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EDITORIAL

Welcome to Issue 59 of the ITF Coaching & Sport Science Review.

The main focus of this edition of CSSR is junior tennis. The articles range from medical and travel advice, obtaining scholarships in the US, to psychological variables and talent identification in young players.

Other topics in this issue include coaching children with autism, teaching styles, serve correction and information on an exciting new tennis app.

Since the launch of CSSR in English in 1992, the ITF has published over 560 articles from contributors of more than 35 different nationalities. Today the review is produced 3 times per year in the 3 official ITF languages of English, Spanish and French and made available free of charge on the ITF coaching web at <http://www.itftennis.com/coaching/sportsscience>.

The 2012 launch of, 'Biomechanics for Advanced Tennis' as an e-book has proven to be very successful in the new electronic format. Interested readers can purchase their copy at:

<http://www.amazon.es/ITF-Biomechanics-Advanced-Tennis-ebook/dp/B00A79U7MK>

The ITF Tennis iCoach website remains at the forefront of online coach education, with up to date and current research available to coaches across the world. For just \$30 per year you can keep up to date with then most current tennis specific coaching information. Please click on the following link for a tour of the site. www.tennisicoach.com

In late 2013, the Tennis iCoach will be re-launched with mobile and tablet PC support on both Android and Apple devices. Version 3.0 of the site will also offer HD quality video, a new navigation and search system, as well as a range of new features that will enhance the user engagement and learning experience for users. The launch is set for autumn 2013 and will be officially released at the Worldwide conference in Mexico.

The ITF is pleased to announce that the 2013 ITF Worldwide Coaches Conference by BNP Paribas will take place in Cancun, Mexico, from 5 to 9 November. The event is being organised by the ITF in conjunction with the Federación Mexicana de Tenis (FMT) and COTECC at the Iberostar Cancun resort. The Iberostar Cancun is a luxurious 5-star all-inclusive complex located on one of the finest beaches in Cancun, Mexico.

The theme of this year's Conference is 'The Long-term Development of a High Performance Player'. The Conference will have presentations related to four distinct ages of player development:

10 & under (Building phase)

11 - 14 years (Development phase)

15 - 18 years (Junior phase)

19 - 23 years (Transition to Professional phase).



The Iberostar Cancun 5-star resort.

For more information on this prestigious event please go to:

<http://en.coaching.itftennis.com/conferences/worldwide/2013-conference.aspx>

To see the summary video from the 2011 ITF Worldwide Coaches Conference by BNP Paribas in Egypt, please go to:

http://www.youtube.com/watch?v=dOGN_oUTxug

The ITF has launched the official Tennis Xpress promotional video following the global launch of the Tennis Xpress programme during the 3rd Tennis Play and Stay seminar at the LTA's National Tennis Centre in London in November 2012. You can watch the video by clicking the following link.

<http://www.tennisplayandstay.com/news/articles/tennis-xpress-promotional-video-launched.aspx>

Tennis Xpress is an easy, active and fun coaching programme for starter adults and recommended by the ITF as the best way to learn the game. Designed as a nine-hour course over six weeks for clubs and tennis facilities, Tennis Xpress is centred on the use of slower Green balls (25% slower) and Orange balls (50% slower) to ensure that players quickly learn the rules of tennis, and the basic techniques and tactics of tennis, in an active way. Tennis Xpress is a supporting programme of the ITF Tennis Play and Stay campaign.

We hope that you will find this 59th edition of the Coaching and Sport Science Review informative and that it will allow coaches across the world to build on and develop their coaching knowledge and to be more effective in their work as coaches. We also hope that you will continue to make use of all the other coaching resources provided by the ITF which can be viewed on the coaching webpage:

<http://www.itftennis.com/coaching>.

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Youth tennis – A medical overview

Brian Hainline (Chief Medical Officer, NCAA, USA)

ITF Coaching and Sport Science Review 2013; 59 (21): 3 - 5

ABSTRACT

Children differ physically, physiologically, emotionally, cognitively, and socially from adults. This article sheds light on the limited amount of studies regarding medical concerns for children in sports. However, it is clear that training programs should be adjusted and careful monitoring is required. Similar to adults, children need to recover physically, nutritionally, and emotionally after exercise.

Key words: Children, Injuries, Strength Training, Recovery, Periodization

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INTRODUCTION

There are few studies available regarding the medical concerns of children in sports. Most of the children's sport literature focuses on the critical period of puberty, during which time there is a considerable change in growth accompanied by hormonal and sex characteristic changes. It is during this time that children may become more specialized in sport, and the training load may increase substantially.

Medical Concerns

It is observed that the increased activity during puberty leads to an increase in the amount of injuries, however there is very little information about tennis injuries in children under 10. An analysis of the hospital emergency rooms in the Netherlands demonstrates that the risk of injury from tennis in children ages 6 to 12 is of 0.01 injuries per player per year. This means that for every 100 children who play tennis, one child will develop some type of injury; there is no pattern to the type of injury that develops. In an Australian study of school children ages 5 to 12, tennis had an injury rate of 1.10 per 1,000 hours of play. This means that for every 1,000 hours of playing tennis, there is a little more than one injury that will develop; again, there is no specific pattern of injury noted.

Heat illness, which includes heat stroke, heat exhaustion, and severe cramping, is more common in teenagers than in children under 10. Even though a child's physiology is not well adapted to heat dissipation relative to teenagers and adults, young children seem to adapt in other ways so they do not become heat ill. There is not good data about sudden cardiac death in children who exercise. In high school athletes, one in 200,000 will develop sudden cardiac death, which is why pre-season screening exams are recommended.

Burnout has been reported in teenagers, but there is limited data for children under 10. Burnout is a psychological and physical condition that results from overtraining, and that leads to poor athletic performance, irritability, fatigue, lack of motivation, and an increase in resting heart rate.

In summary, there are limited data about medical problems in young children who exercise. Most injuries and medical concerns become apparent during and after puberty. Whether the emphasis on early specialization will cause increasing medical problems in children under 10, however, warrants monitoring.

