 matches Sydney parlympic games  | -                                       | -                      | 9.65           |
| Roy et al. (2010)         | 6 players considered elite                  | international tournament          | 70.9                                    | -                      | -              |
| Filipic & Filipic (2009)  | 15 male players (10 with no ITF ranking)    | 22 simulated matches in Green Set | 54.13                                   | 10.32<br>19.68%        | 4.16 ±<br>0.60 |
| Roy et al. (2006)         | 6 male recreational players                 | 6 simulated matches               | 70.2±14.4                               | 10.5±1.3<br>15.15±1.4% | -              |
| Sánchez-Pay et al. (2013) | 54 top 10 players with ITF ranking          | 27 Grand Slam matches             | 81.57±29.83<br>68.30±23.32<br>Green Set | -                      | -              |
| Sindal et al. (2013)      | 14 male players (n7 ≤25 ITF; y n7 ≥350 ITF) | competition matches               | 52.0±9.1                                | -                      | -              |

Table 1. Most important research related to the structure of WCT. TT= Total time of the match; RT= Real time of the match; DP= Duration of the point.



### Physiological requirements for wheelchair tennis

The aim of knowing the physiological profile of a player is to determine the physiological and contextual demands that impact performance, so as to organise training sessions and optimise the player's profile (Sanz et al., 2009).

The intermittent nature mentioned above, makes tennis players have short periods of work followed by rest intervals during a match. This has been largely studied in conventional tennis (Fernandez-Fernandez et al., 2009; Kovacs, 2007). In wheelchair tennis related research, the variables that have received most attention to control the intensity of a match are heart rate and/ or lactate concentration in blood ([Lac]) (Bernardi et al., 2010; Sindal et al., 2013).

In wheelchair tennis heart rate ranges between 120-140 beats per min<sup>-1</sup>, which means an intensity of 65-75% on the maximum heart rate with an approx VO<sub>2</sub>max of 50-68% considering it a moderate/high intensity sport (Barfield et al., 2009; Bernardy et al., 2010; Coutts, 1988; Croft et al., 2010; Roy et al., 2006; Sindal et al., 2013). According to the documents analyzed, these values do not show differences if competitive level is analyzed (amateur or profesional) (Sindal et al., 2013). [Lac] Bernardi et al. (2010) analysed four players in simulated matches, showing average values at the end of the match of 3.75 ± 0.76 mmol•L<sup>-1</sup>. Table 2 shows the most relevant studies on this matter.

| Author                  | Sample                                      | Matches                         | Medium HR (Lat•min <sup>-1</sup> ) | Max HR (%) | VO <sub>2</sub> max (%) |
|-------------------------|---|---------------------------------|------------------------------------|------------|-------------------------|
| Barfield et al. (2009). | 11 male recreational players                | 90 minutes of simulated matches | 121±14                             | 68.17±0.17 | –                       |
| Bernardy et al. (2010). | 4 players                                   | simulated matches               | 137±17.9                           | 77.6±2.90  | 73.0±1.91               |
| Coutts et al. (1988).   | 3 players                                   | simulated matches               | 128±4.1                            | –          | –                       |
| Croft et al. (2010).    | 6 players considered elite                  | competition                     | 146±16                             | 75.3±7.8   | 68.3±11.8               |
| Roy et al. (2006).      | 6 male recreational players                 | 6 simulated matches             | 121.7±9.6                          | 69.4±8.9   | 49.9±14.5               |
| Sindal et al. (2013).   | 14 male players (n7 ≤25 ITF; y n7 ≥350 ITF) | competition matches             | 134±14                             | –          | –                       |

Table 2. Most important research related to WCT physiological requirements Medium HR = Medium heart rate; max HR = maximum heart rate.



### CONCLUSIONS

The increase in the number of scientific publications in the last years provides great knowledge on the issue of wheelchair tennis, so coaches can improve the quality of their training sessions. Having reviewed the data, it is possible to state that this sport of an intermittent nature, lasts between 50 and 80 minutes per match, out of which the players will be hitting the ball between 15% and 20% of the time. Due to the intermittent nature of this sport, the average point lasts between four and 10 seconds, with a rest of 20 seconds between points. The work/rest relationship makes the player heart rate range between 120 and 140 beats per minute for the duration of the match long, so it can be considered a moderate/high intensity sport. Anyway, further research is still necessary, since, depending on the type of injury, the playing surface, or the level of the players, there is a wide variety of values recorded.

Even though more research is still necessary on this matter, the kind of injury, the playing surface or the level of the players present a disparity in the values, some guidelines for the coach and/ or trainer when planning sessions could be: a) in 'accumulation' periods, high volume work and low intensity, b) in 'transformation' periods, increase intensity and decrease volume, with a work/rest ratio of 1:1; and c) in 'realisation' periods, between six and eight seconds of high intensity with 20 seconds rest between repetitions simulating the work in the competition.

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[RECOMMENDED ITF TENNIS ICOACH CONTENT \(CLICK BELOW\)](#)

**Tennis iCoach**

# Left-handedness in tennis: Tactical, coaching and training considerations

Doug Eng (Lesley University, USA) and [Mark Kovacs](#) (International Tennis Performance Association, USA)

ITF Coaching and Sport Science Review 2014; 63(22): 18 - 20

## ABSTRACT

*Left-handedness has been often considered to be an advantage in tennis due to spin and tactical patterns. Recent research indicates that such advantages are minimal at the pro tour level but can still exist at the club level. The advantage has been suggested to be frequency-dependent, where if right-handed players become more accustomed to left-handed opponents, the advantage is neutralised. It is suggested that frequency of training with left-handed opponents with serve and forehand tactical patterns can prepare players better. Recommendations for tactics, training and coaching are made.*

**Key words:** left-handed tactical advantage, handedness, tactical patterns, spin

Article received: 2 March 2014

**Corresponding author:** deng@lesley.edu; kovacs@itpa-tennis.org

Article accepted: 4 April 2014

## INTRODUCTION

One of tennis' great debates is whether lefties have an advantage. During the mid-70s, lefties flourished as Connors, McEnroe, Laver, Vilas, Roche, Orantes, and Tanner were among the top players. The dominance of Nadal over Federer also adds to the debate where it is widely acknowledged that Nadal's heavy spin and tactics are Federer's kryptonite.

