

Editorial

Welcome to issue 44 of the ITF Coaching and Sport Science Review, which is the first edition for 2008. We would like to extend our thanks to the coaches and experts who have contributed articles. This edition includes articles on core stability, mental strength, performance profiling, nutrition, talent, sport psychology and focus during stroke production. In order to facilitate our readers, the articles include an abstract, some key words and the e-mail address of the authors.

During the past months, more online eLearning modules have been finalised. There are now 20 new presentations available on www.itftennis.com/coaching which support the Coaching Beginner and Intermediate players course (Level 1) which include quiz sections at the end to test understanding. The eLearning and quizzes for the Coaching Advanced players course (Level 2) should be available in the next months. These new resources are an expansion to the educational resources which are currently available and they provide coaches with an easy to use interactive program to use both pre and post course. It is recommended that coaches participating in these courses will utilise these e-learning modules before attending the course.

The tennis i-coach website continues to attract more members with close to 5000 coaches now registered members. A number of video presentations have been added recently including:

- Integrated approach to improving effectiveness of technique. - Doug MacCurdy.
- Vic Braden interviewed at the Australian Open.
- Can visual technology assist stroke analysis and development? What is measurable? - Bruce Elliott and Machar Reid.
- Preventing shoulder injury in elite tennis players - Todd Ellenbecker.

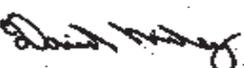
An important educational tool of the ITF's Coach Education Programme are the bi-annual Regional Conferences. These events cover both high level player development and increasing participation in tennis. Coaches who are interested should approach their National Associations who will shortly be receiving detailed information regarding the conferences. More information will be included in www.itftennis.com/coaching. The ITF Regional Coaches Conferences are conducted in partnership with Olympic Solidarity and the Regional Associations (ATF, COSAT, COTECC, and CAT) and the tentative dates for the Regional Coaches Conferences are as follows:

- The ITF Central American & Caribbean Workshop is yet to be confirmed but will be held in Puerto Vallarta (Mexico) from the 15-21 of September.
- The ITF African Regional Coaches Workshop will be held in Pretoria (South Africa) during the week of 24- 27 of September.
- Shenzhen (China) will host the ITF/ATF Regional Workshop will be during the 27 October - 2 of November.
- The week from 3 - 9 of November will see Foz do Iguazu (Brazil) host the ITF South American Workshop.

In addition to the ITF/ Olympic Solidarity Conferences this year, Tennis Europe is hosting the Tennis Europe Coaches Symposium in Roehampton (London) from 22nd until 25th October.

The Tennis...Play and Stay Campaign continues to have a big impact on tennis worldwide. A promotional DVD has been produced recently which features Roger Federer and Ana Ivanovic promoting the key messages including "slower balls, smaller courts, easy game". The DVD is available to view and download on www.tennisplayandstay.com.

We hope you enjoy edition 44 of the ITF Coaching and Sport Science Review, and welcome your comments on any of the information published in the Review either to the editors or to the specific article author whose email has been provided.



Dave Miley
Executive Director,
Tennis Development



Miguel Crespo
Research Officer,
Tennis Development/Coaching



Scott Over
Assistant Research Officer,
Tennis Development/Coaching

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Coach, Can You Help Me to be Mentally Tough?

Janet Young (University of Victoria, Australia)

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ABSTRACT

This paper reviews the concept of 'mental toughness'. Key attributes of the mentally tough player and guidelines for coaches are discussed. The paper concludes that the pursuit of 'mental toughness' can be most rewarding for coach and player.

Key words: Mental toughness, psychological attributes, tennis coach

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

INTRODUCTION

"I cannot remember a time I haven't been mentally tough out there. It is something I've done right since coming through juniors. I haven't been as big or strong as a lot of the guys. I had to find an edge over the guys because I wasn't going to overpower them or serve bigger out there". (Lleyton Hewitt)

"I like being expected to win. I like that pressure ... I think I'm happiest playing tennis. I love to be on the court. I love walking out in the crowd. I love the competition". (Serena Williams)

It is no coincidence that 'mentally tough' players enjoy considerable success in tennis. Just look over the record books with the names of Jimmy Connors, Pete Sampras, Andre Agassi, Boris Becker, Billie Jean King, Steffi Graf, Monica Seles, Chris Evert and Martina Navratilova just to name a few. They all possessed an ability to consistently perform exceptionally well under pressure, fight to the last point, overcome hardships and challenges with increased determination and give of their best at all times in training, practice and matches. Such champions have become role models for many aspiring and talented young players. So, what is this thing called 'mental toughness', can players develop it and what role can a coach play? Let's explore these questions by first addressing what is this somewhat mystical notion of 'mental toughness'.

What is 'Mental Toughness'?

While there are numerous descriptions of 'mentally tough' competitors in literature, there are surprisingly few definitions of the term, 'mental toughness'. One definition which is particularly appealing was recently proposed by Middleton, Marsh, Martin, Richards and Perry (2005). These authors defined 'mental toughness' as "an unshakeable perseverance and conviction towards some goal despite pressure or adversity" (p.1). This definition highlights a core feature of 'mental toughness' which is an individual's ability to cope with stress and anxiety associated with high pressure competition.

'Mental Toughness' Attributes

Recent research (e.g. Gould, Dieffenbach & Moffet, 2002; Jones, Hanton & Connaughton, 2002) suggests there are a number of distinct attributes possessed by mentally tough competitors. These attributes are listed in Table 1.

Table 1. Key Attributes of the 'Mentally Tough' Player (adapted from Jones, Hanton & Connaughton, 2002)

- | |
|--|
| <ul style="list-style-type: none">• Unshaken self-belief in his/her unique set of skills and ability to achieve tennis goals• Insatiable desire and inner drive to succeed• Passionate about the game of tennis• Remains fully focused on what has to be done despite distractions and can switch tennis-focus on and off as required• Thrives on competitive pressure (accepts competitive anxiety is inevitable and knows how to cope)• Rebounds from setbacks and losses with increased determination (regaining control following unexpected events)• Pushes the limits of physical and emotional pain during training and competition |
|--|

Noteworthy features gleaned from this table include:

- All key attributes are possessed by mentally tough players.
- Some attributes are more important, and/or more developed than others, in players.
- There are degrees, or levels, of 'mental toughness'.
- Most (if not all) of the key attributes can be acquired and developed.

As such, these features provide a basis for understanding individual differences and also suggest why a mentally tough player may respond differently across a number of matches. While a mentally tough player possesses all attributes listed in the table above, the extent to which all attributes are functioning or present is not constant, but rather fluid depending on a range of factors including match conditions, the opponent's skill and significance of match. Some days mentally tough players are simply more mental tough, or intense, than on other days!

How is 'Mental Toughness' Developed?

While aspects of 'mental toughness' are thought to be caught (socialised), some of it can also be taught (coached) (Gordon, 2005). In this context, coaches can play a significant role in facilitating desirable psychological attributes associated with 'mental toughness' (Bloom, 1985; Gould, 2005). To this end, the identification of key attributes of 'mental toughness' (Table 1) provides clues as to how coaches might assist a player to develop 'mental toughness'. While coaches need to adopt an individual approach, some suggested guidelines are listed in Table 2 and then discussed in further detail below.

Table 2. Guidelines for Coaches in Developing 'Mental Toughness' in Players

- Encourage a player to passionately 'dream big'
- Clarify the meaning of 'success' (and failure) in terms of effort and commitment
- Develop a player's game planning skills
- Integrate routines in the teaching of competitive skills
- Act as an appropriate role model both on- and off- the court – display the qualities you want a player to embrace
- Be a consistent contact point for a player regardless of match results – care about, and respect, the player
- Empower the player to make decisions and take responsibility of his/her own actions
- Undertake regular evaluations with player of his/her progress and provide positive/constructive feedback

GUIDELINES FOR COACHES

Encourage a Player to 'Dream'

A good starting point is for a coach to sit down with a player and discuss that player's 'big picture' dream. What would the player passionately love to achieve with his/her tennis and/or is there any champion whose tennis and journey to the top he/she is inspired by? (e.g., Roger Federer reports he was inspired by Rod Laver and Pete Sampras; Martina Hingis by Martina Navratilova.)

Coaches can stimulate a player's tennis dream in various ways including:

- Take the player to high standard tennis matches and events, spending time to point out interesting features
- Show video footage of the careers of past champions
- Provide the player with autobiographies and other published material about past and current champions
- Watch and review televised (Grand Slam) events with the player
- Enthusiastically relate own tennis playing experiences, sharing the fun and memorable occasions you have enjoyed as a player and/or coach

Armed with a clear and meaningful dream destination, the player has a direction and purpose which fuels commitment, intensity and drive for the journey ahead. While players need to have realistic expectations of this journey (including its difficulties and challenges), they also need an understanding of how rewarding this journey can be. To assist in this education, coaches need to spend time discussing these aspects with the player. It is also useful for the coach to work with a player to set appropriate goals which will serve as benchmark measures as to how the player is progressing towards his dream destination.

Clarify 'Success'

Coaches can define success for a player in terms of:

- Concentrating on each day's improvements
- Learning from inevitable mistakes and setbacks
- Competing and training fairly to the best of a player's ability on a daily basis
- Enjoying the on-going challenges of the game
- Ability to overcome hardships and challenges with increased determination

Here the key is for the coach to emphasise the importance of a daily work ethic where each training, practice session and match counts (in learning, adjusting and practising what is required to achieve a

player's dream). In this sense, a player never fails (unless he/she does not try to give his/her best effort to the task at hand).

To optimise a player's chances of success (as defined above), coaches should reward/praise a player's efforts and commitment to learning, practising and improving skills. For example, discussing with a player how he/she responded to various situations in a match, and what was learnt as a result, can greatly assist a player to develop his/her powers of self-awareness and ability to take responsibility for his/her actions both on- and off-court.

Eagerly and Earnestly Prepare to Compete

A coach can guide a player to develop sound competitive 'habits' in having a game plan ready for each match. While each game plan will vary (according to opponent, event, conditions etc), coaches can emphasise a set of strategies focusing on:

- Playing one point at a time
- Accept things a player cannot change (e.g., windy conditions, poor umpiring decisions) and think about how to use these situations to his/her advantage
- Give 100% effort irrespective of the score - never give up!
- Move on to the next point after a mistake or a good shot from opponent
- Enjoy the match, love the competition, and take pride in his/her efforts and commitment

The key here is for coaches to support a player to consistently develop appropriate match- and point- plans to address changing, and sometimes unpredictable, situations. Having Plan A is often not sufficient preparation. Rather, a player needs to be prepared, and equipped, to 'think on their feet' with Plans B, C etc. Setting aside time to regularly review possible match-plan scenarios with a player before his/her match can be a useful exercise for coaches to adopt.

Integrate Routines

In guiding a player to develop game planning skills, coaches often find it helpful to teach a player a routine to follow before each point. For example, a coach may guide a player to:

- Simply say the score (but add no further comment as to what it means, for instance, it is preferable to say "40 - love" rather than "40 -love up, I've got this game won" or to say "5-0" rather than "5-0 up in this set. There is no way I can lose this set!")
- Plan how he/she wants to play the next point (e.g., serve wide to the forehand and open up court to hit to opponent's backhand side, then hit deep to backhand and approach net)
- Commit to plan and then play to plan

The goal here is for such a routine to become instinctive for a player such that it becomes his/her 'mode of operation'. Distractions are eliminated and all of a player's attention is on playing the immediate point with no fear or anxiety as to consequences. The player gives his/her best and if the point is lost, the player was outplayed and can use this as positive feedback as to what needs to be changed or done differently in the future.