STRENGTH TRAINING

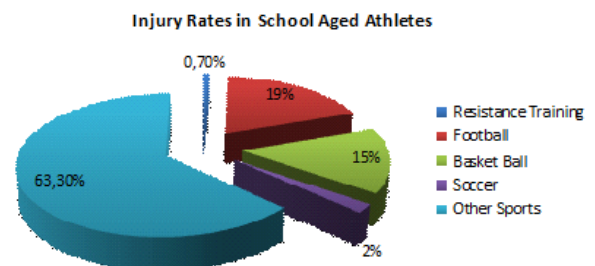
There are many myths and concerns about strength training in children, and this is compounded by a lack of consistent competency standards that are in place for strength and conditioning coaches. Another problem is that there are very strong commercial influences for strength training, and these influences are more in keeping with selling a product or program rather than focusing on best evidence for age-appropriate strength and conditioning. Furthermore, commercial influences often market the use of machines, and they are rarely, if ever, properly designed for children.

The primary reasons for considering strength and conditioning training in children is to improve health and athleticism. Realistic goals for strength training in pre-pubertal children include:

- Improved muscle strength and power
- Improved muscular endurance
- Improved body composition
- Improved strength balance around the joint
- Prevention of injury
- Improved sport performance
- Improved self-confidence

In order to achieve these goals, a program should be properly designed and supervised by a knowledgeable adult, and the child and adult should share realistic goals while assuring that the child can follow directions safely and with proper form. When this is accomplished, the evidence indicates that very few injuries develop from strength (resistance) training relative to actually playing sports, as shown in the chart below (Figure 1).

Myth: Strength Training is Not Safe



"Injuries related to resistance training in high school athletes appear to involve the aggressive progression of training loads or improper exercise [or moving weight] technique."

Faigenbaum, et al. 2009 JSCR



Figure 1. Injury rates in school-age children.

Furthermore, if a properly designed program is accompanied by good nutrition, the results are even better. For example, if you substitute milk for sugar-containing beverages in 14-year-old girls, their overall strength and conditioning gains are statistically significantly better.

In a study of soccer players, children performed much better when they combined resistance exercises with soccer play, as noted in the figure below. Similar gains are also demonstrated for girls.

20 weeks of resistance training on various measures of strength in pre-pubescent boys

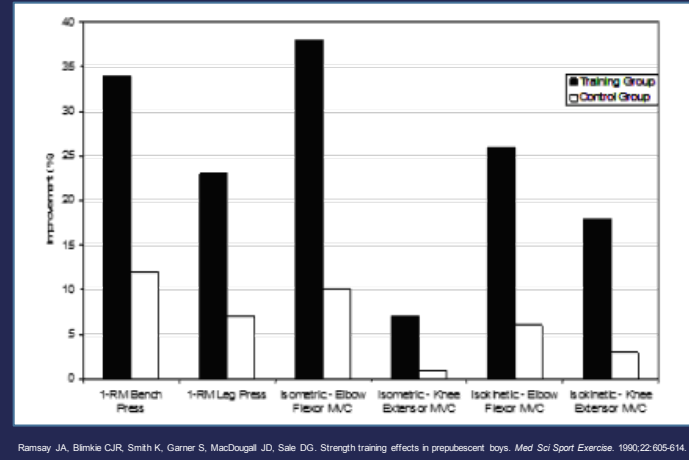


Figure 2. 20 weeks of resistance training on various measures of strength in pre-pubescent boys.

Although there are no tennis-specific guidelines, there are general strength training guidelines that can be followed by children who play tennis, which include:

- Begin at 7-8 years old.
- Frequency: 2-3 days per week.
- Provide qualified instruction and supervision.
- Ensure the exercise environment is safe and free of hazards.
- Start each training session with a 5-to-10-minute dynamic warm-up period.
- Begin with relatively light loads and always focus on the correct exercise technique.
- Perform 1-3 sets of 6-15 repetitions on a variety of upper- and lower-body strength exercises.
- Include specific exercises that strengthen the abdominal and lower back region.
- Focus on symmetrical muscular development and appropriate muscle balance around the joints.
- Sensibly progress the training program depending on needs, goals, and abilities.
- Increase the resistance gradually (5-10 percent) as strength improves.
- Cool down with less intense calisthenics and static stretching.
- Listen to individual needs and concerns throughout each session.
- Begin resistance training 2-3 times per week on nonconsecutive days.
- Use individualized workout logs to monitor progress.
- Keep the program fresh and challenging by systematically varying the training program.
- Optimize performance and recovery with healthy nutrition, proper hydration, and adequate sleep.
- Support and encouragement from instructors and parents will help maintain interest.

RECOVERY AND PERIODIZATION

Recovery may be the most important component of being able to train and compete on a regular basis. Although we have limited data on children, we know with certainty that lack of recovery impedes performance and leads to repeated injuries in teenagers and adults. In

a 16-year study of players at the US Open Tennis Championships, the majority of injuries were from overuse, and the most common trend was for players to return to training or competition before recovering adequately.

Recovery is an integral part of daily training and is not simply reserved for injury management. Recovery is the body's ability to return to a state of readiness following a physical and/or mental challenge. Recovery is physical, nutritional, emotional, and mental. Figure 3 illustrates the role of recovery in training.

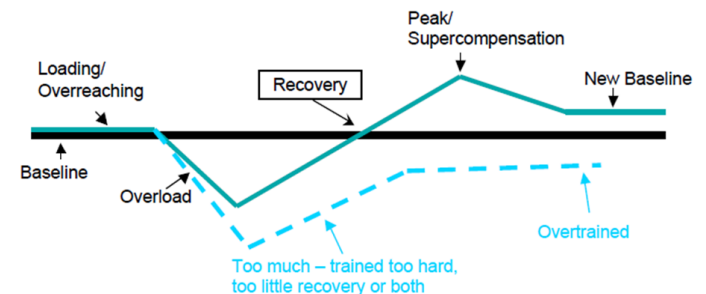


Figure 3. Role of recovery in training.