Loffing, Hagemann and Strauss (2012) recently researched handedness in tennis players with a comprehensive analysis 3,793 male and female club players and WTA and ATP rankings over a 38-year period. It was concluded that left-handers at the ATP level enjoyed an advantage in past years but that advantage has significantly diminished in recent years. WTA players, however, have not showed any advantage for lefties. By comparison, club level players, rankings were slightly skewed in favour of lefties. They suggested lefty advantages were frequency-dependent (meaning the less we see lefties, the bigger the advantage to lefties). It was also suggested that advantage has mostly disappeared due to increased exposure and training.

It is often estimated that about 10% of the world is left-handed. In many sports, it has often been noted that left-handers are more prevalent. Left-handedness represents a tactical advantage in sports such as baseball or ice hockey where 25-50% of professional athletes are left-handed. Notably they are often adapted lefties, much like Rafael Nadal, a natural right-hander becoming left-handed. In other sports, such as golf, lefties are rare due to the lack of left-handed equipment forcing some lefties to switch. Cultural adaptations have also been noted in traditional countries such as Japan or India where left-handedness is still discouraged and lefties only make up even as low as 4% of the population (Shimizu et Endo, 1983). On the other hand, in socially liberal Belgium and the Netherlands, Perelle and Ehrman found nearly 16% were left-handed (Perelle et Ehrman, 1994). Among primitive cultures, it has been shown that lefties are more common in more violent cultures and rarer in less violent cultures (Faurie et Raymond, 2005). Faurie & Raymond hypothesized that left-handedness has an advantage in a violent confrontation where surprise can mean death.

The recent study by Loffing and co-workers suggest that frequency-dependency is important. That is, as right-handers become accustomed to left-handed combatants, the left-handed advantage diminishes. In addition, if the population of lefties is significantly large enough, that tactical advantage is gone. For example, if 50% of people were lefties, everyone would be equally accustomed to right- and left-handed opponents. Yet one could ask, what might be the maximum left-handed population that can be sustained with a tactical advantage. In the study of primitive cultures, the

greatest number of lefties was noted at 22.6% for the Yanomamo tribe in South America (Faurie et Raymond, 2005) The Yanomamos were the most violent tribe studied. Baseball and the Yanomamos enjoy an advantage where lefties are generally not above 25%; this percentage may represent the maximum threshold value at which left-handedness ceases to be as an advantage.

In fact, only in a few combative sports do the numbers of lefties reach over 20% of the playing population. Raymond and co-workers (Raymond, Pontier, Dufour et Møller, 1996) found the highest number of lefties in table tennis, baseball and fencing. Within the sport, the lefties also change depending on positions. The most confrontational position in baseball is the batter-pitcher duel where many resources place the number of lefties at about one-quarter. In addition, some positions geometrically give the left-handed player an advantage, notably first base where in 1941, 67% of MLB first basemen were left-handed (Miller, 2009). In 2002 that number dropped to 36% partly explained by the long ball which downplayed the importance of a left-handed first baseman. The infield play was more important in the early years of baseball (e.g. 1941) than in 2002.

Unlike the ATP Tour, WTA statistics indicate no lefty advantage (Loffing, Hagemann and Strauss, 2012). There could be several reasons. First, the WTA left-handed serves are not as significant spin and pace to be an advantage. Second, in general the WTA backhand and forehand appear more balanced as strengths. Most ATP players have stronger forehands. Comparatively, table tennis demands faster reactions and spin is a more significant tactical advantage.

There are several things a coach can do help prepare both right-handed players and left-handed players for success.

### Sparring with left-handed player

Players should practice frequently against left-handed serves. As mentioned, it may be that the magic number is around  $\frac{1}{4}$  so that means for a player to be fairly prepared, he or she should practice against competitive left-handed serves for 25% of the practice time. This factor appears not as important for female players. In general, not only practicing against a lefty serve is valuable but also playing out points. Youth players may not produce as much spin which may diminish the left-handed advantage but differences between forehands and backhands can necessitate frequency. If coaching a high school or college team, it is valuable to keep a couple of left-handed players for practices. Most starting players should practice against not only left-handed players in singles, but in doubles as well. It can be valuable to rotate a left-handed player among right-handed sparring partners (even if skill levels may differ) as long as all players efficiently benefit from the experience.

### Patterns for practise: controlling a crosscourt rally, angles and slices

Groundstroke patterns discussed here consider right-handed versus left-handed players. Patterns should be practiced with regards to strengths and weaknesses. For most right-handed vs left-handed players, the deuce court crosscourt can be dictated by the right-hander's forehand. The ad court crosscourt pairs the left-handed forehand against the right-handed backhand. When Stan Wawrinka beat Nadal in the 2014 Australian Open, he used the forehand crosscourt extremely effectively.

Both left-handed and right-handed players should practice their crosscourt forehands especially angles to open the court or force the opponent to slice defensively. Forehand angles are important to create tactical mismatches when facing an opponent with the opposite dominant hand. Figure 1 shows a left-handed combination with a topspin forehand angle that pulls the right-hander off the court and exposes court for the down-the-line shot. Comparatively, for a right-hander vs a right-hander, often a player may try to drive the ball inside-out or down-the-line towards the backhand.

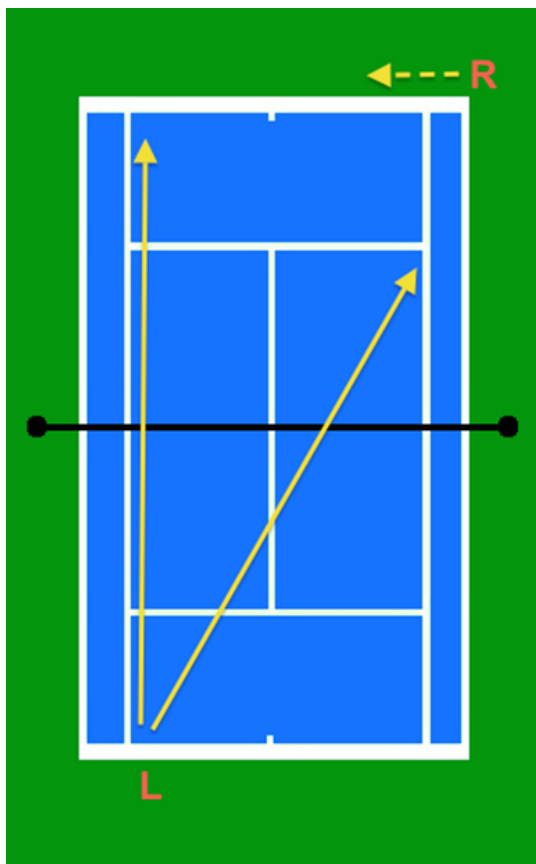


Figure 1. Left-handed tactical combination with the forehand crosscourt angle and down-the-line forehand.