"Do as I do": Lead by Example

The manner in which a coach conducts him/herself on- and off-court can undoubtedly influence a player. In many instances, a coach becomes the significant role model for a player and this responsibility should not be taken lightly.

Accordingly, coaches need to be mindful of the qualities they wish a

player to acquire and develop to be mentally tough and demonstrate these in the conduct of their own coaching duties. To this end, coaches need to demonstrate resilience, commitment, perseverance, coping skills, fun and confidence. Leading by example can be a powerful tool for coaches but no-one said it was easy to do! Awareness of this role and responsibility is a first essential step.

Head up 'Supportive' Team

To develop and nurture 'mental toughness', a player needs to be surrounded by 'like-minded' individuals who are positive and believe in the player, have strong work ethics themselves and are prepared to devote extensive time and attention over a number of years to the player's needs.

Coaches can assist in creating the 'conductive'/facilitating environment by helping a player to set up, and then lead, the appropriate support team (including parents, trainer, physiotherapist, sport psychologist etc). This support team forms the 'immediate circle of influence' around a player and members must be chosen wisely. This group then serves to instil, and reinforce, those values and standards underpinning 'mental toughness'.



Be Consistent

Coaches are often the most constant contact point for a player about matters relating tennis. Accordingly, a player needs to know his/her coach cares about him/her as an individual irrespective of match results. In other words, coaches need to be consistent and show sensitivity, caring and respect in both good and bad times.

'Mental toughness' is not necessarily about match results, but rather consistently competing to the best of a player's ability under difficult, challenging and pressure conditions. Accordingly, a coach's rapport with a player should not be a reflection of a win or loss, but rather a barometer of mutual respect in pursuit of mutually agreed upon goals where, as noted above, effort and commitment to excellence are measures of 'success'.

Empower the Player

A key role of a coach is to empower a player to make rationale and effective decisions on the court and to take responsibility for his/her own play. While a player cannot always control what happens on the court, he/she can control how he/she chooses to respond to incidents. To this end, the coach can best serve a player in guiding him/her to 'trust' his/her abilities and persevere with a 'never-say-

die' commitment to play each point to a plan and with 100% effort. Encouraging the player to make decisions and allowing them to experience mistakes, disappointments and setbacks is all part of the process. Protecting the player is not the answer. Rather, a coach should let the player assume responsibility for his/her decisions in practice, training and matches knowing it is all part of a learning process to be the best he /she can be.

Evaluate Progress

Coaches need to regularly monitor with a player his/her progress in developing 'mental toughness'. How is the player coping with competitive pressures and expectations? Does the player feel more composed on the court and able to focus in disruptive situations? Do the player's goals need to be adapted to changed circumstances such as injury or studies at school?

Receiving regular and positive/constructive feedback from the coach can be most effective in guiding a player to stay on, or change, course. Circumstances invariably change over the many years required for a player to learn the game and coaches can provide an informative 'sounding board' for a player who is committed to explore all competitive advantages in developing his/her skills.

CONCLUSION

A coach's influence in shaping a player's 'mental toughness' can be significant. Rather than simply being a source of tennis knowledge and technique, a coach has the opportunity to instil certain values such as hard work, discipline, fair play, fun, passion, tenacity and perseverance. These values form the backbone of a mentally tough player and, undoubtedly, provide that player with a psychological advantage over most opponents.

This article offers some suggestions for coaches interested in fostering, and nurturing, 'mental toughness' in a player. In following such suggestions, coaches can journey with a player (as a 'team' rather than simply living a player's dream) in pursuit of the player's 'holy grail'. It is not a short-term endeavour or project, but irrespective of the outcome, both coach and player can look back afterwards and say, "That was fun, rewarding and memorable. We gave it our best and have no regrets". In this sense, both coach and player have played the game of their lives and won the ultimate victory.

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'Mental toughness' is not necessarily about match results, but rather consistently competing to the best of a player's ability under difficult, challenging and pressure conditions'

Six Good Reasons to Keep Your Eye Off the Ball

Damien Lafont (PhD. and Certified Tennis Coach, France)

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ABSTRACT

The very best tennis players in the world appear to keep their gaze on the contact zone at the time of impact and even, for a brief time, after the impact. This characteristic seems to have been insufficiently appreciated before.

Key words: Tennis, contact zone, focus, flow.

Corresponding author: damien_lafont@yahoo.fr

INTRODUCTION

Despite the tennis community having an understanding of the principles of mental training (for a review see Weinberg, 2002; Crespo et al. 2006), the vast majority of mental-oriented studies are dedicated to manage the pre-match, post-match or between-point time. However, if the mental skills are important during the off-task time, which represent 80% of current matches (Moran, 1994), when the player hits the ball certainly still remains the decisive part of the stroke (Brabenec and Stojan, 2006).

In fact, not many people have suggested what the relevant mental states needed during the hitting phase are. This is due in part because the ball is seen as the only 'natural' cue.

However, elite player's behaviour shows us that the ball is not always the relevant cue. Indeed, they differ significantly from lower ranked players in having a longer fixation on the ball combined with a fixation on the contact zone until the end of the follow through. Whereas in the same time most of the professionals seem to abandon the ball with their eyes as it approached the hitting zone (Yandell, 2005; Murphy, 2007; Lafont, 2007). It is well illustrated by Roger Federer focusing on the contact zone at - and after - impact, holding his head still in the direction of the contact zone.

In tennis, maintaining the head on a vertical axis and keeping the upper body stabilised is recognised as one of the characteristics of high-level players (Elliot, 1989; Groppe, 1986). In particular, keeping the head still during the preparation phase and at impact helps insure better balance and a consistent hit on the center of the strings (Braden and Bruns, 1977; Saviano 2003).



In addition to these physical effects, the recent observations tend to go in favour of the mental benefits to control the head position and prolong the fixation of the contact zone to the entire duration of the

follow-through. Thus, the main objective of this study was to examine the relationships between gaze and head fixation on the contact zone (fixation in the remainder of the article) during the hitting phase, and examine mental states of potential relevance in high level competitive tennis such as concentration, control or confidence.

CONCENTRATION

A common error of most tennis players is to believe that they have to be concentrated with the same intensity throughout the match. In fact, the key is not to stay focused but to know how to refocus efficiently, i.e. to refocus on the most relevant cue.

The pioneering work of Gallwey (1974) suggested that during play a ball-focusing technique helped to reach concentration. However, due to physical limitations (speed of the ball and visual acuity) (Stein and Slatt, 1981), ball-focusing is not always the most relevant strategy.

To cope with these limitations, two significant studies (Braden and Bruns, 1977; Ford et al., 2002) suggested a shift of focus from the ball to the contact zone. According to them, concentration can be improved not only by watching the contact zone, but also by the fixation on this zone until the end of the follow-through. So, it is essential for concentration to keep the eyes focused for a fraction of a second on where the impact takes place.

CONTROL

Mentally efficient players remain in control or at least feel in control (Higham, 2000). However there are many areas where players can experience a loss of control: wind, sun, temperature, spectators or types of playing surface. If the player fixates on them, this will take his focus out of the game, and at the same time increase his anxiety. So, it is important for the player to recognize what Jackson and Csikszentmihalyi (1999) named 'the controllables'.

What is entirely within his control is how he chooses to react to what happens. In particular, the player can control the strategies and the techniques of performance, i.e. having a process focus which takes the mind off information that cause over-intensity and gives a greater sense of control.

The fixation allows such process focus because it teaches a certain ritual of repetitive body movements which gives the player the feeling that everything is under control. In addition, fixation allows the player to exclude irrelevant thoughts and to tune into the task at hand, but also sends a sign of control to the opponent. Thus, the fixation can lead to better control.

STRESS AND ANXIETY

Under stress people forget the more recent instructions causing them to revert to old software which impacts their stroke production. To

cope with pressure, top players often employ individual routines based on relaxation, breathing or self-talk (Weinberg, 2002).

Another way to reduce the anxiety is to redirect the focus onto the process (Taylor, 2000). Fixation - considered as a process focus - giving the player more control, can be an efficient way to counteract pressure. Indeed, by focusing on mechanics the player will deflect emotional content from the moment and he will not fall victim to motor paralysis. Instead, he will be able to send messages to his brain that will allow him to hit the ball correctly. This control reduces the stress response and ultimately frees the athlete from fear of failure.

STAYING IN THE PRESENT

Under stress the greatest lapses in concentration come when the player allows his minds to project what is about to happen or on what has already happened. Hence, the ability to stay mentally in the present is the key to being focused in a match (Girod, 1999). Many athletes often refer to it as being in the 'here and now' (Higham, 2000).

The usual ways to practice the maintenance of moment-by-moment focus during a match is to learn meditation, yoga or deep breathing techniques (Quinn, 2004). During play, what is very helpful in tennis is that before long the player is going to hit the ball which would bring him back to the present. However, tennis players often lift their eyes and pull their head up before the ball even reaches the racket. Such action which immediately follows the first part of the ball trajectory can be interpreted as the sign that the player mentally plans too soon in advance.

The fixation after the impact helps the player to stay in the "here and now". If the focus is on the present, the physical sensations usually remain stable (Murray, 1999), which reinforces the feeling of control. Therefore gaze and head control can provide an extended period of control.

CONFIDENCE ENHANCEMENT

Concentration and control can only be achieved if the player has confidence in what he/she is doing. Self-confidence is one of the most important components of a player's psychological state prior to and during a match (Harwood and Dent, 2003).

Self-confidence is the general belief that one has the ability to perform successfully (Weinberg and Gould, 1999), for example, the confidence in one's own strokes (Samulski, 2007). Since the fixation phase is the same regardless of whether the player is winning or losing, it reinforces the player's belief that he has the skill necessary to perform well. Using specific and repetitive body and visual control during points, he can maintain a confident mental attitude and so execute strokes under increasing competitive pressure. Therefore, even during the hitting process, the player can gain confidence in his abilities.

ZONE

Once the player feels confident, his mind is free to focus on the task at hand. This is one of the main components of the special internal mental state, named flow or peak performance (Le Scanff, 2003). In tennis terminology, this is commonly called "playing in the zone" (Young, 2000, Ford et al., 2002).

Focusing on the contact zone could be viewed as an efficient process (or performance) routine which reinforces the concentration on the task at hand and the sense of control, both of which are fundamental dimensions which best describe the mind-set in flow. In addition, maintaining fixation helps follow a natural rhythm while

hitting the ball, resulting in more fluid stroke production. Thus, by allowing the delicate synergy between some key mental states, the fixation would promote flow and therefore would have a positive impact on performance.

CONCLUSION

This article supports the hypothesis for head and gaze fixation as a fundamental tennis skill allowing optimal mental states. More precisely, the idea underlying this study is that great players' fixation on the contact zone help them to achieve efficient and consistent concentration during play. Fixation during the follow-through will also help keep focus on the task at hand which leads to an increased feeling of control. This control can impact the hitting response which in the past was believed to be out of control because of visual limitations. Fixation helps to control both the emotions and thoughts reducing stress and anxiety, therefore increases self-confidence. In addition, the after-impact fixation stage participates to enhance the fixation of the player in the present, which promotes flow and would have a positive impact on performance.