This chart demonstrates the difference between overreaching and overtraining. Overreaching is a normal process of training, and it is the accumulation of training and non-training stressors that lead to a short-term decrease in performance – a decrease that can be overcome with a recovery lasting a few days. Every good coach pushes a player to a place of overreaching. It is here that the player discovers new and creative sources of inner strength and adaptations. If the athlete recovers following a vigorous workout, then a new baseline of superior strength, athleticism, or adaptation develops.

Overtraining results from an accumulation of training and non-training stressors that has a detrimental long-term effect on performance, with a recovery period that may take several weeks or months. Approximately 50 percent of athletes who play individual sports such as tennis overtrain. All too often, the athlete begins to perform more poorly and the response is to train harder rather than to back off and recover more. An athlete who is overtrained by 5 percent will perform less well than an athlete who is 90 percent prepared for competition. It is the wise coach who understands the difference between overreaching and overtraining, between going to the edge of the cliff and falling over the cliff.

We have very little data on recovery in children. However, it is noteworthy to observe children in unstructured, active play. Typically, the duration of low- to medium-intensity activities in 6- to 10-year-old children is six seconds, and it is three seconds for high-intensity activity. The question is whether this data should serve as a guide to how we structure tennis and other physical activity in children. Should we do away with 20-second-and-more drills? We have no answers. However, based on everything we do know, children should take time to recover after exercise. They should eat properly within one hour (carbohydrates and proteins), they should be well hydrated, they should be able to rest, and they should sleep properly.

CONCLUSION

This article has showcased the available knowledge about the effects of sports on pre-puberty children. Medical concerns, recovery and periodization need monitoring to prevent or reduce the risk of injuries. Strength training can be performed by children to improve health and athleticism, however, the medical concerns will have to be taken into account. In the critical period of puberty children may become more specialized in sport, and the training load may increase substantially. This could lead to an increase in the amount of injuries. The future asks for more research about medical related subjects related to children and sport.



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Note

This article was completed by Mr Hainline while he was in the position of Chief Medical Officer at the USTA.

Observed teaching styles of junior development and club professional tennis coaches in Australia

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ABSTRACT

Diverse learning conditions and experiences are often created by employing different teaching styles and tennis coaches need to purposefully implement a range of teaching styles. This paper presents the findings of research completed on the observed teaching styles of 12 tennis coaches in Australia using Mosston and Ashworth's Spectrum of Teaching Styles (2008). The 12 coaches were selected after completing a survey questionnaire about teaching styles and indicating their willingness to participate in systematic observations of their instructional practices. Results indicate that Junior Development and Club Professional tennis coaches commonly use two teaching styles (Command Style-A and Practice Style-B. These teaching styles share common and complimentary pedagogical principles with direct instruction guidelines whereby the coach is in control of what the students are learning in addition to how and why they are learning it.

Key words: teaching styles, development, coaching

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INTRODUCTION

The objective of teaching or coaching is to connect learners in consequential goal-orientated activities with the aim of achieving instructional outcomes specific to an individual lesson or group of lessons (Mosston & Ashworth, 2008; Rink, 2002). The manner which tennis coaches organise and configure practice, deliver information and offer feedback has been represented by numerous terms including; strategies, styles, approaches, frameworks, processes and methods. This paper refers to the term teaching styles. According to Ashworth a teaching style can be defined as,

A plan of action that defines the specific decision interaction of the teacher or coach and the learner for the purpose of leading to the development of specific objectives in subject matter and behavior (Ashworth, personal communication, March 2, 2010).

Previous research has revealed that Australian tennis coaches believe they use a range of teaching styles during their coaching sessions throughout the year (Hewitt & Edwards, 2011). Literature has also submitted, however, that teachers have a tendency to overestimate the frequency with which they report to using teaching styles (Cothran et al., 2006; Mosston & Ashworth, 2008). It has been suggested that the instructional practices available to tennis coaches have been

confused by the presence of various terms and coaching language (Reid et al, 2007).

The importance of coaches basing their practice on a theoretical framework has been well documented in the literature (Lyle, 2002; Mosston & Ashworth, 2008). A theoretical framework offers clarity around the purpose and arrangement of activities that promote increased student interest, cooperation, and managerial effectiveness and more legitimate assessments of learning (Metzler, 2000; Mosston & Ashworth, 2008).

Mosston and Ashworth's Spectrum of Teaching Styles

Mosston and Ashworth's Spectrum of Teaching Styles (Mosston & Ashworth, 2008) describes a unified theoretical framework of teaching where an array of teaching styles have been arranged on a continuum. The structure of The Spectrum of Teaching Styles stems from the initial premise that "teaching is governed by a single unifying process: decision making" (Mosston & Ashworth, 2008, p.8). Every deliberate act of teaching is a result of a previous decision. The latest version of The Spectrum of Teaching Styles consists of 11 different teaching styles (Mosston & Ashworth, 2008) (See Table 1).

LANDMARK STYLES	
Reproduction	Production
Command (A)	Guided Discovery (F)
Practice (B)	Convergent Discovery (G)
Reciprocal (C)	Divergent Discovery (H)
Self-Check (D)	Learner-Designed Individual Program (I)
Inclusion (E)	Learner-Initiated (J)
	Self-Teaching (K)

Table 1: The Spectrum of Teaching Styles with the Reproduction and Production Clusters located.



The five styles (A-E) form a represent teaching options that foster reproduction of existing (known, past) information and knowledge. The styles (F-K) form a cluster that represents options that invite

production (discovery) of new knowledge. This paper outlines research that has been undertaken to address the lack of literature about the teaching styles of Australian tennis coaches.