A strong down-the-line backhand can neutralise the forehand advantage. For example, Novak Djokovic can be extremely effective against Rafael Nadal's forehand. When Nadal drives Djokovic into the backhand corner, Djokovic's down-the-line exposes Nadal's backhand. Federer by contrast cannot exploit Nadal's backhand as effectively with a down-the-line backhand from the ad court corner.

Sometimes two-right handed players engage in a slice crosscourt rally in the ad court. However, a strong right-handed crosscourt backhand slice can also neutral a left-handed forehand especially with a western grip. Obviously, the same is true for the left-handed slice versus the right-handed forehand. Even though the forehand player may seemingly have the mismatch advantage against a weaker backhand, the use of the backhand slice can effectively neutralise a western grip. If the slice crosscourt is strong enough, it may even become an effective approach shot against a western grip with the opposite hand.

### Slice serve and patterns

For left-handed players, to increase an advantage, one must obviously increase pace and spin rate to reduce reaction time and comfort level of the opponent. For anyone competing against an opponent with the opposite dominant hand, the slice serve is recommended.

If no left-handed players are available, a right-handed coach may use a technique to imitate left-handed spin on the serve. The right-handed coach can hold the racquet with a western grip. The coach can serve it with almost a normal service motion but moving the racquet from right to left to imitate a lefty's slice serve.

For all players, the slice serve forces the opposite-handed opponent to move more laterally to the backhand and opens the court. Most players have weaker backhands. The coach can place angled targets as shown in Figure 2, about two meters short of the service line to better practice a wide serve. If the backhand is the weaker shot - which is usually true - this tactic can be valuable in opening the court.

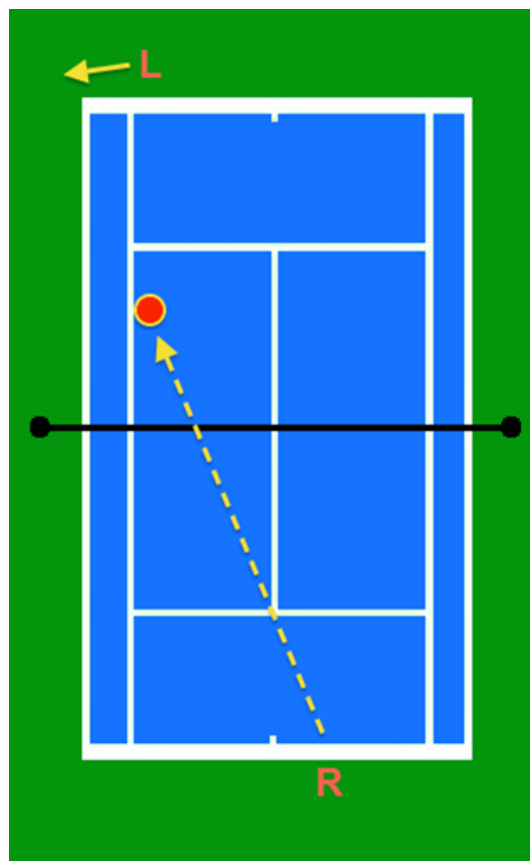


Figure 2. Right-handed slice serve target to the left-handed backhand.

In addition, players may practice certain tactical patterns off the serve. For example, a right-hander may serve wide in the deuce court and prepare to drive the forehand inside-out on the next shot. For such a pattern, often there are subtleties as many players may slice from out wide so practice driving the inside-out forehand off a low, slice ball.

Another combination might be a slice serve wide, slice return back, slice approach crosscourt. This pattern can be useful against the receiver on the run with a western forehand grip.

### Doubles partner

Many players may find it an advantage to seek a doubles partner with the opposite dominant hand. Many great doubles teams have such combinations: the Bryan brothers, Woodforde-Woodbridge, McEnroe-Fleming, and Navratilova-Shriver. Often teams put the forehands on the outside but they don't need to do so as often having two overheads and two forehands in the middle can be advantageous. Obviously, such teams do not allow for a rhythm in service returns and sometimes the opposing team is not properly prepared.

### Mental rehearsal and cues

Mental preparation is important especially for the right-handed player who needs to consciously remind oneself to make tactical adjustments. First, players should develop a game plan and favourite tactical patterns. Players should be conscious of game plans and tactical patterns and review them. Players should incorporate cues that remind them of their plans. When preparing to serve or return, players should incorporate brief cue reminders from time to time. More frequent visualisation of points can also help. For the recreational player who plays twice or less per week, mental cues can be important in facilitating preparation. Given the left-handed population, a right-handed player might face a left-handed opponent in a match once every four to six weeks. If not prepared, the right-hander may fall behind in the first several games. The same may also apply for the lefty-lefty match. Although it appears to be an equaliser, both left-handed players should still make conscious preparation before the match to get a good start.

### Physical training

Physical training for either left-handed or right-handed should be symmetric. Tennis is a highly asymmetric sport, especially on serving and if one favours a forehand or one-handed backhand. Although physical training does not always have a tactical basis, it is always important regarding the asymmetry of tennis. Single-legged or one-sided exercises can be beneficial in assessing physical weaknesses, proprioception balance. It is important to have balanced strength to help avoid injuries. Players should also test their physical weaknesses and imbalances from time to time as tennis is asymmetric.

In addition, physical speed and strength should be trained or improved. Often in adjusting to left-handed players, quick footwork adjustments can be valuable. Players who are faster or stronger can split step and get into position quicker, or more quickly move around a weakness or counter a heavy spin with more racquet head speed or a bigger shot of their own.

### Team and group training

Often many training groups remain small, such as three or four students training together. That may not be ideal in creating an environment that supports a variety of styles to prepare against. Club or school teams have the advantage of being a larger group culture. If there are 12 players on the team, there might be one-three left-handed players. The coach should make sure lefties practice serving to all the other players who might face similar competition. A club coach usually has small groups of four, which limits variety. If in a large programme, the coaches may consider, having the few the left handed players rotate to other courts from time to time. Finally for teams, consider having left-handed practice partners who are not on the team since the team's left-handers may be too few or too weak.

### CONCLUSIONS

Physical training should be implemented regardless of whether players are preparing for a left-handed player since it is a fundamental part of training. Coaches should ensure all players gain exposure against left-handed players and different styles. Players should be encouraged to develop game plans and tactical patterns that can be effective against left-handed players. Mental rehearsal and cues can be valuable to remind players how to tactically approach their opponents. Finally, before a match, coaches can remind players to be conscious of their game plans.