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Considerations on Talent in Tennis

Miguel Miranda (International Tennis Federation)

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ABSTRACT

This article discusses some of the considerations on talent in tennis. It mainly stresses the importance of disposition as a fundamental characteristic for the appropriate development of talent with some examples along the development stages of a tennis player.

Key words: Talent, disposition, development.

Corresponding author: miguelmirandab@gmail.com

INTRODUCTION

Talent in sport, in tennis, specifically, is always in the limelight. Everybody wants talent. Players want to have it, coaches want to discover it and amateur players want to enjoy it. Authors like Hopf (2000), when analyzing sport talent state that it is impossible to detect a talent unequivocally.

In general, on the basis of previous rigorous studies, we can state that in spite of all the effort, there is no reliable scientific theory on the vast subject of sport talents so far (Joch, 1997). Selection, detection, origin, characteristics and development of sport talents are widely used words, which much as we regret, and considering the research on tennis (Hoare, 2001; Muller, 1989; Rowley, 1993), still need clarification which can only be provided by sport scientific research.

The definition of talent as a natural gift is naive and not very scientific since it neglects the importance of those factors that impact on talent development itself. So, we agree with some authors who understand talent as a disposition for performance in a specific environment of an individual's life (Hopf, 2000).

This definition implies a specific notion of talent, so that its drive towards performance is so as long as it exists in a specific environment; since different performance environments in life (e.g. sport, music, study, business, etc.) demand different qualities and development of the individual (Bloom, 1985). Accordingly, someone who has had the talent to become a good tennis player, may or may not have the talent to be a good coach, or someone who has succeeded in a specific business environment may or may not be successful in politics, culture or sports management (Stojanovic, 2006).

THE IMPORTANCE OF DISPOSITION

We therefore note that this disposition for performance is the key element in talent definition and development. How is this disposition shown? Prior to any analysis, let us consider that tennis is an "open skill" sport, different decisions must be made on an ongoing basis according to different perceptions of the situation that the player is undergoing. The disposition of the tennis player can be described according to the different stages of this player's development (Crespo & McInerney, 2006).

At the initial stages

Different "dispositions" can be observed at this stage:

- Disposition to have fun and have a good time when playing tennis
- Disposition to persevere in the movement on court and the impact on the ball
- Disposition to stay for extra time after practice sessions

- Disposition to discover new roads that deliver better tools. As we see, in practical terms, our player is not satisfied with just passing the ball over the net to land it on the opposite side. He/she will want to hit it harder, aim it better, etc.
- Disposition to require and accept more from his coach, his parents and, most important, from himself. It is then a clear example that shows that they go beyond their parents' initiative. We must remember that more often than not, this initiative comes from the parents and becomes a source of pressure rather than a help. (I suggest consulting ITF Development Department's recent publication on this matter). Some recent studies have laid emphasis on the key role of the family in the process of talent development (Côté, 1999).

At intermediate stages

When the player gets more experienced and progressively develops his/her skills, new dispositions become evident:

- Disposition to devote more hours to play and train
- Disposition to change and to continue improving. To accept this willingly "it will be much better for me because, besides, I will be able to hit the ball this other way, but I can also achieve something else"
- Disposition to competition as a challenge and to enjoy it, being ready to encounter the frustration of defeat.
- Disposition to accept more disciplinary rules that transform playing into training, repetitions and greater demands

At advanced stages

At this stage, the player is already a professional player and tennis plays a key role in his life. The most important dispositions at this stage are:

- Disposition to accept training overload, competitions, expecting for results, mental overload due to internal and external expectations
- Disposition to start new quests for more and better performance tools to help them go beyond what was imagined or available
- Disposition to be irreverent (respectfully irreverent) when facing those concepts that the player feels inappropriate (maybe technical or tactical) and also (and particularly) when facing opponents

Hopf (2000) states that "the athlete who works actively and autonomously gets better results than that one who passively stays under the protection of the coach."

THE ROLE OF THE COACH AS REGARDS TO DISPOSITION

Understanding disposition as a concept that is close to motivation our role (or rather our obligation) is clear and accurate: a high degree of

motivation and support to these "talents" who are born and also made, as Shonborn (1984) pointed out.

The statement that goes: "this player has reached the summit in spite of his/her coach" is more and more common. We must, then, revise our methodology, our knowledge and updating, help our players to discover more and better alternatives to their game, to deeply analyze their individual features, how they adapt to their style and above all, respect the interest of the athletes. (Stojan, 1984).



CONCLUSION

Joch (1997) already stated that over 1500 papers had been made on the subject of talent in sport. This gives an idea of how vast this issue is to be dealt with in a short article of just a few lines. As a summary, we must never forget, among other things, that the job of the coach must focus mainly on the following:

- Create the conditions, have the means and foster an appropriate environment for talent development.
- Be aware of the special characteristics of the talent's learning process; not only as regards motivation but also as regards those technical aspects that are incorrectly or partially addressed.
- Consider the relevance of the appropriate technical and tactical work when developing a talent.

It is an important challenge to start preparing specific programs to efficiently control and follow up our job with talented players through designing and using tools that will help us to put into practice the ideas addressed in this article.

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The Invisible Aspect of Tennis: A Revision of the Psychological Processes of the Activity

Carlos Ferres Rial (Psychology Professor, Uruguay)

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ABSTRACT

Psychologic Training is one of the work areas that has been drawing most of the attention. Players, coaches, experts and journalists consider its a priority to achieve good sport performance. But beyond this intuition concerning its importance, let us define what it is, and which are the tasks that characterise the sport psychological training for maximum performance .

Key words: Training, psychology, processes

Corresponding author: fesu@adinet.com.uy

INTRODUCTION

Let us accept that the athlete is like a complex system (bio, psycho, socio, cultural) immerse in an ever demanding activity that is always presenting "problem situations" for him to solve. In order to face this situation, he must undergo a training process defined as "a set of pedagogic and didactic procedures organized and oriented according the principles that regulate biologic and psychological processes, according to the specific nature of the performance of each sport discipline, in order to improve the performance of the competitive attitude" (Molnár.p.32).

A process whose target is not at odds with health, on the contrary, strives for a better level of balance that will provide the athlete a top performance aiming at a better adaptation to competition. It can also be understood as a set of action learnings (sport fundamentals) that will help to better solve the movement that our sport demands.

No doubt, if we want to understand the sport phenomenon, first we must analyze it, understand its parts and then become aware of the internal dynamics of man in a sport situation. Although all definitions always have constraints, we believe we must conceptualize the idea of sport. By definition, it should be an activity that shares characteristics related to playing. Researchers of this activity state that sport is a particular kind of game which implies "agonism" (confrontation - competition), that the activity has as an aim in itself (beyond the personal benefits), it is spontaneous and has no other limitation than the will to participate. Besides, it helps to face the player with a reality other than that of his daily life.(Huizinga, 2000).

But, there is still another very attractive phenomenon, with great restrictions to participation, that faces the athlete to strive for levels that can be at odds with the concept of health: top performance sport. This is only for those who can bear the top performance selective process. (Fig.1).

The man who practices sports is permanently facing a resistance to defeat, controls the situation or is controlled by it, in short, this is the sport task. This basic opposition situation of the activity, has two ways out: the reward of victory or the frustration of defeat. Both must be undertaken, properly elaborated by the competitor; or else they may become barriers for his/her top performance and future contact with the activity. (Fig. 2).

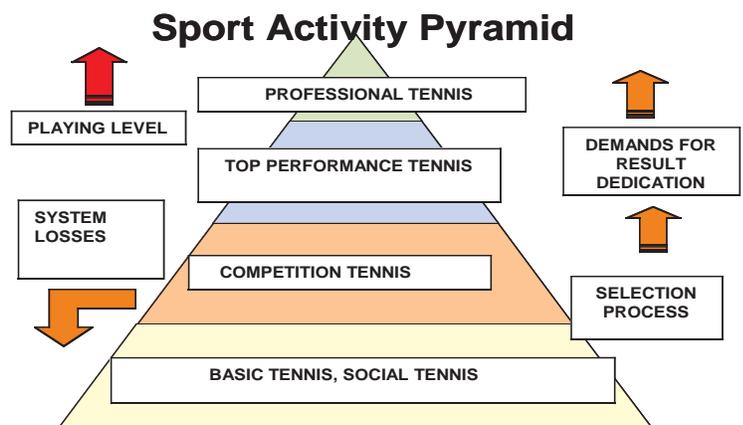


Figure 1. Sport Activity Pyramid .

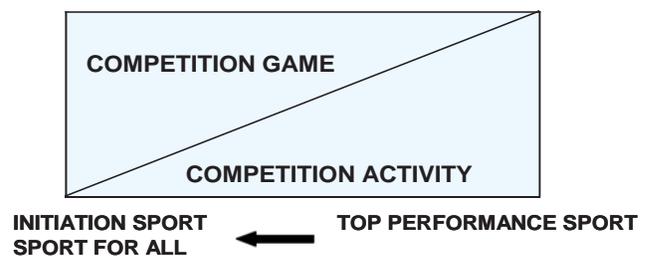


Figure 2. Relationship between competitive game and competitive activity .

If we analyze the sport activity, we see that there is always a situation in which we must "overcome resistance": an opponent, an object, a target, etc. We can even rate it better, divide it into "objective", its degree of difficulty, and "subjective" its interpretation by the competitor. This differentiation can often help us to understand better how our competitor feels (Fig. 3)

The competitor's perception oscillates between two situations: a challenge or a threat. To choose between one or the other ("positioning"), will bring about different consequences when doing the activity. The first one, will no doubt, allow for an absolute commitment of his skills. The competitor knows he is there because he can, he wants, his self confidence levels tell him so and he will act accordingly.

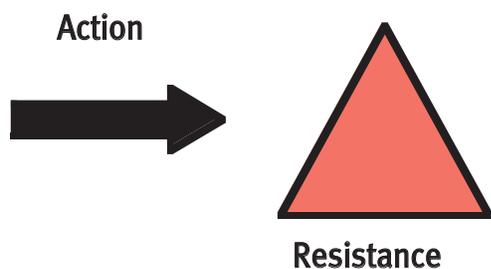
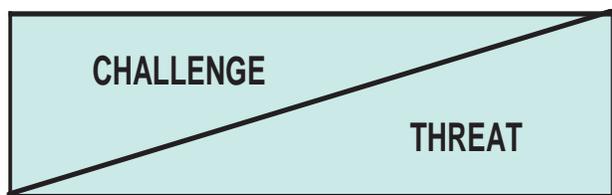


Figure 3. Relationship between action and resistance.

In the second case, he places himself in a threatening environment, the difficulty of the task he is facing is greater than his possibilities to solve it, the situation is perceived as highly risky. Some competitors are increasingly invaded by this situation and even fall into processes that compromise not only their motor performance levels but also their recovery capacity, their reflection and attention concentration levels, and other fundamental processes for top performance. (Fig.4).



WIN
SATISFACTION
REWARD
GREATER CONTROL

FRUSTRATION
SUFFERING
LESS CONTROL

Figure 4. Relationship between challenge and threat.