RESEARCH METHOD

The coaches in this study were selected for detailed observations after completing a survey questionnaire on teaching styles and indicating their willingness to have their lessons recorded. Systematic observations were then used to identify the teaching styles that the coaches employ during lessons. Junior Development (JD) and Club Professional (CP) coaches were observed and videotaped during three tennis lessons of 30 minutes duration with four players. The lessons were performed during the coaches' formal certification coaching courses conducted by Tennis Australia (TA). In order to code and record the coaches' teaching behaviours during lessons, the Instrument For Identifying Teaching Styles (IFITS) (2004) coding sheet was used in conjunction with Ashworth's Identification of Classroom Teaching Learning Styles (2004). The coding procedure employed in using IFITS consisted of a ten second observation proceeded by a ten second recording of this observation. In other words, every 20 seconds the coder using IFITS made a decision regarding which teaching style the coach was using or whether they were engaged in a class management activity. Class management is defined as any activity that is not directly related to instruction. All of the 36 videotaped lessons were coded by the researcher and a second trained individual. To clarify any queries during the coding process, Prof. Sara Ashworth provided extensive assistance and advice.

Participants and Setting

Participants for this study were recruited from earlier research by Hewitt and Edwards (2011) who conducted a survey questionnaire on the self-identified teaching styles of 208 tennis coaches in Australia. From the 208 coaches, 56 expressed an interest in having their lessons videotaped and coded. The characteristics of the final observation group were male and female, coaches with different coaching qualifications and experiences and from states.

RESULTS

Table 2 shows the participant breakdown of the range of teaching styles observed during the coaches' three by 30 minute coaching lessons (n=36).

PARTICIPANTS	OBSERVED TEACHING STYLES
Junior Development 1, 2, 5 Club Professional 8	A, B
Junior Development 3, 4, 6 Club Professional 7, 9, 10, 11, 12	B

Table 2: Participant breakdown of the range of teaching styles observed being employed during the coaches' three by 30 minute coaching lessons (n=36).

The coaches in this study were observed implementing two teaching styles. These included, Practice Style-B and Command Style-A. Practice Style-B was employed by all 12 participants, while Command Style-A was used by eight of the coaches. A depiction of the breakdown of total time (%) that the 12 participants employed these teaching styles during their three 30 minute coaching lessons is displayed in Table 3.

TEACHING STYLE	PERCENTAGE OF TIME THAT TEACHING STYLES OBSERVED
Command Style-A	10.58%
Practice Style-B	84.25%
Styles C-K	0%
Management	5.15%

Table 3: The breakdown of total time (%) the 12 participants were observed using teaching styles.

From the 36 lessons that were observed, Practice Style-B was used 84.25% of the time while Command Style-A was used 10.58% of the time. No other teaching styles were observed.

DISCUSSION

The results indicate that tennis coaches in this study employed two teaching styles (Command Style-A and Practice Style-B) when instructing tennis. Practice Style-B was used in 84.25% of lesson time. The use of these teaching styles strongly correlate with direct instruction guidelines where the coach makes decisions about student learning and how and why they are learning. Australian tennis coach accreditation manuals (Tennis Australia Learner Guide, 2010; Crespo & Reid, 2009) recommend that tennis coaches should combine the use of direct and discovery teaching styles. The teaching styles observed in this study are not necessarily compatible with the favoured teaching processes identified in these publications. Coaches should understand and purposefully implement a range of teaching styles to achieve various learning outcomes. No one teaching style encompasses all learning eventualities so an effective coach must possess the capability to change and combine teaching styles during lessons. Previous research has suggested that tennis coaches believe they use a range of teaching styles during coaching sessions throughout the year (Hewitt & Edwards, 2011). These results, however, suggest that there is a lack of congruency between the teaching styles that tennis coaches believe they use and what they actually use. Through an awareness of a range of teaching styles, coaches change, modify, or support their instruction to maximise their interactions with students.



CONCLUSION

This paper reported on the observed teaching styles of 12 tennis coaches in Australia using Mosston and Ashworth's Spectrum of Teaching Styles (2008). The results from the systematic observations undertaken can assist in accurately identifying the instructional practices utilised by tennis coaches. Junior Development and Club Professional tennis coaches in this study use two teaching styles

when coaching tennis. These teaching styles were Command Style-A and Practice Style-B. The predominant teaching style was Practice Style-B. The findings from this study can be used in the design of coach education programs and professional development initiatives and may also extend relevance into sports coaching more broadly. The information outlined in this paper is part of a doctoral study. Further research includes exploring the teaching and learning experiences called canopy designs that are located between each teaching style. Interviewing coaches to reveal insights into how they decide what teaching styles to use and when to use them has also been undertaken. It is anticipated that these findings will present coach education providers with valuable information about tennis coaching behaviour.

Notes:

1 The term teaching style is synonymous with coaching style in this paper.

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Travelling to tournaments: Guidelines for coaches and players

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ITF Coaching and Sport Science Review 2013; 59 (21): 9 - 11

ABSTRACT

This article provides practical guidelines to coaches and young players travelling around the world playing international tournaments. The preparation phase asks for several administrative actions and measurements as to accommodation, vaccination and medication. On arrival players and coaches have to deal with acclimatization, different habits and safety.

Key words: travelling, juniors, international tournaments

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INTRODUCTION

A high level tennis player has to go abroad on a regular basis. He will travel to many countries, in various parts of the world, and often travel through different time zones. Different tournaments can be played, depending on age and level (see table 1 for an overview of the different tournaments).

PREPARATION

In order to be able to enter a country one needs valid identification papers (e.g. passport). In addition, several countries require a visa. The website (www.cibt.nl) mentions countries for which one needs a visa. In general, visa requests require the following: passport, passport photo, and insurance papers. A visa can oftentimes be arranged through a travel agency, or directly at the embassy of the country. For several countries one can even request a visa online. Due to the processing time of visa requests it might be convenient to request an extra passport. This allows the player to leave one of the passports at the embassy while the other is used for travelling to a tournament abroad.

Furthermore, it is wise to have a good insurance coverage. A continuing travelling insurance with world coverage is advisable - in that way one is always covered and it is often cheaper. A health insurance with extra physiotherapy is recommended for tennis players.

HEALTH

It is not always possible to continue the same eating and drinking patterns that are held at home while abroad. That is not a problem by itself, but it is wise to aim for healthy and responsible nutrition similar to what one is used to at home. This means: nutrition that is relatively rich with carbohydrates; contains enough protein and liquids, and is not too fatty.