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### RECOMMENDED ITF TENNIS ICOACH CONTENT (CLICK BELOW)

**Tennis**  **iCoach**



# Developing a young tennis player: A parents' guide

Frank Giampaolo (Maximising Tennis Potential, USA)

ITF Coaching and Sport Science Review 2014; 63(22): 21 - 22

## ABSTRACT

*The development process of a young tennis player is complex and can be challenging for any parent. There are many obstacles to overcome simultaneously and learning how to cope with these can be overwhelming. Goal setting and developing a strategy are essential components to the success of the player. Parents play pivotal roles in supporting the athlete throughout the development process. This article discusses the aforementioned aspects and is based on "The Tennis Parent's Bible" by Frank Giampaolo.*

**Key words:** parenting styles, goal setting, relationships, motivation

Article received: 4 April 2014

**Corresponding author:** fgsa@earthlink.net

Article accepted: 3 July 2014

## INTRODUCTION

Like gasoline and fire, educated parents can accelerate a child's success. In today's world, coaching has moved past the athletic playing field and into every aspect of life. A knowledgeable, educated primary tennis parent can be one of the best ways to contribute to a player's success. If the child's involvement or intention in tennis is different to that of the parent, or vice versa, it could lead to conflict or miscommunications. Try to establish the reasons why as a parent it is important that your child participates in tennis and communicate with them as to their aspirations.

The best players were motivated by very powerful forces. Find out what is motivating your child.

Common motivational forces may vary from:

1. Ensuring a better future
2. Having to keep up with older siblings
3. Seeing someone just like them succeed
4. An experienced coach who believes in them
5. Wanting to belong
6. Deep need for a better life
7. Fame
8. Fortune
9. Supportive parents
10. Love of the game

### One size does not fit all

A common mistake to make as a tennis parent with experience in the game is to assume that the child's experience will emulate or reflect their own. This applies to coaching in the same way; it would be impossible for one to expect a player to play in the same style or with the same technique as their coach. A coach must be flexible with their teaching strategy and be ready to modify training sessions to the requirements of each player.

### Competition stage

During competition it is important to ensure open communication between parents and coaches otherwise there may be conflicting ideas. A parent must outline their expectations to a coach early on to prevent these issues from escalating and negatively impacting the player. Discussions surrounding the coaching philosophy is a good foundation to build a relationship with the parents. The needs of a player will develop and change throughout their career.

### Goal setting

When a player transitions from recreational play to match-play it is important that clearly established goals are set for long term and short term periods. Goal setting and organising should be used as soon as your child enters into the competitive phase. After an event, plan on setting some goals to organise their upcoming lesson. Sit down with the child and review their completed match logs at

an appropriate time. Being prepared and organised promotes a positive attitude. There are four sides to your youngster's game that need to be developed. Put in writing the four sides of development and identify a weakness that can be improved.

Technical: Slice backhand

Tactical: How to beat a moonballer / pusher

Movement / fitness: Develop core strength and stability

Emotional / focus: Practicing closing out 5-2 leads

Sit down with your child and discuss your expectations. This should include performance goals such as effort, time management, nutritional requirements, perseverance and work ethic versus having to win every event they are entered into. Review family philosophies and policies. Discuss the enforcement of such guidelines. Discuss how the goal is to eventually develop a self-reliant young adult.

At tournament sites we often hear parents and inexperienced coaches unknowingly sabotaging their player's upcoming performance by pulling their attention completely away from their performance goals. They do this by talking about the success of their child's peers. Look for the positive. Say something nice. It is important to acknowledge your child's effort. Once a month, throughout the course of your youngsters tennis career plan on sitting down and writing a letter stating how proud you are of them and place it on their bed at night.

### Developing a family philosophy

Team leaders, who are primarily tennis parents, must cultivate a positive family atmosphere to maximise success. An important step is to define the roles and styles of the parent.

At the competitive level, being a tennis parent is one of the most incredibly rewarding, yet most challenging adventures to undertake. Parents with a clear understanding of their own family's unique 'life philosophy' are more likely to avoid drama, stress and misunderstandings.

If the parent cannot control their own anxiety, asking a child to be mentally tough under adverse conditions destroys the positive messages they are trying to deliver. Tennis builds character. On a daily basis, encouraging the parents to display the same positive character traits developed through sports is critical in solidifying these powerful life lessons. The family's philosophy is the basic beliefs, attitudes and moral compass of the group.

## EXAMPLE

### Developing a personal philosophy

Developing a personal philosophy will help an individual, a family and children avoid unnecessary pressure, strain and tension. Having pre-set guidelines will assist in the development of the child's personal philosophy. It will also aid the parent in acquiring the right coaches through the different stages of the child's development.

Team leaders, who are primarily tennis parents, must cultivate a positive family atmosphere to maximise success. An important step is to define the roles and styles of the parent.

### PARENTING STYLES

Ten parental styles that are commonly demonstrated:

**The Rocket Scientist:** These parents often talk above their child's head, confusing their child more than they help.

**The Athlete:** These parents still view themselves as a competitive athlete. They often stretch more before their child's match than their child does.

**The Submissive Victim:** The child hides their frustration and becomes submissive.

**The Developer:** This parent is always pointing out life lessons in a positive way.

**The Drill Sergeant:** This parent makes all the decisions in dictator fashion. His battle cry is "Because I said so!"

**The Judge:** Judging and criticising is what this parent does best and most often. This parental style can spot 47 things wrong in 30 seconds and they believe they are helping.

**The X Pro:** "When I was top ranked..." is how most comments start with these parents.

**The Negatron:** These parents expect the worst in every possible situation.

**The Jabber Jaw:** Talks at the coach for 45 minutes of the child's one hour lesson and then later complains that there wasn't any real progress.

**Houdini:** This parenting type is known to drop off their child in the morning for their afternoon lesson and shows up at the club at the evening to pick them up.

### CONCLUSION

Young athletes will respond in either a positive or negative way depending on their guidance from parents and coaches. It is important to understand that life and the game of tennis is always in a state of evolution. Every generation changes it, tweaks it and improves it. The game's highest level is meant to be surpassed. Records are meant to be broken. Pay close attention to your child's progress and read between the lines. Encourage and praise them for their efforts. Acknowledge the struggle.