But let's see the kind of situation tennis faces us with. In general it is an individual and an indirect confrontation task between competitors, (the net is between them). It implies speed and accuracy to name just the most evident. It requires a great number of skills in the physical, technical, tactical and psychological aspect that are often, particularly in top performance, evaluated in a sophisticated way. (Fig. 5).

But, which are these psychological skills of the playing tennis task? Let us mention some:

- High degree of attention concentration.
- Competitive capacity.
- Appropriate motivation level.
- Good self confidence level.
- Capacity for mental representation of the action.
- Efficient affective-emotional self regulating mechanisms
- Decision making capacity as the activity demands (quick reaction), in competition, generally under pressure

Some of these variables may seem strange, or typical of other disciplines but they are essential for the efficient performance in tennis.

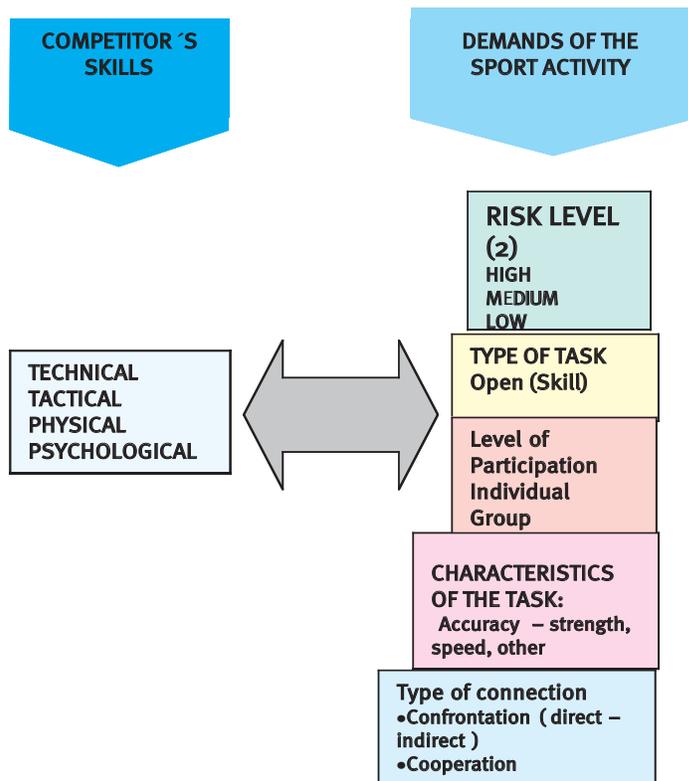


Figure 5. Relationship between the competitor's skills and the sports demands.

RHYTHM MANAGEMENT

The tennis player must be ready to face the endless changes of rhythm the activity demands, not only do they impact on the physical aspect but mainly on the mental aspect as well.

Because of these characteristics of the activity we have divided the task of playing tennis into two parts:

The **active phase**, in which the player is playing the point, making the effort, his action tries to solve the opposition situation that winning the point implies. It is the time when the player tries to express the on court work of so many hours in the quest for his playing style, even if he does not always succeed to do so. But it is not all, we must add that the competitor must be prepared for the following: while the player is in the "active part of the match" (playing a point) he must behave in a totally different way from the moment he is in:

The **recovery phase**, (when the point or game are over) the player must have the capacity to recover both physically and mentally and be prepared to serve or return. In general, we see that players are trained mainly for the active part of the game, neglecting this other phase that is so important. No doubt, here we find the "invisible aspect" of the activity, where many competitors lose concentration and control.

They do not respect the rhythms, do not show their capacity to control the situation for the psycho-physical recovery and the preparation for the next ball; on the contrary, they are controlled by the situation and may fall into "early fatigue", or a saturation of their affective - emotional control, their decision making will be affected as well as his accuracy (more double faults, more unforced errors). Its final part includes the sub-phase of "preparation" of the point, the competitor gets ready to serve or return, must adjust his mind and body to start action; both service and return require a different physical preparation to solve the situation (Fig. 6).

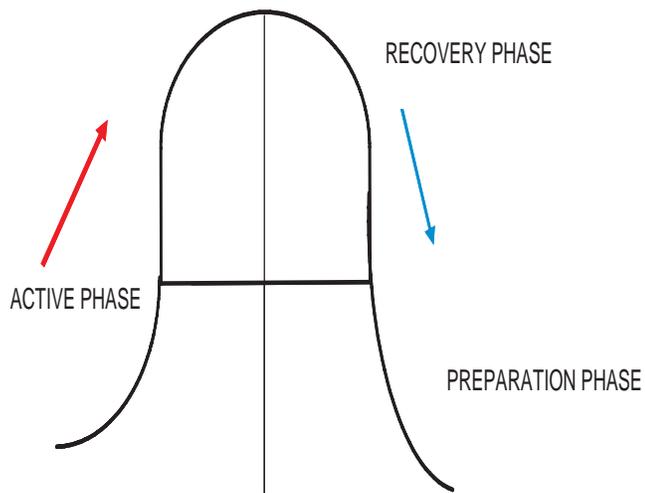


Figure 6. Phases on rhythm management .

Analyse his game! Does he respect rhythm in the match? What is his between points recovering capacity like? When the match gets tough, does his performance change? Does he live the match situation as a challenge or a threat?

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Performance Profiling in Tennis

James Newman & Miguel Crespo (International Tennis Federation)

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ABSTRACT

This article presents the fundamentals of performance profiling applied to tennis. It discusses the reasons why conduct a performance profile as well as a step-by-step procedure on how to do it. It also includes two tennis-specific examples of performance profiles.

Key words: Performance, profile, evaluation.

Corresponding author: james.newman@itftennis.com

INTRODUCTION TO PERFORMANCE PROFILING

Performance profiling is a process whereby an athlete lists the most important attributes for their success in their sport on a performance profile (see tables). They then rate their current ability out of 10 for each attribute and set a 'target' or 'importance' score for each attribute. This helps to reveal areas that the players consider most important to their development.



WHY TO USE PERFORMANCE PROFILING

Performance Profiling was developed from Personal Construct Theory (PCT) (Kelly, 1955), which states that the events and experiences of individuals lead to 'personal constructions' of how the individual perceived those events or experiences. The important aspect here is that it is the 'perception' not a 'reality' that are held in people's minds.

The relevance of PCT and performance profiling to working with tennis players is that, because knowledge is subjective, players may have different perceptions of their abilities to coaches. Coaches usually set the training programme for their players and often this is based on the areas where the coach 'perceives' the player needs to develop. Problems can arise with this when the perceptions the player has about their ability are different to those of the coach. In this case, the coach might be setting a schedule that the player does not agree with. For example, if the coach puts an emphasis on improving the slice-backhand approach but the player feels happy with that area of their game (or that it is less important than another area), and that the backhand cross-court drive needs more work, then the player may lack the motivation to work on the slice.

If the coach continues not to focus on areas important to the player, in favour of areas important to the coach, the player may lose motivation to work on the area the coach has focused on. This may

also affect their commitment and belief in the programme and trust in the coach.

Faced with these potential differences in perceptions, players and coaches can use performance profiling to do the following:

- Identify the attributes important to perform well in tennis
- Identify player's areas of 'perceived' strength and weakness
- Increase player's self-awareness of their abilities and what's required to excel in their sport
- Identify to the coach the areas the player may be more resistant to developing
- Highlight differences between the player's perceptions of their abilities and the coach's perception of the player's abilities

(Butler & Hardy, 1992; Butler et al, 1993; Doyle & Parfitt, 1997; Butler, 1997)

When coaches and players have this information it is easier to design a programme that the player is motivated and committed to.

HOW TO DO A PERFORMANCE PROFILE

There are different ways the performance profile can be conducted. Players can work in groups, alone or with a coach or a sport psychologist. As the performance profile is an 'athlete-centred' process (Jones, 1993), the authors believe the player should conduct the profile alone. However, as some people struggle to generate attributes, the coach could provide a comprehensive list of all the attributes required for tennis and allow the player to select attributes from this list that they consider important.

There are different types of Performance Profiles. In this article we include two of them; one is a general Performance Profile for a tennis player, whereas the other is a Game Situation Specific Performance Profile on the serve. Besides, we also include a blank Performance Profile for players and coaches to use.

GUIDE TO COMPLETING THE PERFORMANCE PROFILE

1. Generating Attributes

The player writes down the physical, mental, technical and tactical attributes that are important for their success in tennis. Many athletes have a tendency to focus solely on areas of weakness however encourage them to also list important strengths. For recreational players, attributes can be basic (forehand, backhand) but performance players should be more specific (slice second serve, concentration).

If the player has difficulty in generating or choosing attributes, the coach could then ask them to think about their favourite player and to think what attributes make them a great player (Weinberg & Gould, 2007). Players should end up with 15-20 of the most important attributes on their Performance Profile.

2. Rating

Players then rate themselves out of 10 for their current ability within each attribute and then set a 'realistic-ideal' target out of 10 for each attribute, to achieve within a set time period (min of 2 months, max of 1 year).

To see the areas most important to performance, the player subtracts the current rating from the 'realistic-ideal' target. Theoretically, the higher the score the greater the player perceives they need to work on the attribute.

3. Evaluate

The player should look at the final profile and have freedom to change any attributes or ratings to ensure they are fully confident in their profile. Especially focusing on ratings, which can often not be fully thought through at the end of the profile.

4. Coach Profile (Optional)

Coaches can also perform a profile of the player; generating important attributes and rating the player's current ability.

DISCUSSING THE PROFILE WITH THE PLAYER

If the coach has their profile of the player, they can compare it to the one done by the player to see where differences exist between the player's perceptions of their abilities and targets and the coach's perceptions. The coach can then decide whether to show their profile to the player. The advantage of this can be to provide a basis for negotiation between player and coach on which areas to work and may provide motivation to the player if the coach has rated the player higher on certain attributes than they rated themselves.



The coach discusses the player's profile with the player and asks questions about why they generated certain attributes and why they gave certain ratings. If the coach feels the player's profile, and their 'perception', is inaccurate then they should go through the profile and ask the player why they feel the way they do about certain attributes. The coach should listen to the player's reasoning but also offer their perceptions and reasoning for rating the player higher or lower in each attribute.

Set the priorities, set the goals

Once the profiles and attributes have been discussed, the coach can give the player time to amend their profile further. The player and coach should then meet to agree the profile and the training priorities and schedule.

The player can assess their profile each week and update their current ratings whenever they feel appropriate. The coach can also retain a copy of the player's profile and update it with their perceptions of the player's improvements. The profile process can be redone every 6 months to 1 year to ensure it is up-to-date with the player's training needs.

SUMMARY

Performance Profiling gives an insight into how the player views their sport and their ability in it. Coaches who are not aware of their player's perceptions of their own game, risk losing the interest, focus and motivation of the player to their own development. Even though the coach may have to make sacrifices in not working on an area they feel is important, the player may gain more confidence by improving a different attribute that holds more concern for them during performance. This added confidence could have a positive impact on their whole game.

By discussing each other's perceptions of the player's ability, the coach can seek to question and remove negative, 'irrational' thinking the player has about their ability. Finally, by breaking down their game, players gain a clearer picture of their sport, their abilities and how to work towards improving them. The targets set by the player will provide an ongoing motivation to improve in the direction that they have agreed with their coach.