When using medication, it is wise to consider one's needs and options before the start of the trip. Take enough medication along to cover the whole trip. Keep essential medication in the hand luggage and do not put them in the luggage that will be checked-in. With respect to medication, one is bound to a limit. This limit of hundred millilitres of liquids when travelling by plane does not apply to medication needed while travelling, but does apply to medication that will be used at the place of destination.

The availability of medication abroad differs between countries. For some medications one might need a prescription in the home country, while in other countries medication can be purchased at the local drug store and vice versa.

ITF TOURNAMENTS	TENNIS EUROPE TOURNAMENTS	ATP/WTA TOURNAMENTS
ITF Juniors. All ITF junior tournaments that are being played, you can find on www.itftennis.com/juniors .	Tennis Europe Under 12, 14, and 16.	Men: ATP tournament, challengers, and futures.
ITF men. All ITF men's tournament that are being played can be found on www.itftennis.com/mens . Factsheets, results, and players' information can be found here.	Summer Cups / Winter Cups	Women: \$ tournaments, WTA tournaments, challengers, and futures.
ITF women. Factsheets, results, and players' information about women's tournaments can be found on www.itftennis.com/womens	Summer Cups Under 12 (Tennis Europe Nations Challenge by HEAD)	
Junior Davis and Fed Cup	European (Individual) Championships	
World Junior Tennis Competition 14 & Under		
To be able to subscribe for these tournaments the one needs a Tennis Europe login and IPIN.	To be able to subscribe for these tournaments one needs a Tennis Europe login and IPIN.	To be able to subscribe for these tournaments one needs a login for the ATP player zone.

Table 1. Types of tournaments.

Moreover, it might happen that medication available under the same name has a different composition in different countries (or even contains illegal substances). Therefore, the purchase of medication while abroad should be done with extreme caution and after consulting a tournament doctor.

Another point of preparation is checking whether any vaccinations are required for the country one is travelling to. The player should check at least six weeks in advance whether it is advised to get vaccinations and whether previous vaccinations are still active.

TRAVELLING

Whatever way of transportation used – airplane, bus or train – it often entails long periods of waiting, no proper sleep, and no familiar food. As eating habits and patterns will be interrupted, different products will be consumed at different times. It is wise to try hold on, when possible, to regular times for breakfast, lunch and dinner. Snacks should be brought along and low fat meals should be ordered at the airline company to intake enough carbohydrates while travelling. During a flight people lose relatively a lot of water. Therefore, players need to drink more than they would normally do (water, juice, lemonade or sport drinks). A long trip often also implies sitting for a long time. Stiff limbs, cramp, accumulation of fluids in the feet, and constipation are the result. Regularly getting up or parking the car for a moment can prevent or reduce these symptoms. Take a stroll, stretch the legs, and do some simple stretching exercises.

On destination

When one arrives after a long trip it is not automatically wise to immediately grab a bite to eat and head to bed. Whether it concerns when you eat and go to bed, or what you eat, it is important to make conscious choices. Moreover, heading to bed right upon arrival might lengthen the time it takes to recover from the trip.



It is highly recommended to regain one's own rhythm as soon as possible and adjust to the time of the country. For example, choose fixed times to eat from the first day onwards and try to hold on to those. That prevents one's metabolism from getting upset and unnecessary weight gain or loss. Besides the right (timed) nutrition, especially in countries with high temperatures, it is important to drink enough fluids. The hotter it is the more fluids the body loses and the more should be drunk.

Jetlag

When several time zones are covered in a short period of time, there is a risk of getting jetlagged. A jetlag is a disturbance of the sleep-awake rhythm, which is being regulated by a biological clock in the brain (adjusted according to daylight). The times at which one eats are of importance. In addition, the sleep hormone melatonin plays an important role. This hormone is produced in the brain whenever it is

dark and disappears when it is light. Jetlag has a negative impact on mood and ability to perform.

Symptoms of jetlag:

- Feeling tired, which might be the case up to five days.
- Less energy and concentration.
- Trouble sleeping.
- Headaches.
- Loss of appetite.
- Stomach and bowel problems.

Muscle power, flexibility, and coordination are often negatively affected by a jetlag. In addition, the absorption of glucose is less efficient, negatively affecting endurance.

Preventive measures for jetlag:

- Go on the trip well rested.
- When travelling to the east start a couple of days in advance by getting up and going to bed earlier. When travelling to the west start a couple of days in advance by getting up and going to bed later (jetlag is more common when travelling east rather than west).
- Set your watch before departure to the time of destination.
- When on destination get into the local rhythm as soon as possible.

Traveller's diarrhoea

When travelling to South-America, Africa, the Middle East or Asia, there is a risk of contracting travellers' diarrhoea. About a third of the travellers to these parts of the world contract this disease. It is caused by consuming products which are contaminated with a bacteria or virus. Unfortunately contaminated food cannot be recognised: they look normal, smell normal, and taste fine. Hot tea and coffee, boiled water, soup, bread, butter, soda in bottles, fruits you can peel, all food that has been cooked and served right away, can products, and fresh bread, are considered safe.

Contracting traveller's diarrhoea oftentimes occurs in the first week of one's stay. The most common symptoms are diarrhoea, cramps, bloating, fever, nausea and an "ill feeling".

Important is to take plenty of rest and take in enough fluids. Mineral water, weak tea, soup, bouillon and Oral Rehydration Therapy (ORT) are suitable. A doctor should be consulted when running a high fever, if the diarrhoea continues after a week, or continued dehydration.

Prevent travellers' diarrhoea:

- Wash hands thoroughly after using the toilet or before eating.
- Do not drink tap water in the mentioned continents. Watch out with ice cubes.
- Do not drink milk.
- Do not buy food on the street.
- Do not consume raw vegetables (only if washed with mineral water).
- Do not consume fruit that cannot be peeled.
- Do not consume raw meat, bird, raw fish and raw egg (egg yolk).
- Do not consume non-packaged ice cream.
- Do not consume cold food (salads, cold meat, and chopped steak).