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### RECOMMENDED ITF TENNIS ICOACH CONTENT (CLICK BELOW)

**Tennis*i*Coach**

# Measuring the service quality of International Tennis Federation coaches education courses

Karl Davies (USTA Southern, GBR)

ITF Coaching and Sport Science Review 2014; 63 (22): 23 - 24

## ABSTRACT

*The requirement for effective coach education certification programs is becoming increasingly important worldwide for many reasons. First, the number of children who participate in youth and interscholastic sport is increasing dramatically. In addition, female participation, older people playing the sport, and newer sports forms are also on the increase which has created a demand for more qualified coaches and sports instructors, thus, making the education and certification of coaches essential, particularly at the entry level. Most of the developing countries using the International Tennis Federation's coach education syllabus have a policy that all coaches need to be affiliated and be certified in order to coach. Ensuring that all coaches go through the certification system, particularly at the developmental level, to transfer the appropriate knowledge to the coaches in order to retain players is paramount. The purpose of this article is to present a research on measuring the service quality of the International Tennis Federation's coaches' education courses.*

**Key words:** coach education, service quality, developmental coaches, starter-beginner players

Article received: 10 March 2014

**Corresponding author:** karlmd17@gmail.com

Article accepted: 19 June 2014

## INTRODUCTION

In order to have a thriving business, tennis coaches on all levels need to keep players in their program. Coaches who tend to have the most influence on the game of tennis are developmental coaches. Developmental coaches are coaches who work with starter-beginner tennis players. The first impression that an aspiring player has of the game will ultimately predict their future participation. Usually the first introduction to any sport is through a coaching lesson (Gilbert & Trudel, 2004). Therefore, the quality of coaching that developmental coaches produce in their lessons will have a significant bearing, not only on their own program, but also the game of tennis. It may be assumed that developmental coaches should be proactive in making sure they have the right skills to coach players. This would entail attending a course staged by their respective National Tennis Federation. Unfortunately, this is not the case as the image of tennis coach education courses is somewhat negative; participants of courses are of the feeling that they are not receiving the required knowledge to deliver high quality tennis coaching service (McCullick, Belcher, & Schempp, 2005).

Studies to date have demonstrated a positive influence between coach education courses and a coach's confidence and efficiency (Vargas-Tonsing, 2007). Considering the globalisation of sports, including tennis, coach education and the demand for qualifying coaches, has been on the rise. In light of this information, tennis has stepped up its efforts to provide a better education to their coaches through adopting coaching courses that have the most updated coaching information and matching educative resources (Crespo, McInerney, & Reid, 2006). Santos, Mesquita, Garca, & Rosado (2001) concluded that the quality of coaching has a direct relationship to the success and satisfaction of its participants and ultimately in their willingness to stay in the sport. There has been a change in focus by researchers in coach education from coaches' behaviours and performance towards thoughts and knowledge that form the basis of coach's actions (Gilbert & Trudel, 2004). Many developed Tennis Federations have established their own unique models of coach education and certification to ensure that those individuals working with a country's top young players are employing both current coaching practices and working with these players with a methodology and philosophy that is player-centred where the health and well-being of the athlete is put first (Crespo et al., 2006).

The International Tennis Federation (ITF) is the world governing body of tennis and is responsible for the overall development of the game worldwide. The ITF's Development Department's objective is to help developing countries grow the game. One of the ITF's development programs is the provision to developing countries of a coach education syllabus, should they not already have one in place. A large majority of developed countries have their own curriculum

and, therefore, do not require the ITF's assistance. Currently, there are 80 nations that use, in some form or other, the ITF's coach education syllabus (Miley, 2011). The ITF, therefore, influences a great number of coaches worldwide by way of developing countries using the ITF's coach education syllabus. It is for this reason that the ITF's coach education syllabus should be the cutting edge in coach education design, ultimately to fulfill its objective of developing the game worldwide.

A major component of participation in the sport of tennis falls on the shoulders of the tennis coach. In most cases, the first port of call of any interested starter-beginner tennis player is the coach. Studies have shown that the quality of coaching has a direct relationship to the success and satisfaction of its participants and ultimately their willingness to stay in the sport (Santos et al., 2001). Although quality of coaching is not the only intervening variable in the continued involvement in tennis, it is recognised as a significant, contributing factor to the development and retention of players.

## THE RESEARCH

### Purpose

Evaluating the quality of service of tennis coaches' courses as a service, therefore, become fundamental to the sustainable development of tennis as a sport. From an educational point of view the development of sports coaches is a complex process that requires not only an individualised program, but in many cases random learning pathways (Nelson & Cushion, 2006). It is the requirement of coach education syllabi to recognize this and to comply with the demands of the coach as they play a critical role in tennis participation and retention. Misener & Danylchuk (2009) justify the importance of the coach when they say, "Coaches are influential figures in the social, physical, psychological and emotional development of athletes".

### Instruments

A quantitative and qualitative research instrument was used. Survey method was used for the quantitative section, and the feedback from the quantitative response was used in the qualitative section. The standardized quality of service SERVQUAL questionnaire to evaluate pre-service expectations and actual post-service experiences of a group of tennis coaches attending the ITF Starter-Beginner Tennis Coaching course constituted the quantitative research instrument. A pre-and post-questionnaire exploring five dimensions of service quality was administered to respondents. These dimensions were: reliability of service, responsiveness of service deliverer, assurance of service users, tangibles and empathy of service provider. The nineteen sub-dimensions that explored the gap between respondents' expectations and actual service experience are summarised in table 1.

| <b>Sub-dimensions of service quality.</b>    |
|--|
| 1. Credibility of tutors and instructors     |
| 2. Tennis training course design             |
| 3. Tennis coaching contexts                  |
| 4. Organisation of tennis coaching practices |
| 5. Pre-course organisation                   |
| 6. In-course organisation                    |
| 7. Post-course organisation                  |
| 8. Marketing of course                       |
| 9. Learning styles and strategies            |
| 10. Education styles and strategies          |
| 11. Different methods of course delivery     |
| 12. Didactical styles and strategies         |
| 13. Tutors created learning environment      |
| 14. Feedback opportunities                   |
| 15. Quality of coaching course material      |
| 16. Integration of prior learning            |
| 17. Delivery of technical principles         |
| 18. Delivery of tactical principles          |
| 19. Delivery of scientific tennis principles |

Table 1. Sub-dimensions of service quality.

The sub-items under each dimension of SERVQUAL model constituted two questionnaires. The sub-items elaborated on the tennis coach education context and provided appropriate feedback to the research objectives of obtaining a service quality of the ITF's Starter-Beginner Coaching Course. The pre-course questionnaire was divided into two sections. The first section requested demographic information from each participant. In the second section, 19 sub-items representing the five service quality requested respondents to rate the importance they gave to each sub item on a five Likert point scale. The post-course questionnaire was also divided into two sections. The first part was an identical layout to the pre-course questionnaire where the sub-items were presented on a five Likert scale. The second part of this section requested respondents to give consent to be part of the interview part of this research.