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Example of a General Performance Profile for a Tennis Player

PLAYER NAME: _____

AGE: _____ RANKING: _____ PROFILE DATE: _____

Attributes	1	2	3	4	5	6	7	8	9	10	DIFFERENCE Target minus current rating
TECHNIQUE											
Groundstrokes	Blue	Red	Red	Red	2						
Transition game	Blue	Blue	Blue	Blue	Blue	Blue	Red	Red	Red	Red	3
Net game	Blue	Blue	Blue	Blue	Red	Red	Red	Red	Red	Red	3
Serve & Return	Blue	Red	Red	1							
TACTICS											
Game style	Blue	Blue	Blue	Blue	Blue	Blue	Red	Red	Red	Red	2
Strategy	Blue	Blue	Blue	Blue	Red	Red	Red	Red	Red	Red	4
Tactical patterns	Blue	Blue	Blue	Blue	Red	Red	Red	Red	Red	Red	2
Shot selection	Blue	Blue	Blue	Blue	Blue	Blue	Red	Red	Red	Red	2
CONDITION											
Speed	Blue	Blue	Blue	Blue	Blue	Blue	Red	Red	Red	Red	3
Power	Blue	Red	Red	0							
Endurance	Blue	Blue	Blue	Blue	Blue	Red	Red	Red	Red	Red	1
Flexibility	Blue	Red	Red	Red	2						
MENTAL											
Concentration	Blue	Red	Red	Red	2						
Motivation	Blue	Red	Red	Red	2						
Emotional control	Blue	Red	Red	Red	1						
Self-confidence	Blue	Blue	Blue	Blue	Red	Red	Red	Red	Red	Red	2

Blue line = Current Rating

Red line = 'Realistic-Ideal' Target Rating (For 6 months time)

Example of a Specific Game Situation Performance Profile for SERVING

PLAYER NAME: _____

AGE: _____ **RANKING:** _____ **PROFILE DATE:** _____

Attributes	1	2	3	4	5	6	7	8	9	10	DIFFERENCE Target minus current rating
TECHNIQUE											
Ball toss placement	Blue	2									
Leg Drive	Blue	2									
Timing	Blue	1									
Hip rotation	Blue	3									
TACTICS											
Variety of placement	Blue	4									
Second serve consistency	Blue	2									
Disguise	Blue	3									
Body serve	Blue	4									
CONDITION											
First serve power	Blue	1									
Coordinated action	Blue	0									
Core strength	Blue	3									
Flexibility	Blue	3									
MENTAL											
Pre-serve routine	Blue	2									
Arousal control	Blue	3									
Focus	Blue	2									
Imagery of serve action placement	Blue	5									

Blue line = Current Rating

Red line = 'Realistic-Ideal' Target Rating (For 6 months time)

Fit to Play™ & Perform - Core Stability 1 (Bridging)

Carl Petersen & Nina Nittinger (Canada)
ITF Coaching and Sport Science Review 2008; 15 (44): 17 - 18

ABSTRACT

This is a Core Stability Training program based on our Fit to Play™ & Perform DVD series. All of the exercises can be made more difficult using external resistance from balls and stretch bands as well as balance equipment like ½ foam rolls, wobble boards or balance pods. The exercises consist of bridging and stabilization focusing on core strength.

Key words: Core, Stability, Bridging.

Corresponding author: carl@citysportsphysio.com

INTRODUCTION

The core (trunk) muscles form the stable support base for the body. The core consists of four main muscles: 'the inner unit' - the transversus abdominus (TA) (lower abdominals), multifidus (deep, small muscle of the back), the pelvic floor muscles and the diaphragm. These muscles work together to support the back and pelvis as the upper and lower extremities move during play and training. The trunk muscles help transfer energy from the legs through the core (trunk) to the upper body and arms. This is especially important in rotational or asymmetric sports like tennis. In tennis players, the abdominal musculature plays a significant role in trunk and core stability providing a mechanical link between the lower and upper limbs.

Begin with Base Work (adapted after Richardson et al, 1999)

Start by lying on your back with knees bent up to approximately 90 degrees. You want to learn to switch your core on at a low level-like turning up the dimmer switch on a light. You should feel a light tension in your lower abdominal and pelvic floor muscles.

Now that you are able to 'Switch on the Core' with leg and movements, it is time to connect the core to the extremities (arms and legs) with some bridging exercises using resistance bands and balls. The following exercises are designed to help to develop the core and to strengthen specific larger muscles in a dynamic and functional way. They have been chosen because they are functional in nature and reflect the current research on how our muscles and fascial tissue link together to form sling systems connecting the core.

BRIDGING EXERCISES

1. Quadruped Bridging

- Assume a quadruped bridge position with hands under shoulders and knees under hips.
- Let your back arch down like an old swayback horse.
- Now 'Switch on Your Core' like a dimmer switch as you suck your belly button to your spine and hold for 10 seconds.



Figure 1. Quadruped bridge .

- You can also do some light rocking back & forth, side to side and on the diagonal to challenge core more.
- Do 2-3 sets of 10-15 repetitions.

2. Quadruped Bridging

- Assume a quadruped bridge position with hands under shoulders and knees under hips.
- 'Switch on Your Core' like a dimmer switch.
- Stabilize -keeping your back flat and lift one leg to the side and rotate it for 4 seconds.
- Do 2-3 sets of 10-15 repetitions.



Figure 2. Quadruped bridge with knee circle .

3. Quadruped Bridging with Arm Raise

- Assume a quadruped bridge position with hands under shoulders and knees under hips.
- 'Switch on Your Core' like a dimmer switch.
- Stabilize -keeping your back flat and raise 1 arm or leg up and hold for 4 seconds.
- Do 2-3 sets of 10-15 repetitions.



Figure 3. Quadruped bridge with arm and leg raise .

4. Supine Bridging (with stretch cord abduction)

- Lie face up on a mat with your feet on the floor and knees bent to 90 degrees.
- Keep the head and arms relaxed and 'Switch on Your Core'.
- Lift your hips and low back (from tail bone to rib cage) until trunk is level.
- Push knees apart against stretch cord and lift your hips as above.
- Hold for 4 seconds. Do 2-3 sets of 10-15 repetitions.



Figure 4. Supine bridge with cord .

5. Supine Bridging (with stretch Band diagonal pull)

- Start as above.
- 'Switch on Your Core', push knees together against the ball and lift your hips as above.
- With a stretch cord secured around feet do a diagonal pull with alternating arms.
- Do 2-3 sets of 10-15 repetitions.



Figure 5. Supine bridge with diagonal cord pull .

6. Prone Bridging

- Assume a bridge supporting yourself on forearms and toes
- 'Switch on Your Core' like a dimmer switch.
- Stabilize -keeping your back flat and hold 4 seconds.
- Do 2-3 sets of 5-10 repetitions.



Figure 6. Prone Bridge .

7. Prone Bridging + Hip Extension

- Assume a bridge supporting yourself on forearms and toes
- 'Switch on Your Core' like a dimmer switch.
- Stabilize -keeping your back flat and hold 4 seconds while raising one leg into hip extension.
- Do 2-3 sets of 5-10 repetitions.



Figure 7. Prone bridge'with leg raise .

8. Lateral Bridging + Limb Movement

- Assume a lateral bridge position supporting yourself on forearms and feet.
- 'Switch on Your Core' like a dimmer switch.

- Bridge hips up to spine neutral position and hold 4 seconds.
- You can work upper arm into external rotation with a stretch cord (resistance band) or do an arm raise and hip hike
- Do 2-3 sets of 5-10 repetitions.



Figure 8. Lateral Bridge with elastic resistance .



Figure 9. Lateral bridge with arm and leg raise .

RULES OF CORE STRENGTH

- Always start with 'Switching on Your Core' routine to reeducate the lower abdominals to work in a pre-anticipatory way. This is especially important after a lay off, after an injury, or when you have been mal-aligned or have low back or hip pain / stiffness.
- Approach traditional sit-ups with caution, as the elbow-knee movement places a lot of strain on the low back.
- Core exercises should be done at the end of strength work outs, or after hitting, so that they can adequately function as stabilizers during the exercise.

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ITF LESSON PLANS FOR BEGINNER PLAYERS: LESSON 4

Lesson Plan 4

Level of player: Beginner (ITN 10.3 to ITN 8).

Game situation: Rally from the baseline

Tactical theme: Keeping the opponent at the baseline by hitting the ball with height.

• **Tactical theme 1:** 1. Hitting the ball, 2. Placing it high over the net, 3. Inside the singles court

• **Tactical theme 2:** 4. Playing a high ball to the left side, 5. Playing a high ball to the right side, 6. Playing a high ball to the middle

Technical themes: 1. Preparation, 2. Generally low to high forward swing, 3. Open racquet face at contact point, 4. Usually long and smooth follow through.

Number of players: 8

Equipment: Red, orange, green (transition) and regular balls and 23 in. and 25 in. racquets according to the level of the players (ITN 10.3 to ITN 8).

Courts: Recommended to set up red, orange, and regular (green) courts.



DRILL 1-OPEN SITUATION

Goal: Players to play points with ground strokes from the baseline with the intention of keeping your opponent on the baseline by hitting the ball with height.

Methodology: Point play.

Player organisation/positioning: Pending the level of the players there are different options:

- ITN 10-10.3: Create 4 mini-courts (red 'play tennis' courts and balls) using the court width. 2 mini-courts in each side of the net, have 2 players playing in each mini-court.

- ITN 8-9: Use the full court with orange or green 'play tennis' balls. Have 4 players on each side of the court. They play in pairs down the line. 2 pairs play close to the doubles tramlines and the other 2 closer to the centre of the court. Depending on their level, they start serving from closer to or further away from the net.

- Other options: 12 metre or 18 metre courts can also be set up (orange 'play tennis' court).

Player rotation: After 5 baseline points or according to a given time (for e.g. 2 minutes), winners move up one court and losers move down one court. When using a full court winners can play winners and losers play losers. Try to make sure that everyone gets a chance to play against each other.

Coach analysis and diagnosis points: Set a height over which the ball should pass to be considered a high ball. After 5 baseline points or according to a given time (for e.g. 2 minutes), winners move up one court and losers move down one court. When using a full court winners can play winners and losers play losers. Try to make sure that everyone gets a chance to play against each other.

DRILL 2-CLOSED SITUATION WITH BASKET FEEDING

Progression 1 a (Technical themes):

Goal: Players to play points with ground strokes from the baseline with the intention of keeping your opponent on the baseline by hitting the ball with height.

Methodology: Point play.

Player organisation/positioning:

- ITN 10-10.3: Create 4 mini-courts (red 'play tennis' courts and balls) using the court width. 2 mini-courts in each side of the net, Have 2 players playing in each mini-court.

- ITN 8-9: Use the full court with orange or green 'play tennis' balls. Have 4 players on each side of the court. They play in pairs down the line. 2 pairs play close to the doubles tramlines and the other 2 closer to the centre of the court. Depending on their level, they start serving from closer to or further away from the net.

- Other options: 12 metre or 18 metre courts can also be set up (orange 'play tennis' court).