Mosquitos

Mosquitos can transfer malaria or other diseases, such as Japanese meningitis (encephalitis), break bone fever (dengue), yellow fever, and chikungunya. Mosquitos, who transfer the last three diseases, bite during the day and the night. Hence, a '24 hour per day' protection is needed. Players need to wear body-covering clothing (long sleeves



and jeans, socks, and shoes), protect uncovered parts of the body (face, hands, ankles) with anti-insect substances and use a mosquito net.

SAFETY

It is important to take good care of one's belongings. In addition, players should be careful with personal data. When these end up in wrong hands it could not only cost money, but also reputation.

The following tips might be of assistance:

- When travelling by car, make sure to always lock it.
- Keep important possessions with you (passport, wallet, credit card), or use vaults/lockers.
- Be careful with reservations through internet; inquire whether the website is safe. Use a second credit card with a lower limit to make reservations.

- Electronic hotel keys contain personal details. Hence, keep them safe at all times.
- Never walk outside in an unfamiliar neighbourhood or in the dark. It is best if someone of the tournament picks the player up at the airport or train station.
- If the player observes suspicious behaviour, the tournament organization should be informed.
- Do not talk about personal information when calling in a public area.

CONCLUSION

It is vital for players to have an extensive and good preparation. Administrative points of interest are the possession of a passport, the correct visas, and a good insurance coverage.

With respect to health, one should check beforehand about vaccinations needed and be cautious with the purchase of medication while abroad. Consuming contaminated products can cause travellers' diarrhoea. Hence, nutrition requires careful attention. Additionally, measures could and should be taken to prevent mosquito related deceases. Finally, players and coaches should keep their belongings and personal data safe.

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Note

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The great opportunity of university tennis in the USA

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ABSTRACT

This article discusses the great opportunity of American collegiate tennis; it provides all the necessary information to understand the American system and the process to follow in order to get a tennis scholarship. Beginning with the requirements a player must comply with, in order to compete in university tennis, and then the different options throughout the different organizations, this article includes all you need to know in order to apply for a scholarship and how to study and play at an American university. It also includes a list of ATP players who have played American university tennis before becoming professional players, since there are an increasing number of players that experience NCAA tennis.

Key words: university tennis, scholarships, NCAA

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INTRODUCTION

American universities represent a great option for hundreds of tennis players all over the world. They offer a number of benefits that cannot be found anywhere else in the world. Tennis players who play at American Universities can play top level tennis while studying at the university at the same time, training and studying every day and competing during the academic year representing the university. These tennis players end up with a university degree, learn to speak perfect English, get a several year international experience, and high level scholarships to cover most of their expenses in the US.

There are over 1,000 universities with male and female tennis teams, and great differences between one university and another. ITF or ATP ranked players usually end up in the best NCAA Universities where the training structure is almost professional, with several coaches, nutritionists, physiotherapists, and a good budget for coaching and travelling. Other universities are not that good and their facilities are not that good either, but tennis players train daily with 8 team mates and travel to regional or national competitions representing the university.



WHAT ARE THE REQUIREMENTS TO OBTAIN A TENNIS SCHOLARSHIP?

Tennis players who would like to get a tennis scholarship and continue with their academic and athletic development at an American university will have to meet a number of personal, academic and athletic requirements in order to comply with all the existing rules in university sport and in order to get multiple options for their future in the US:

- To have a national or international ranking with the greatest number of competitions and results possible.
- To be an amateur tennis player who has not collected any money nor signed professional contracts.
- To have finished secondary school in their country of origin without having repeated a course.
- To have started university in the US just after having finished secondary school.
- To have passed.
- To complete American admission tests, SAT for American selection, and TOEFL, a test of English as a foreign language.

HOW TO MAKE THE BEST DECISION EACH TIME

Each case is different and each player has to ask himself a number of questions before beginning the process in order to understand his/her sport, academic and financial objectives. Some tennis players want to make a leap into professional tennis after finishing university, so, it is a must to find a university in which tennis is played at top level and coaches are acknowledged as good coaches. Still, many players want to use their talent for tennis to enter the best universities from the academic point of view, where they can continue playing tennis and where tennis is the door to top quality education. Financial targets depend on the family budget for the American adventure, since low income families have to accept any university that offers a high scholarship while others would rather make an investment in order to go to a better tennis or academic university.

Once the players understand their situation and personal objectives, they start communication with the universities and start receiving information from coaches to decide which programmes and which institutions meet their requirements. They neglect those that do not and focus on those universities that meet the objectives necessary for a future in the USA. University search process can last between 6 and 18 months. It is important to take the time to meet the academic requirements and to be within the coaches' radar when they start offering the scholarships available.

TENNIS SCHOLARSHIPS

American university tennis scholarships cover most of the expenses in the US, coaching, travel and material to train and compete. The scholarships range between 40% and 100% depending on different factors, and these scholarships are destined to cover academic fees, study materials, lodging and meals. Very few students get full scholarships since coaches have to allocate the scholarships available among team players. For women, things are different since there are more scholarships and most girls get full scholarships to fund their education in the US during all four years of their careers.

Number of universities with tennis teams

950 universities have tennis teams for young men and over 1,100 for young ladies, all of them competing in different organizations in the USA (NCAA, NAIA, NJCAA). Not only is there a greater number of universities with women teams, but there are also more scholarships, particularly at the NCAA Division I in which most women tennis players have scholarships to cover all their expenses.

MEN'S TENNIS	UNIVERSITIES	SCHOLARSHIPS
NCAA DI	263	4.5 per team
NCAA DII	161	4.5 per team
NCAA DIII	314	0 per team
NAIA	92	5 per team
NJCAA	120	5 per team
Total	950	
WOMEN'S TENNIS		
NCAA DI	320	8 per team
NCAA DII	212	6 per team
NCAA DIII	361	0 per team
NCAIA	110	5 per team
NJCAA	141	5 per team
Total	1,144	

Ivy League Universities (8 highly rated universities) in Division I and all universities in Division III do not have sport scholarships but they do give other academic scholarships that reduce the total cost of education at these institutions. These universities are recommended for tennis players with high academic profile and a high income.