The qualitative part of the research used a personal in-depth interview. The aim of the personal interview was to gain further insight into the importance each tennis coach gave to identified aspects of the ITF's Starter-Beginner Coaching course.

#### Sample

Ninety six coaches (n=96) over four ITF Starter-Beginner tennis coaching courses were approached to take part in the quantitative part of the research. Of those 96 coaches, 71 (South Africa n=22, Vietnam n=24, Seychelles n=11, St Lucia n=14) consented to take part in the quantitative SERVQUAL survey as part of the research. 56 participants were used in the final analysis section of this research.

The second part of the research used eight qualitative interviews with participants who had consented to provide additional insight into their expectations. Gender equality was imperative in the respondents' research sample resulting in four males and four females taking part in the qualitative section of this research.

#### RESULTS

The following observations were obtained from the responses made on both the pre-course expectations questionnaire and post-course satisfaction questionnaire.

- Sub-items delivery of technical and tactical knowledge, and tutors created a learning environment were recorded as the most importance to the respondents.

- Sub-items marketing of the course and integration of prior learning were not perceived as important to the respondents and were given the lowest grading.
- Sub-item in-course organisation was rated the highest actual satisfaction received by the respondents.
- Sub-item marketing of the course was rated the lowest actual satisfaction received by the respondents.
- Sub-item that gave the most quality of service by way of gap analysis was integration of prior learning.
- Sub-item that gave the least quality of service from comparing the difference between expectations and importance was marketing of the course.
- Dimension assurance of service user was ranked highest by the respondents when comparing the difference between expectations and satisfaction.
- Dimension tangibles were ranked the lowest by the respondents when comparing the difference between expectations and satisfaction.
- The sub-item delivery of technical knowledge under performed as it was given the highest importance and low satisfaction representing nearly one of the lowest differences in values.
- Sub-items credibility of tutors and instructors, didactical styles and strategies, and feedback opportunities were given an equal rating of importance and satisfaction.

#### CONCLUSIONS

The findings of this research emphatically point towards the ITF's Starter-Beginner Coaching course providing a high level of quality of service. Considering the worldwide perspective of the sample generated to make this research's analysis and interpretations, the ITF is doing its best to impact coaches in a positive way. The implementation of the modified rules program into the ITF's Coach Education Syllabus has been positively received by the participants of this research. This provides the confidence to the coaches in their attempt to attract and retain tennis players in this program. If every coach who takes the ITF's course is receiving the appropriate knowledge and doing their best to retain players, this will have a worldwide impact on the game of tennis. This would be the ultimate goal of the ITF as the status and future of the game falls in their hands. From a coach's educational point of view, the ITF is fulfilling its objective.

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**RECOMMENDED ITF TENNIS ICOACH CONTENT (CLICK BELOW)**

**Tennis**  **iCoach**

# The role of the coach in the early stages of development

Cyril Genevois (University of Lyon, France)

ITF Coaching and Sport Science Review 2014; 63 (22): 23 - 24

## ABSTRACT

*The initial stages of player development are challenging for coaches as they must teach a player to quickly learn technique, stroke production and the fundamental skills of the game. The role of a coach is to create an optimal environment that encourages player engagement and enjoyment. The coach must adopt a behaviour that contributes to the success of the player and allows for the player to development at a rapid rate. This paper explored the ways that this can be obtained.*

**Key words:** progression, player development, environment

**Corresponding author:** cyril.genevois@aol.fr

Article received: 10 March 2014

Article accepted: 19 June 2014

## INTRODUCTION

It is now recognised that ‘talent’, provided the individual possesses basic skills, is the result of intense practice extended for a minimum of 10 years, known as ‘deliberate practice’, which involves three types of constraints (resource, motivational and effort constraints) that the child/parent/coach triad will have to deal with all along the path to high-level development (Ericsson, 1993). Elite athlete development is a process that can be broken down in three stages, as identified by Côté (1999), i.e. the sampling phase (6-12 years), the specializing phase (13-15 years) and the investment phase (16+ years). One variable in the sampling years that is particularly important is the enhancement of the child’s self-esteem and confidence in his abilities. Equally important is the successful acquisition of fundamentals, which is the cornerstone of continued technical, physical and mental development as the player moves through the developmental stages (Lubbers, 2003). Thus, the coach will have to both adopt a behaviour that contributes to the quality of his relationship with his student in order to facilitate his learning (Jowett and Poczwardowski, 2007), but also propose efficient content because it is always easier to create a solid foundation from the start rather than having to plan for technical corrections that always result in bad experiences and are costly in energy.

### Quality of the coach athlete relationship

According to Baker (2003), coach behaviours have an impact on the athlete’s satisfaction level, commitment to goals, drive to succeed and self-esteem.

Jackson (2010) assessed the impact of Lent and Lopez’ (2002) “tripartite” model of efficacy beliefs (self-efficacy, other-efficacy and relation-inferred self-efficacy) on Jowett’s own model (2007) which describes three relational constructs that characterize mutually beneficial coach/athlete relationships, i.e. closeness, commitment and complementarity. It was found that a high degree of confidence in the other person’s capabilities (i.e. other-efficacy) predicted enhance commitment for both dyad members. It was also suggested that having confidence in the other person’s ability was more strongly related to intra-individual outcomes for athletes than for coaches, probably because young athletes occupy a subordinate position within the dyad (at elite levels, athletes may not occupy such a subordinate position). Moreover, relation-inferred self-efficacy appraisals were found to exert positive effects on athlete and coach commitment. This suggests a potential chain of events where committed coaches display verbal and non-verbal behaviours (e.g. praise, emotional support, and long-term planning) that, when detected by athletes, foster enhanced athlete commitment. The main goal of the tennis coach will therefore be to create an optimal cooperative setting by being able to:

Express verbal and non-verbal emotions (especially for female tennis players) and show empathy (Haselwood et al. 2005).

- Give more options to players during coaching sessions by explaining the objectives, provide support and encouragement such that players’ self-esteem develops (Coatsworth & Conroy, 2007).

## Efficient content

The use of progressive technique, designed to take advantage of as many tactical situations as possible, can result in conflict because the repetitive tasks required to stabilise and enhance the skills will not be perceived as fun. Improvement of accuracy and speed of cognitive, perceptual and motor performances could be achieved through:

- Drive to succeed (Unierzyski, 2003): a player’s commitment to perform a given task and give his best to improve through repetitive practice of the task (Ericsson et al. 1993).
- Immediate and appropriate feedback (coach skill) and knowledge of one’s results (Ericsson et al. 1993).
- Relevant use of “self-talk” to emphasise the efficiency of the work done (Hardy, 2006).