Coach analysis and diagnosis points: Ensure the players practice both the forehand and the backhand strokes at the same time and in the same quantity and that they direct the strokes high into the court using targets or cones.



ITF LESSON PLANS FOR BEGINNER PLAYERS: LESSON 4

Progression 1b (Tactical theme):

Goal: Players to practice the fundamental tactics of the baseline game emphasising ball height to move the opponent.

Methodology: Use self-feed, partner hand or racquet feed, or coach feed. Create stations: Station 1, Hitting the ball (consistency), Station 2, Placing it over the net (height), and Station 3, Inside the court (direction), Station 4, Hitting the ball with direction.

Player organisation/positioning: Same as above.

Player rotation: Same as above.

Coach analysis and diagnosis points: Make sure the players begin to understand how to use the tactical concept of ball height (with the intention of moving the opponent) from the baseline and how they relate to the groundstrokes (i.e. direction and racquet face position, height and racquet path trajectory, etc.).



DRILL 3-RALLY WITH COACH

Goal: Players to practice the fundamental tactics of the baseline game using their groundstrokes in a rally situation with their coach to apply the tactics of moving the opponent by using height.

Methodology: Players rally with the coach.

Player organisation/positioning:

- For ITN 10-10.3 using 4 mini-courts (red 'play tennis' courts), players serve or start the rally with an underarm serve with the coach playing on one of the courts, and with the extra player possibly picking up balls, or doing a physical activity, keeping the score, creating a station that they will be able to practice their ground stroke consistency (i.e. against the fence/wall or hit into a target). After 5 points, they get together to discuss theme of the lesson. The side of the coach should start the rally/point.
- ITN 8-9 using 2 mini-courts, coach and players rally down the line (using orange or green 'play tennis' balls). Putting the players into two groups of 4, (with the coach making the 4th member in one of the groups). The 8th player or spare player could be doing a physical exercise or picking up balls, or an activity that relates to the theme of the lesson.

Player rotation: Same as above.

Coach analysis and diagnosis points: Make sure the players begin to apply the basic tactics of moving the opponent deep and back from the baseline using their groundstrokes.

DRILL 4-OPEN SITUATION WITH POINTS

Goal: Players to practice the fundamental tactics of moving the opponent using height from the baseline using their groundstrokes in a rally situation with their peers.

Methodology: Players rally among themselves.

Player organisation/positioning: Players play points relative to their playing level and court size i.e.

- ITF 10-10: 3-4 mini-tennis courts
- ITF 8-9: Using half court. They could progress to using full court but having good rotation and using either orange or green 'play tennis' ball.

Player rotation: Same as above.

Point/scoring system: The following formats can be used:

- Individual scoring: Number of ground strokes in.
- Team/pair scoring: Number of ground strokes patterns in
- Other options: Number of times players adopt a correct preparation, contact point, and impact the ball with the strings.
- Individual points
- Extra points given for tactical (moving the opponent using height) or technical proficiency
- King of the court

Coach analysis and diagnosis points: Make sure the players begin to apply basic tactics (moving the opponent using height) from the baseline using their groundstrokes.



Tennis Nutrition Facts

Page Love (USA)

ITF Coaching and Sport Science Review 2008; 15 (1): 21 - 23

ABSTRACT

This paper reviews the facts on tennis nutrition. It provides key measures in the calculating a player's diet and questions for coaches and players to discuss. The article also focuses specifically on nutritional facts and fiction related to carbohydrates, proteins and fats.

Key words: Protein, fat, carbohydrate, nutrition, tennis.

Corresponding author: Nutrilove@aol.com

INTRODUCTION

There are so many sports diets, and many of their inventors are making big bucks by raising false hopes and making false claims. Any diet will cause weight loss in the short run, but most lead to cravings and binging and eventual weight gain - and some may even be harmful to your body. It's hard to sort out fact from fiction. Are carbohydrates bad? Is fat the root of evil? Here's the real story, based on sports nutrition science.

PROTEIN

Why do I need it?

- Your body needs protein to build and repair muscles
- It is the building block of major organs
- Every enzyme in our body, many hormones, and our antibodies are all made of it
- It provides a feeling of fullness
- It is an important source of iron, zinc, and niacin

How much do I need?

- A 3-oz. (84g) serving at meal time (2x/day)
- A 1- to 2-oz.(28g-56g) serving at snack time (1-2x/day)

What are some healthy sources of protein?

- Lean beef, pork, turkey, venison, lamb, seafood and fish
- Tofu and veggie burgers
- Peanut butter and nuts
- Eggs, milk, yogurt, cottage cheese

CARBOHYDRATES

Why do I need them?

- They are the body's main source of energy and help maintain blood sugar
- They are stored in the muscles to be used as energy between meals and snacks
- They are an important source of fiber, B vitamins, and iron they bulk up in the tummy and help us feel full

How much do I need?

- At least 2 servings of carbs (grains) at each meal (3x/day)
- 1 serving of carbs for a snack (2x/day)

What are some healthy sources of carbohydrates?

- Whole wheat grains: breads, pastas, brown rice, bagels, muffins
- Starchy vegetables: corn, peas, potatoes
- Legumes / beans: pinto, navy, black, black-eyed peas
- Pretzels, popcorn, wheat crackers

FAT

Why do I need it?

- Fat is an important energy source and helps to maintain our immune system

- It helps manufacture hormones like estrogen and thyroid
- It is necessary for cell growth
- It helps us feel full and adds flavor and enjoyment to foods

How much do I need?

- A minimum of 1 teaspoon of vegetable fat per meal and snack
- Take your weight, cut it in half - that's how many fat grams to eat a day (120 lbs. = 60 grams)

What are some healthy sources of fat?

- Peanut butter and other nut butters
- Vegetable oils including olive, safflower, peanut, corn, canola
- Cheese, avocados, olives, legumes, nuts/seeds
- Mayonnaise, margarine, butter, sour cream, salad dressings
- Ice cream, cookies, candy bars, muffins, donuts, chips, crackers, croutons

CARBOHYDRATE FACTS FOR TENNIS PLAYERS:

Are You Getting Enough Fuel for Your Engine to Perform?

How much carbohydrate does a tennis player need?

For a healthy distribution, you should aim to have at least:

Grain/Bread: 2 - 3 choices at each meal 3 times per day (1 cup minimum portion)

1 choice at each snack (2 times a day)

Fruit: Minimum of 4 servings per day (or 2 cups)

Vegetables: Minimum of 2 servings per day (or 1 cup minimum)

Dairy: Minimum of 3 servings per day (e.g., 1 cup milk/yogurt)



Or, a good rule of thumb is targeting 3 gms. per pound (0.45kg) of body weight. For example: A 100-lb. (45kg) player would need a minimum of 300 grams of carbohydrate foods per day from the food groups listed above.

Why does your body need carbohydrates?

- Carbohydrates are main source of fuel for muscles and organs
- Eating adequate carbohydrates will raise your metabolism
- Used to maintain blood sugar and quick energy stores
- Stored in our body to be used as an energy source between meals and snacks
- An important source of fiber, B vitamins, and iron
- "Bulk" source, helps us to feel full

What are some healthy sources of carbohydrates?

- Whole wheat grains - breads, pastas, bagels, muffins, rolls, etc.
- Starchy vegetables - corn, peas, potatoes, etc.
- Legumes/beans - pinto, navy, baked, black, black-eyed, etc.
- Brown rice, couscous
- Pretzels, popcorn, wheat crackers
- Bananas, oranges, apples, melon, etc.
- Carrots, broccoli, green beans, squash, etc.
- Milk, yogurt, pudding, cheese, etc.



Practical Questions

Do you consume enough carbohydrate? If no, what limits you?

What are some carbohydrate foods that you used to enjoy in the past that you will no longer let yourself enjoy?

Have you experienced any of the following carbohydrate deficiency symptoms?

- Light headedness
- Fatigue
- Inability to make it through a normal training session
- Muscle cramping
- Other:

List some reasons why you will allow more carbohydrates back into your diet?

Write one positive statement about why to allow yourself more dietary carbohydrates.

Set a goal this week for adding more carbohydrates to your training diet.

PROTEIN IN THE TENNIS PLAYER'S DIET

What is an adequate amount of protein?

Protein is a vital recovery nutrient in the diet. Tennis players should aim to have at least a 3-ounce(84g) serving of protein at meal time (2 times per day) and a 1- to 2-ounce (28-56g) serving of protein at snack time (1 to 2 times a day). Research suggests that protein needs are slightly increased with heavier exercise training, especially training involving both strength and endurance components such as tennis.

Because protein needs are specific to body weight, these needs are determined by taking into consideration your weight in pounds or kilograms.

Example: Your weight in pounds $2.2 = \text{kg}$

Your kg weight X (1.0 - 1.5) = gms

Sample player's daily needs:

140 lbs. (63kg) $2.2 \times (1.0 - 1.5) = 78 - 110$ gms daily

Why does your body need protein?

- Protein is needed to build and repair and rebuild our muscles
- Protein is the building block of major organs
- Every enzyme in our body and many of our hormones are made of protein
- The antibodies we make to fight infection are made from proteins
- Proteins provide a feeling of satiety and fullness and settle hunger cravings
- They are an important source of iron, zinc, and niacin
- The body cannot store extra protein, so our diet must supply a fresh source of protein each day

What are some healthy sources of protein?

The best sources of protein in the diet to replace, build, and maintain body tissues are high-biological quality sources such as animal proteins found in poultry, fish, lean red meats, eggs, and dairy products.

- Seafood and fish (salmon, tuna, crab, shrimp, lobster, etc.) are very high in protein - a can of tuna contains as much protein as half a dozen eggs or a whole sirloin steak - and are more digestible than other meats (fish is 95.5% digestible, pork follows at 93.9%, chicken at 91.4%, and lamb at 87.8%)
- Beef, pork, turkey, chicken, venison, lamb
- Tofu and veggie burgers and other vegetarian meat analogs
- Peanut butter and nuts
- Eggs, milk, yogurt, and cottage cheese
- Milkshakes, Ensure®, Carnation Instant Breakfast®, Gatorade Recovery®
- Luna or Clif Builder® bars, Protein Plus PowerBar®, GeniSoy® bars (8 or more grams of protein)

Meeting your daily needs - Common amounts of protein founds in foods:

1 cup low-fat milk	8 gms
1 oz. (28g)cheese	8 gms
1 oz (28g) meat, fish, poultry	7 gms
1 slice bread	3 gms
1 Tbsp. peanut butter	7 gms
1 cup starchy beans	14 gms

Using these examples, for a 140-lb. (63kg) tennis player, the following daily training diet would meet 110 gms of protein:

Breakfast (24 gms)

1 cup cereal	3 gms
1 cup low-fat milk	8 gms
1 bagel	6 gms
1 cup orange juice	0 gms
1 Tbsp. peanut butter	7 gms

Lunch (39 gms)

sub sandwich with lean turkey	28 gms
1 oz. (28g) pretzels	3 gms
1 carrot	2 gms
1 apple	0 gms
1 cup low-fat milk	8 gms

Dinner (38 gms)

2 slices vegetarian pizza	22 gms
salad with dressing	2 gms
2 breadsticks	6 gms
1 cup low-fat milk	8 gms
1 cup fruit cocktail	0 gms

Optional Snacks (9 gms)

3 cups popcorn (no butter)	3 gms
12 vanilla wafers	6 gms

Daily total **110 gms**

Should I consider protein supplements?