As to Junior Colleges (NJCAA) there are many options with different regulations for the different regions all over the country. In California, Junior Colleges cost less than \$15,000, but they are not allowed to give sport scholarships. Other Junior College Universities with similar costs do have scholarships but they can only have a limited number of international players in their teams (2). One of the advantages of Junior Colleges, apart from the cost, is that admission requirements are less demanding than at NCAA or NAIA, so, they are the right alternative for some athletes who after 2 years can go to 4 year universities with a higher sport and academic reputation and get sport scholarships.

AN INCREDIBLE OPPORTUNITY FOR WOMEN'S TENNIS

Women's tennis is the sport that offers more benefits to international players and one of the sports with more foreign players competing in American university sport. Any player with good national ranking or international experience will have the opportunity to play at a Division I university (as long as she meets the personal and academic requirements). This will imply full scholarship for all 4 years, for all coaching, competition, lodging and education expenses in the US. However, the transition to WTA has proved to be more complicated. A recently published article in the New York Times called "Path to Pros in Tennis Rarely Crosses Campus", highlights how few women have

managed to enter the professional tour. In fact, there are no WTA top 100 players who have played university tennis but there are 5 players among the top 200 and some more with a lower WTA ranking (Source:).

On the other hand, the male system has successfully produced ATP players. Tennis players who have passed through American university tennis (Source: www.collegetennisonline.com).

01 January 2013 ATP Ranking				
NAME	AGE	UNIVERSITY	RANKING	BEST RANKING
John Isner	27	Georgia	13	9
Kevin Anderson	26	Illinois	36	28
Benjamin Becker	31	Baylor	65	38
Michael Russell	34	Miami	92	60
Jesse Levine	25	Florida	104	69
James Blake	32	Harvard	124	4
Rajeev Ram	28	Illinois	131	78
Ryan Sweeting	25	Florida	144	64
Bobby Reynolds	30	Vanderbilt	151	63
Steve Johnson	22	USC	175	165
Rhyn Williams	21	Tennessee	194	190
Arnaud Brugges-Davi	27	Tulsa	198	135

01 January 2013 ATP Ranking - Doubles				
NAME	AGE	UNIVERSITY	RANKING	BEST RANKING
Mike Bryan	34	Stanford	1	1
Bob Bryan	34	Stanford	2	1
Robert Lindstedt	35	Pepperdine	8	5
Mahesh Bhupathi	38	Ole Miss	11	1
Jean-Julien Rojer	31	UCLA	13	13
Marcin Matkowski	31	UCLA	16	7
Scott Lipsky	31	Stanford	25	24
Treat Huey	27	Virginia	36	35
Eric Butorac	31	Gustavus Adolphus	39	17
Dom Inglot	26	Virginia	40	40
Rajeev Ram	28	Illinois	44	33
Ken Skupski	29	LSU	52	44
James Cerretani	31	Brown	63	45
Andre Begeman	28	Pepperdine	64	70
Frank Moser	36	VCU	68	47
Johan Brunstrom	32	SMU	73	31
Robert Farah	25	USC	74	58

Table 3. ATP Men's Ranking for singles and doubles.

CONCLUSION

No doubt, the American system offers plenty of opportunities to train in a professional environment playing against good level players. It also offers the opportunity to study in one of the best places in the world, with over 1,500 universities to choose from.



According to the list of professional players who have studied in the US, the system does not prevent players from meeting their athletic targets, since the system gives them the possibility of choosing a study based career or make their dreams come true on the ATP/WTA tour. However, it is necessary to be careful when applying for a university, particularly when complying with all the regulations existing in the United States.

It is also important to choose very well among all the existing options, knowing that many universities and tennis programmes are very different in terms of the level of their players, the knowledge of the coach, the sport and academic facilities and the scholarships they offer. Therefore, the decision should be made on the basis of professional, parental or coach advice, considering the personal, academic and sports objectives of the players. The American system offers the American adventure to hundreds of players from all over the world who can benefit from an experience that is unique in the world.

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Talent identification and development – The important links between research, systems, parents and coaches

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ABSTRACT

This article discusses the great opportunity of American collegiate tennis; it provides all the necessary information to understand the American system and the process to follow in order to get a tennis scholarship. Beginning with the requirements a player must comply with, in order to compete in university tennis, and then the different options throughout the different organizations, this article includes all you need to know in order to apply for a scholarship and how to study and play at an American university. It also includes a list of ATP players who have played American university tennis before becoming professional players, since there are an increasing number of players that experience NCAA tennis.

Key words: Talent Identification, development, coach education

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INTRODUCTION

In many sports talent identification (TI) and talent development (TD) of young athletes has become important. Tennis is no exception with many tennis federations, academies, clubs and management agents assuming TI to be a necessary aspect of their role. Large sums of money are invested in trying to identify and then develop talent in young players. The process involves increasingly younger children, some as young as 6, 7 or 8 who are part of Tennis10's programmes.

At the same time, several authors (Coyle, 2009; Gladwell, 2008; Syed, 2010) have published popular 'science' books that indicate TI to be a simple process. They suggest it consists of finding the right players and then training them hard (up to 10,000 hours) over many years (at least 10) so that they become successful adult performers. However, in tennis, as in other sports, many players selected at a young age do not achieve adult success. The reason could be that the 'wrong' players are identified or that the development process is inappropriate for different reasons. We know many tennis organizations and systems try to identify talent in young players through tests or rankings – and then develop that 'talent' through intensive (deliberate) practice and frequent competition with rankings determining progress even before puberty. Furthermore, these TD processes often make other activities, including other sports and education, secondary in importance.

TALENT IDENTIFICATION RESEARCH



As this simple two step approach to TI gains credibility and momentum, a vast amount of academic research has collectively shown that, far from being a simple process, TI is a highly complex one (Pankhurst & Collins, 2013). As an example, research indicates that the wide range of inter-related issues involved in player development are such that no young player develops at the same time or in the same way as another. Research indicates that neither testing nor rankings are able to identify talent in young players and hard work, while important, is only one part of multiple TD processes. In addition, increasing evidence shows that many athletes develop and achieve success in ways other than TI. For example, talent transfer programmes (where skills learned in one sport are transferred to another) are proving to be successful. High quality programmes that involve many players steadily developing skills over several years before being identified as talented at 13 or 14 years of age are also possible. While tennis remains a late performance sport with peak performance in the early to mid-twenties, the need to try and find 'talent' at 6, 7 or 8 years of age must be questionable.