In order to combine the primary goal of “deliberate practice”, i.e. learning, with the necessary search for fun in the early stages of development (often game-based), use of the “Play to Learn” concept (Genevois, 2011) appears to be the most appropriate answer when working with younger players.

### Principles of the “Play to Learn” concept

- A tennis match is played between the coach and the student or between several students: wins/losses, ranking, etc.
- The point is awarded provided that the proposed exercise is successfully performed. For example, hitting a combination of groundstroke, approach shot and volley in predetermined zones: the point is awarded to the player if the play sequence is successfully performed; otherwise, the point is awarded to the coach. First to 10 points wins.
- The player picks an exercise among several options available, all in line with the objective of the session.
- The proposed exercise comes with a variety of parameters available to the player (stroke precision, number of strokes, etc.), which demand optimal concentration from the player in all cases.

This concept results in:

- Better ability to concentrate (“otherwise I lose” attitude) and enhanced intrinsic motivation
- Development of feelings of being competent and in control of the situation and building of self-esteem because of a constant challenge to either acquire new skills or stabilise learned skills
- Better coach-player relational quality (especially when the coach loses).

To assess the impact of his teaching on the acquisition of technical fundamentals, the coach can use the various tools and resources offered by his National Association as well as video to carry out a longitudinal follow-up and increase the player’s awareness of the progress made. The coach will need to be attentive to changes in the player’s behaviour during the session to pick up cues on his

satisfaction level, i.e. facial expression (smile or no expression), body language (dynamism or lack of dynamism). Similarly, it is essential for the coach to pay particular attention to the recovery periods between exercises as these can provide opportunities for verbal interaction related to the session or other subjects, making it possible to adapt the session if the coach or the player feels a need for it (for example, to rekindle motivation or change the session objective).

## CONCLUSION

In conclusion, the challenge for any coach involved in the initial stages of a player's development is to put himself in a position where he can help the player quickly acquire the fundamentals specific to progressive technical development in a fun and enjoyable environment thanks to the "Play to Learn" concept.

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## RECOMMENDED ITF TENNIS ICOACH CONTENT (CLICK BELOW)

**Tennis*i*Coach**

# Marketing and communication applied to tennis organisations

Jordi Gázquez (Royal Tennis Federation of Spain, Spain)

ITF Coaching and Sport Science Review 2014; 63 (22): 23 - 24

Abstract

*This article intends to help coaches, club managers, schools and federations to become aware of the role of the media in the success or failure of an event in a player's career. It presents some considerations and suggestions within the framework of a communication plan that are considered essential to reach the expected targets.*

**Key words:** media, sponsor, promotion

Article received: 14 March 2014

**Corresponding author:** jordi@3setscomunicacio.com

Article accepted: 19 June 2014

## INTRODUCTION

### Previous considerations

The media is a platform to provide and share knowledge and information about tennis to organisations and to the public. It is a key tool to get keep the public up-to-date with news, schedules and results of current and upcoming tournaments. It is also a way to involve sponsorship promotion, encourage participation in tennis and inform the public about upcoming events.

The media may not be directly interested in the activities of certain smaller organisations for their own sake, in this case, the tennis stakeholders are the ones who have to communicate all the news and projects. There is a range of organisations that use social media and other media platforms as a way to communicate and promote themselves. The communication plan is a key organisational tool that will help to achieve a positive relationship between the public and the media.

### Communication plan



Figure 1. Elements in the communication plan

In order to design a communication plan there must be clearly defined objectives, i.e. analysing the needs of the association, event or player. These objectives must be realistic and in line with the budget available. It important to appoint a person in the organisation who will be responsible for the implementation of the communication plan.

What can we communicate? Table 1 summarises the different tennis related contents that can be communicated.

| Communication contents   |
|--|
| The presentation of an event   |
| New appointments within organisations  |
| Communication of news of the institution and/ or event   |
| Communication of future projects   |
| Announcements and awards   |
| Spread the opinion on a current issue of public interest, related with the activities of the institution or within the tennis sector |
| At the individual level, inform about the participation of an event and/ or the results achieved                                     |

Table 1. Communication contents

### What media to communicate?

Local and regional media will be more or less reptive of certain information. Information must be channelled in a way that will impact the appropriate audience in the most efficient way. Media organisations must concentrate their attention on tennis in specific and sport specialised media to ensure that the material they are producing is concise and relevant.

### What tools are available?

There are a variety of communicative resources available to communicate information quickly and to target audiences. Table 2 summarises these resources.

| Communication tools or resources  |
|---|
| Databases   |
| Press releases  |
| The agenda of an event / the magazine of a club/ a tennis tournament schedule |
| A website   |
| Social media (Facebook, Twitter, Youtube, Instagram, etc.)                    |
| An e-bulletin or newsletter   |
| A blog  |

Table 2. Communication tools or resources.

Below you will find a detailed list of the most common communication tools or resources.

### Press releases

The aim of a press release is to facilitate information or invite the public to a concrete event. The main elements are: date, name and logo of the institution, headline, text, signature and contact details. The press release should not be longer than a page. The style should be short and to the point and as journalistic as possible.



It is advisable to include a high definition photograph and/ or an internet link. It is convenient to produce a calendar to send press releases following the highlighted steps of the communication plan. It is advisable to reinforce press releases with phone calls. As to the wording of the press release, its characteristics are the following: a short headline with the name of the sponsor, the tournament, the club and/ or the person mentioned. The first paragraph must answer the following questions: What? Who? When? Where? and How? It is also necessary to include the statements of the persons interviewed between inverted commas.

#### Programme of the event / press guide

This resource includes sport, social and practical information before the event. It is normally published as a paper or electronic magazine in pdf format. The tools in the programme are usually the following: a greeting from the authorities, a technical guide, an honour roll, participating players or exhibitors, an event background, facilities and services, sponsors and advertising, contact details, and as an option, an article about the event or about tennis in general.

#### Website

If it is a club website, this communication tool will help to produce the most complete and up to date information. It should not be a static resource and it needs to be regularly updated, there has to be someone in charge of the site (Sotelo, 2012). Another important element is to have a corporate design to add value to the website, menus should be clear and should make navigating easy. Sponsors must have enough room so that they are clearly visible and in relation to their contribution to the institution. If it is a tournament or event website, it is necessary to include things such as a "Factsheet", the order of play, the results, the draws, the players, the venue, access to the facilities, the tournament guide, the history, the different news, photos and videos of the event.