Not usually. Protein needs can easily be met without supplementation, as seen above. Taking in extra protein much above your daily training needs could possibly cause weight gain in the form of fat as well as dehydrate your body, leading to fatigue on the court.

"What if I am trying to gain weight?"

It is realistic to expect to gain 1 lb.(0.45kg) of muscle every 2 weeks when both weight training and eating adequate energy calories. Protein intake will only need to be increased 5-8 gms per day above your current adequate intake to meet these needs (e.g., 1 oz./28g meat or cheese).

When should I eat protein?

Include protein with each meal and spread equally throughout the day. Try not to eat a large portion of protein right before or immediately following matches; it is most important at these times to increase both fluid, electrolyte and carbohydrate food choices.

What about meat alternatives?

There are plenty of alternatives today for those who want to eat less red meat or no meat at all. These include soy products, dairy, eggs, beans and nuts, and so on. Remember, though, that it takes 2 times the visual equivalent of vegan protein foods to get the same amount as you would from animal proteins (3 oz./84g equivalent).

Also check out the handout, "Meat Alternatives & Vegetarian Proteins for the Tennis Player's Diet"

Helpful Hints:

Recommendations to increase or decrease protein intake should be made on an individual basis and after normal daily intake is analyzed. Eating extra protein does not guarantee larger muscles. You must be eating adequate energy and protein as well as doing weight training on a regular basis to achieve these results.

Refer to the USTA Strength Training Manual for additional guidelines for setting up a strength training program.

FAT FACTS FOR TENNIS PLAYERS

Fat has gotten a bad reputation and become a dreaded word in the world of what people eat! In reality, it is a vital ingredient in our diet, just like protein and carbohydrates. For healthy nutrition, we need at least 1 tsp. of vegetable fat per meal and snack (3 - 6 times per day). Tennis players need more fat than the average person due to the high calorie demands of tennis play.

Why does the body need fat?

- secondary source of energy
- maintenance of the immune system
- manufacture of hormones, especially estrogen and thyroid
- regulation of metabolism
- source of antioxidant vitamins and helps your body to absorb these
- component of cell membrane and needed for cell growth
- contributes to satiety and enjoyment of foods

What are some healthy sources of fat?

- fish high in omega-3 fatty acids, such as mackerel, lake trout, herring, salmon
- peanut butter and other nut butters
- vegetable oils: olive, safflower, sunflower, peanut, corn, canola, flaxseed, soybean
- cheese, avocados, olives
- legumes: black beans, black-eyed peas, lentils, garbanzo beans, kidney beans, navy beans, pinto beans
- nuts and seeds
- mayonnaise, margarine, butter, sour cream, salad dressings
- ice cream and bakery items
- dairy products: cheese and milk
- chips, crackers, croutons

Practical Questions

Do you think you consume enough fat for your training diet?

What are some foods containing fat that you used to enjoy in the past that you will no longer let yourself enjoy?

What are some fat deficiency symptoms you have experienced?

List some reasons why you will allow more fat back into your diet?

Write a positive statement about why to allow yourself more dietary fat:

Set a goal this week for adding more fat to your training diet.

Situation Training: Key to Training in a Game-based Approach

Wayne Elderton (Tennis Canada)

ITF Coaching and Sport Science Review 2008; 15 (44): 2 4-2 5

ABSTRACT

This article identifies various methodologies and approaches for coaches to train and drill using the game based approach (GBA). The article refers to point, shot, and situational training, and provides ways to evolve a drill.

Key words: Game based approach, coaching methodology, situational training

Corresponding author: EldertonW@northvanrec.com

INTRODUCTION

As coaching moves away from the technical 'stroke model' methodology and towards a Game-based approach (GBA), new coaching tools are needed. In the past, the tools coaches used to plan and structure lessons were the technical stroke models (e.g. the forehand, backhand, serve, etc). Coaches who use a GBA but continue to build lessons and plans around strokes risk being sucked back into model methodology. For a GBA, stroke models make poor planning tools since they ignore tactical elements. Effective GBA training combines tactical and technical learning.

The strength of the GBA lies in the fact that tactics (what to do) is placed before technique (how to do). Tactics include critical elements required for successful game play like decision-making, problem solving, anticipation, etc. A very effective way to keep tennis training on track with a GBA is to use what I like to call "Situation Training". Drills are more effective when they are about situations rather than strokes.

In learning (whether business, medicine or tennis), the rule is: "The transfer of learning between any two situations is directly proportionate to the degree they are similar". In other words, skills will not transfer from lessons or drills if practice does not re-create a realistic game-play environment. This is the pitfall with many basket feeding drills. As a result, some proponents of GBA outright reject basket feeding as a tool coaches should use. However, even basket feeding drills can be used effectively in a GBA if Situation Training is employed.

Whether playing chess or tennis, the foundation of playing any game is tactical. Tactics are ways to win the game. They employ the relationships between the player, an opponent(s), and the elements of the game (e.g. a ball, the court, etc). Using situations as building blocks brings together all the elements of tennis (tactics, decision-making, problem-solving, technique, psychology, etc).

For tennis, we can incorporate all these elements by placing them in a situational framework.

POINT SITUATIONS

The Situation Training system starts with the 'big picture' tactical categories. These follow the stages of how a typical tennis point unfolds and are called Point Situations:

1. Initiate: In this stage, the player begins the point off either the serve or return. Does the player gain advantage on their 1st serve more often than not? What about their 2nd serve? On the return, does the player neutralize the opponent's advantage and capitalize on and weaker serves, etc?

2. Build: In this stage a player must maintain consistency but also maneuver their opponent into making an error or giving up the advantage. For example, all too often players try to 'win' from a neutral baseline exchange. Taking too much risk means giving up more points than you get. Not being aggressive enough means the opponent can take advantage.



3. Advantage: In this stage the player must identify when they have an advantage and then capitalize on it. For example, this could be an approach shot that sets up a winning volley or an angled topspin that pulls the opponent off the court. The idea is to increase the pressure on the opponent.

4. Finish: In this stage the player has the opportunity to outright win the point using for example, an overhead, or a put-away volley. Many players don't practice Finishing since they feel it should be 'easy'. As every experienced player knows, there are no 'easy' balls in tennis, only ones with greater opportunity. It is common to see players set up the point over and over again only to panic and blow the finishing shot.

5. Stay-in: This stage is the other side of the coin of both the Advantage and Finish Stages. Players must learn to defend when an opponent has an advantage or finishing opportunity. Sometimes, all it takes to turn a match around is to successfully defend against a couple of finishing opportunities by an opponent. In addition to defending, this stage also includes countering (turning around an opponent's advantage). When countering, a player isn't playing it as safe as when defending. Countering includes all the passing shots against opponents at net and approaching the net. This stage is most often trained at the same time as the Advantage and Finish stages.

Note: Every point obviously doesn't progress through all of these stages (e.g. a Serve & Volley may go from Initiate to Finish). However, all of them need to be trained to make a complete player.

SHOT SITUATIONS

The next element of Situation Training is to define the situation in a more narrow way. For more specific training, coaches can use the 'Shot Situation' (sometimes called a "Shot Cycle") which describes the cycle of events that happen during a shot from the player's impact to the opponent's, and back again.

This framework gives coaches a critical tool to systematically organize training tactically. It allows lesson construction ("Coach, I would like to work on this situation that happened to me at the tournament"), unit planning ("This month we will cover these situations"), and the creation of drills ("Today's drill will be about maintaining a neutral crosscourt exchange").

The Shot Situation includes two main 'halves'. A tactical Context that presents a challenge to the player and a Response that deals with the challenge.

- The Context incorporates all the elements that happen in the situation when the player receives the ball (where they are in relation to the opponent and the characteristics of the ball received).
- The Response includes all the elements required to answer the challenge (the Phase of Play and the characteristics of the ball sent).

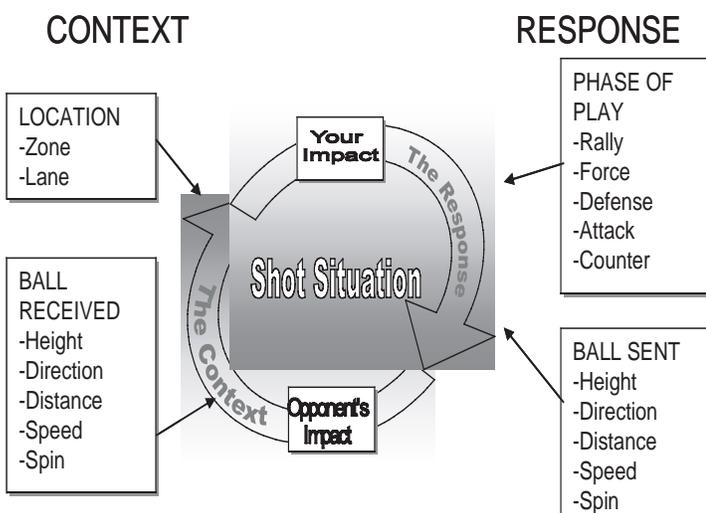


Figure 1. Shot Situation

SITUATION TRAINING

By using the appropriate Shot Situation elements, training becomes 'game relevant' and fits into a GBA. For example, a lesson or a drill could start with this introduction to a context (try to picture it on the court with players):

"In a Both Back situation, the opponent was located deep behind their baseline and the player was near their own baseline (Location). The opponent sent a high ball with topspin deep to the player's backhand lane (Reception Ball Controls)."

Once the Context has been introduced, the next step is to help the student create a Response. The coach can either set up the situation and let the student try to solve it (with guidance) or guide students into selecting a Response before the drill begins and jump right into training it. The student should always be part of creating their own solution. If the student has a sense of solving the problem on their own, they will become better problem-solvers. If the coach gives them solutions, it short-circuits the student's ability to become a self-sufficient player.

To train the situation, the drill must re-create the context. Feeding becomes critical for repetition (whether basket or live ball feeding from a partner). When the context changes (e.g. the ball received is lower, harder, etc), it gives a great opportunity for decision-making to be incorporated. Technical coaching in this framework becomes relevant and practical and transfers to real match play easier.

It is worth mentioning again that this process is also the basis for creating hundreds of drills. How many situations do your players need to master? Every competition they play will produce a number of situations they need to work on. This is a far more useful way to practice than going through countless general 'forehand' & 'backhand' drills.

EVOLVING DRILLS

By understanding the components of Situation Training, coaches can create new drills or, change elements of the drills they currently use increase their realism. For example, a coach could take a single file line drill with players hitting crosscourt forehands and evolve the following elements:

- The position of the feeder (re-create the opponent's location) and the characteristics of the ball fed to recreate a specific context
- The starting location of the hitter and their recovery after the shot
- Determine the key decisions required in the situation
- Determine the appropriate Phase of Play for the hitter
- Measure the characteristics of the ball sent required to successfully perform the tactic
- Position opponent's to re-create a competitive environment

These are just some of the changes that would make the drill practical and more transferable to match play.

CONCLUSION

By using a tactical based Situation Training framework that moves from general Point Situations to more specific Shot Situations, coaches can ensure their training and planning harmonizes with the Game-based approach. More importantly, they will be more effective at helping students learn to play better tennis.