#### Social media

Social media helps to manage the online reputation of the tennis organisation, club or player. Thus, we have to be dynamic and create a loyal community of virtual followers that will help to increase the number of sponsors and create a media impact. However, it is key to study and moderate the use of the social networks. Twitter and Facebook, are the most popular platforms of social networks, they have an extraordinary impact on tennis and they help to improve the optimisation of search engines and user engagement.

#### E- newsletter

This tool provides a permanent information service for those who, having registered earlier, are interested in your content. It is usually sent as an email in pdf or html format. The appropriate presence of the sponsors is also necessary. Likewise, it is important to guarantee the data protection according to the laws in force in each country.

#### Blogs

Blogs help to develop the corporate presence on the internet, since it is a web space the aim is the frequent publication of updated articles, analysis or spreading the news. These contributions can be made by one or several authors, and can include texts, images, multimedia content or links. The idea is to debate and discuss in a dialogue, creating a community of participants to set social and professional relations in a dynamic and coherent way, as well as the promotion of collaborating or sponsoring entities.

#### Communication actions

Many actions can be programmed for a communication plan. Some of the most relevant are: to distribute the information of the event among those people interested in it, the organisation of presentations or press conferences about the events, to programme informal meetings with journalists (tennis tournaments for journalists, a Christmas lunch, etc.). It is fundamental to keep frequent, open communication with the journalists and provide details of upcoming events.

#### When to communicate?

It is, of course, key to communicate when we have something important: an event, a tournament, a clinic, the visit of a great player or celebrity, an important result of our team or club or federation

player, or a tennis activist. It is our responsibility to grant the appropriate value to the information.

It is important to know that in the world of tennis, there may be times of the year which are more favourable for the media to publish information, generally, this is perhaps, because they are less distractions of other sporting events. These opportunities should be taken to promote tennis and publish more tennis news.

#### Measure the impact of the communication

One crucial element of all communication plans is the report of the repercussions of the communication, to know the impact of our communication policy. This report must include a list of all the communicative elements created, all the press releases sent, the material used, the activities organised, the media contacts, the media that attended our events, all the articles published by the press and in the internet, the radio and TV appearances, the volume of the activity in social networks and the presence of the sponsors.

This way, the valuable feedback will help to change and adapt the stages and contents of communication plans to ensure that objectives are achieved in the most efficient way possible.

#### CONCLUSIONS

The media plays a critical role on the popularity and communication of a sport, and impacts directly on the level of the participation and involvement in a given society. This article has stressed the fact that internet has become the main source of information nowadays, which is even strengthened by mobile devices.

The 21st century is witnessing the 2.0 communication era (Olabe, 2009), and we run the risk of an information saturation. Thus, it is critical to check the truthfulness and reliability of the information before sharing to an audience. Besides, all those who are responsible for the tennis activities of any organisation must have a dynamic and active communication policy to best promote the events organised and to attract a large audience.

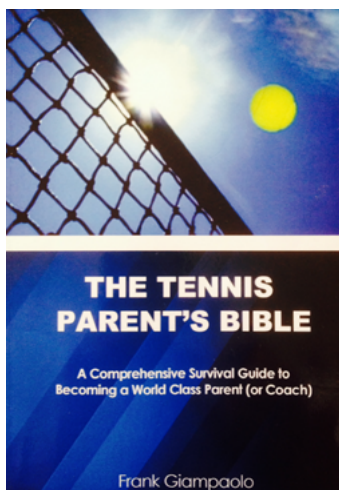
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**Tennis iCoach**

# Recommended books



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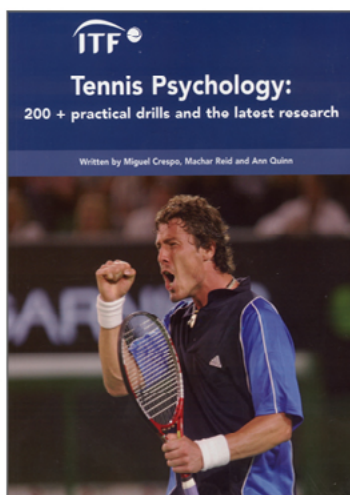
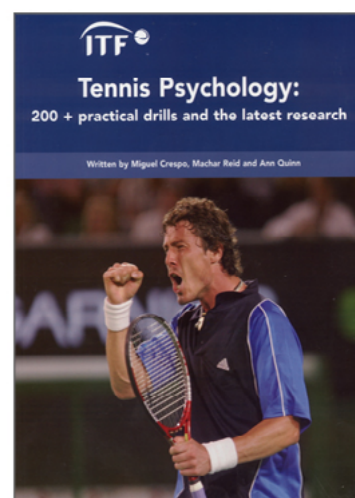
Author: Frank Giampaolo. Language: English. Type: 245 page book. Level: Beginner to advanced level. Year: 2010.

The Tennis Parent's Bible is a comprehensive guide to assist parents through the mental and emotional complexities of raising a world class young athlete. The book provides supporting material to help parents guide their children through the development process of the game of tennis. It includes ways to navigate problems and difficulties and aims at answering the challenging questions and scenarios that parents may be faced with. A customised 14 page evaluation is included and an interview with a professional ATP player is an inspiring addition. It is a reference for addressing the importance of fundamental stroke production, nutrition, physiology and off court training, including mental training.

## TENNIS PSYCHOLOGY: 200+ PRACTICAL DRILLS AND THE LATEST RESEARCH

Author: Miguel Crespo, Machar Reid and Ann Quinn Language: English and Spanish. Type: Ebook. Level: Beginner to advanced level. Year: 2014.

ITF Tennis Psychology aims to firstly educate coaches about the theory behind the various psychological strategies to increase their understanding of the skills. Secondly and most importantly for the coach, the E-book provides many examples of mental skills and techniques they can apply to all players they coach from young junior throughout the touring professionals. Now available in E-book format and ready to be downloaded directly from Amazon.



## TENNIS PSYCHOLOGY: 200+ PRACTICAL DRILLS AND THE LATEST RESEARCH

Author: Miguel Crespo, Machar Reid and Ann Quinn Language: English, Spanish, Russian. Type: 243 page book. Level: Beginner to advanced level. Year: 2006.

ITF Tennis Psychology provides a detailed analysis of the mental challenges of the game. Complete with theoretical information and practical example, this ITF publication reflects the ITF's ongoing role in making available the most up-to-date tennis specific training information to players and coaches worldwide.

# Recommended Web Links



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Fax: 44 20 8878 7799  
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ISSN: 2225-4757  
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