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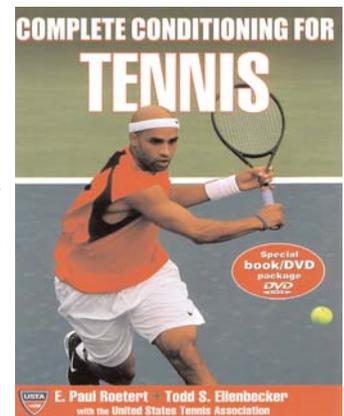
Recommended Books and DVDs

COMPLETE CONDITIONING FOR TENNIS

Authors: E. Paul Roetert and Todd S. Ellenbecker **Year:** 2007 **Language:** English
Type: 207 page book with a 90 minute DVD **Level:** All levels **ISBN:** 978-0-7360-6938-0.

Complete Conditioning for Tennis details how to make the most of the training time of players with exercises, drills, programmes designed to assess the players' fitness level, improve footwork, increase their flexibility, enhance stamina, boost mental focus, and prevent common injuries. In this book coaches and trainers will find comprehensive information to help their players increase strength, power, agility, and quickness and take their game to a much higher level. Additionally Complete Conditioning for Tennis includes a 90 minute DVD which demonstrate on court gym drills and exercises used by professional players. The book aims to develop the highest level of athleticism for success in tennis.

For more information visit: www.humankinetics.com

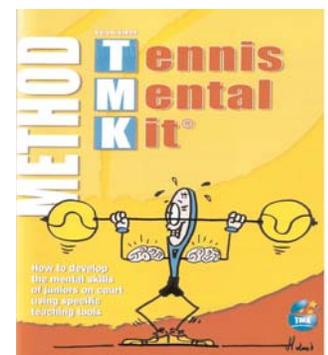


TENNIS MENTAL KIT

Author: Antoni Girod **Year:** 2007 **Language:** English **Pages:** 58 **Level:** Beginner/ Intermediate
ISBN: 84-7902-277-9.

This book presents a new method of mental training which is set out clearly and in an attractive manner. The book describes the main psychological skills in tennis, focuses on why they are important and the practical application for the player and coach. For each of the 10 skill areas there are several in-depth descriptions of possible drills and routines. The drills include hit and win target drills for motivation, controlled breathing routines for relaxation or even a tennis situation self assessment form. In addition there is a junior section which provides advice on how to plan, prioritize, test and develop using the mental training drills provided for various times during a child's development or when overcoming particular problems.

For more information visit: www.tennismentalkit.com

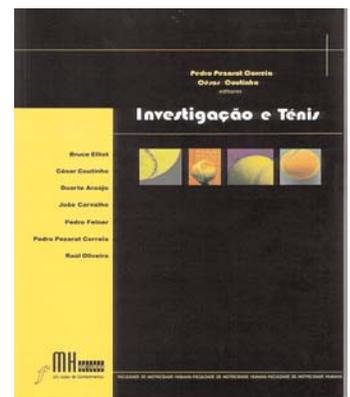


INVESTIGAÇÃO E TÊNIS (RESEARCH AND TENNIS)

Editors: Pedro Pezarat and César Coutinho **Authors:** Bruce Elliott, César Coutinho, Duarte Araújo, João Carvalho, Pedro Felner, Pedro Pezarat Correia, and Raúl Oliveira **Year:** 2007
Languages: Portuguese and English **Pages:** 140 **Level:** Intermediate/ Advanced
ISBN: 987-972-735-148-0.

This is a collection of the main presentations given at the Seminar "Research and Tennis" organised by the Faculty of Human Kinetics of the Technical University of Lisbon on November 16 and 17, 2007. The six journal articles with the exception of one (English) are written in Portuguese. Three of the journals focus on biomechanical analysis of tennis (biomechanics, biomechanical patterns and muscular profile of the shoulder), two of them on tactics (patterns and decision making) and another one on risk factors associated to injuries in tennis. All of the articles offer an extensive review of scientific literature on each topic as well as a considerable list of references.

For more information visit: www.fmh.utl.pt/

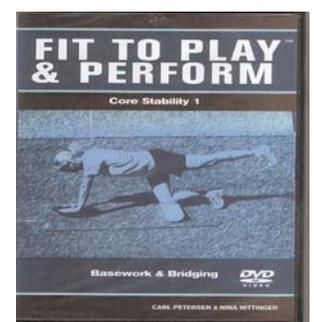


FIT TO PLAY™ & PERFORM - CORE STABILITY

Authors: Carl Petersen and Nina Nittinger **Year:** 2007 **Language:** English **Resource Type:** (4 DVD series)
Level: All Levels
ISBN: 978-097343143-8

This collection of DVDs includes dynamic and functional exercises that can be used in the training spectrum. This well balanced multi-core strength programme includes basework and bridging, lower core and legs, upper core and arms and exercises to connect the upper and lower core. It shows examples of training with stretch bands, resistance equipment, physio ball, balance equipment and medicine balls which aim to build strength and stability in numerous planes of motion. This series is useful for athletes of all ages and abilities and includes a high performance warm-up as well as stretching guidelines.

For more information visit: www.fittoplay.com



ENTRENAMIENTO EN PISTA DEL JUGADOR DE TENIS (ON-COURT TRAINING OF THE TENNIS PLAYER)

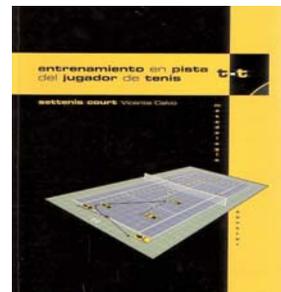
Author: Vicente Calvo **Year:** 2007

Language: Spanish **Resource Type:** 142 page book with Set-Tennis Software CD **Level:** All Levels

ISBN: 978-84-611-9996-9

This is a book and software combination produced by the strength and conditioning coach of Fernando Verdasco. Within the book the author describes the physical demands within tennis and defines and explains the science behind these demands. The book includes methods of tennis specific on court conditioning and how to periodize and use progression training to peak for competition. In addition to the book the software CD provides on court moving diagrams with videos and progressions created by the author. Another use of this software is that it will allow the user to create programs and progressions to share on the online data base. This internet data base becomes a resource for teachers, coaches and players to share appropriate exercises and examples that they have found to work and provide ideas for every user to benefit from.

For more information visit: www.settenis.com

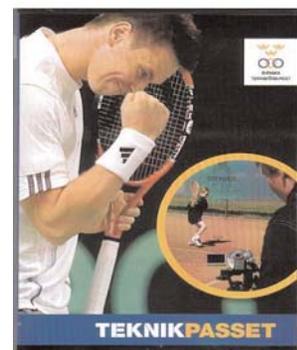


TEKNIK PASSET

Author: Swedish Federation **Year:** 2007 **Language:** Swedish **Resource Type:** DVD **Level:** All Levels

This DVD provides summaries of the current mini tennis and ITN programs using video examples of drills and progressions. The DVD looks at the specificity of training and provides links between skill transfers from athletic events such as discus, javelin and shot put. There are sections on physiological and biomechanical breakdown of technique and how to develop attributes such as force development, precision and consistency with good examples of these being used in the professional game and by intermediate players.

For more information visit: www.tennis.se



TENNIS E SCOLIOSIS (TENNIS AND SCOLIOSIS)

Author: Rodolfo Lisi **Year:** 2007 **Language:** Italian **Pages:** 117 **Level:** Advanced

ISBN: 88-7020-120-1.

The book is a serious investigation on the relationship between tennis and scoliosis, a deformity of the spine characterised by a lateral curvature on the frontal plane associated with vertebral rotation that mainly affects adolescents (girl mostly). The author reviews some preliminary notions of normal anatomy of the spine and elaborates on scoliosis and scoliotic attitude. This is followed by an extensive analysis of physiological and biomechanical features of tennis movements and an in depth discussion of the main existing studies on tennis and scoliosis. These studies are confronted with those in fencing, javelin throw and asymmetric sports. The tennis player's back is also included as one of the chapters in the book. Colour photos and drawings as well as a detailed section on references at the end of this chapter are included in this book which is an excellent contribution to the knowledge of this important condition that may affect tennis players.

For more information visit: infolombardo@lombardoeditore.it

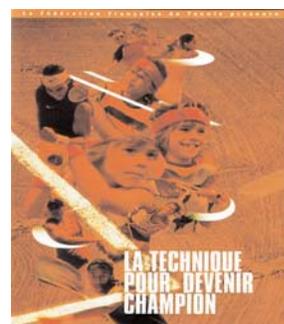


LA TECHNIQUE POUR DEVENIR CHAMPION (THE TECHNIQUE TO BECOME A CHAMPION)

Author: French Tennis Federation **Year:** 2007 **Language:** French **Resource Type:** DVD **Level:** All Levels

This is an excellent part by part breakdown of tennis technique with special attention to the progression and development of tennis technique from the initial stages to high performance level. The DVD looks at the service, the forehand, the backhand and playing at the net. The technique is broken down using excellent video slow motion analysis and specific spot lights on individual body parts and biomechanics. The biomechanical analysis is explained using commentary and the appropriate annotation of shapes, lines and arrows which aids the understanding of principles such as balance, rotation and flexion. Throughout the DVD it features footage of every playing standard, young beginner all the way to Grand Slam Professional.

For more information visit: www.fft.fr



General Guidelines for Submitting Articles to ITF Coaching & Sport Science Review

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International Tennis Federation, Ltd.
Development and Coaching Department.
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Address: Avda. Tirso de Molina, 21, 6º - 21, 46015, Valencia (España)

EDITORS

Miguel Crespo, PhD. and Dave Miley.

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FORMAT

Articles should be word-processed preferably using Microsoft Word, but other Microsoft compatible formats are accepted. The length of the article should be no more than 1,500 words, with a maximum of 4 photographs to be attached. Manuscripts should be typed, double spaced with wide margins for A4-size paper. All pages should be numbered.

Papers should usually follow the conventional form: abstract, introduction, main part (methods and procedures, results, discussion / review of the literature, proposals-drills-exercises), conclusions and references. Diagrams should be done using Microsoft Power Point or any other Microsoft compatible software. Tables, figures and photos should be relevant to the paper and should have self explanatory captions. They should be inserted in the text. Papers should include between 5 and 15 references that should be included (author/s, year) where they occur in the text. At the end of the paper the whole reference should be listed alphabetically under the heading 'References' using the APA citation norms. Headings should be typed in bold and upper case. Acknowledgement should be made of any research grant source. Up to four keywords should also be given and the corresponding author contact details.

STYLE AND LANGUAGES OF SUBMISSION

Clarity of expression should be an objective of all authors. The whole emphasis of the paper should be on communication with a wide international coaching readership. Papers can be submitted in English, French and Spanish.

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When submitting articles authors should indicate their name(s), nationality, academic qualification(s) and representation of an institution or organisation that they wish to appear in the paper.

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In calling for papers, the Editors ask that contributors adhere strictly to the guidelines. Views expressed by contributors are their own and not necessarily those of the Editors or publisher.

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ITF Ltd, Bank Lane, Roehampton,
London Sw15 5XZ
Tel: 44 20 8878 6464
Fax: 44 20 8878 7799
E-mail: coaching@itftennis.com
Website: www.itftennis.com/coaching

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