Research suggests that a high quality relationship between research, TI processes and the system (federations, clubs, and academies) is very important for a successful TI programme. It also indicates that this is not the case. The three elements need to complement each other with research contributing to the knowledge base of the system that then constructs effective practice in the field. In reality, it appears that many tennis systems either ignore or are so unaware of the research that they are delivering ultimately ineffective and inefficient programs, where very few players actually achieve the adult success for which they were identified.

There is more research that shows there are three key groups of people who contribute in almost equal measure to the successful development of a young athlete in any sport: the system, coaches and parents. An excellent relationship between these three is known to contribute to athlete success (Gould et al, 2004). For a sound working relationship each group must first respect each other's role and then understand the complexity of TI. Parents and coaches are essential to the TI process organised by the system, but research shows that relationships are often fractured.

As a coach it can, of course, be difficult to access the vast amount of TI research. The simple two step TI process adopted by many tennis federations and academies is appealing, perhaps because it is easy to follow. The outcome of both these factors means coaches

assume current TI practice is the right practice. However, in order to help coaches find relevant information, it is necessary to split the TI research into different topics, and give each a number of sub topics. Approached in this way, the complex issues become more straightforward.

TALENT IDENTIFICATION AND DEVELOPMENT ISSUES

The first major research topic is talent identification. Coaches know from experience that TI means selection but big questions arise. Is there a right age to select and how should selections be made? From these two questions come others: Is it a good idea to use tests and do tests work for young children (Lidor & Ziv, 2013)? What tests are valid because they link to tennis performance as an adult? Do rankings before 14 or 15 years of age mean anything? What are the outcomes of selecting from rankings that coaches should know? Often selection in any form leads to early specialisation in tennis. Is that a good idea? There is a great deal of research on just that topic (Pediatrics, 2000).

Understanding the research on selection and early specialisation, leads the coach to the second major topic of athlete development. This topic crosses into both TI and TD. Much of the information comes from the extensive child development research in the sport environment (Beunen & Malina, 2008). A sound knowledge of the complexities and of growth, development and maturation helps coaches understand that athlete development impacts both their coaching practice and the young player's performance while moving from childhood to becoming an adult.

Talent development has two major research topics. One that strongly impacts the coach is the research on practice (types and volume at different ages) and the use of deliberate practice in TD. The other is the research on junior competition (its role and again type and volume at different ages) and the relationship of junior competitive success to adult success. Competitive stress in junior players and what causes it is another complexity of the junior competition research (Ecklund & Gould, 2008; Dweck, 2008).

Role of the Stakeholder

A fifth research topic cuts across TI and TD and concerns the role of the stakeholders: the system that sets policies and actions in TI and the parents and coaches who become part of the process. The research in this topic is much less than in the other topics, but still indicates the complex nature of its contribution to TI. It includes research on the role of coach education and development in coaching talented players. The research in each of these five topics can be broken down into sub topics that make it much easier for coaches to understand the research base that exists. The table below shows the five topics and their sub topics.



KEY TOPICS IN TALENT IDENTIFICATION AND DEVELOPMENT				
Sport specialisation and selection	Practice	Athlete development	Junior and adult success	The role of the stakeholders (System, Coaches and Parents)
Sub Topics				
Early and late performance sports	Concepts/ understanding of deliberate practice	Long term development growth	Purpose of competition at different ages.	System policies and priorities
Early specialisation	Volume/type of practice at different ages/ stages	Chronological/ biological age	Chronological age based competition.	(Federations, academies, management companies)
Understanding talent and potential	Coach led practice vs self practice	Psycho-social and physio-mechanical development	Competitive success/ rankings.	Resource management
Capacities of a sport	Game based coaching	Goal setting	Relative age effect.	Coach role, expertise and knowledge
Selection and testing	Purpose of practice	Quality of coaching environment	Volume / type of competition,	Coach education
The role of luck, place of birth and opportunity		Parent/player relationships	Competitive stress.	Role of parents
Generalised or specific training				
TI processes				

Table 1. Key topics in talent identification and development

CONCLUSION

This article has shown that talent identification is a complicated and long process. There are many areas of interest to consider and identifying players at an early stage does not necessary guarantee success. However, in studying these major areas of TI research and their sub topics, coaches can begin to understand the complexity of TI and assess their knowledge of the different issues. In the end these knowledgeable coaches will be able to have an impact on the current thinking of talent identification and, in turn, be able to improve the development of young tennis players.

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Coaching children with autism: Insights from Australian coaches

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ABSTRACT

This paper reviews an Australian-based coaching program for children with autism. Experiences of coaches are discussed and implications for coaches interested in working with children with autism are highlighted.

Key words: children with autism, coaching

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INTRODUCTION

The coaches were nervous. They had just completed a coaching course for the Tennis Australia MLC Tennis Hot Shots program and had been offered the opportunity to coach a group of children with autism. Were they equipped to coach this special population of players and on what should they focus to address these players' needs? These were some of the questions raised by the coaches in response to this new challenge. In this paper the experiences of these coaches will be shared and based on these experiences, guidelines provided for other coaches who might as a result be encouraged to include children with autism in new or existing programs.

Autism

Autism is a complex and pervasive developmental disability that typically appears during the first three years of life and is the result of a neurological disorder that affects normal functioning of the brain, thus impacting development in the areas of social interaction & communication skills. There is no known cause of autism with statistics indicating that 1 in every 150 children is diagnosed with this condition (Autism Society of America, 2012).

THE TENNIS PROGRAM

Twelve (7 female and 5 male) third year Physical Education students at Victoria University in Melbourne, Australia, enrolled in an Adapted Coaching Unit. In the first week of the unit, Tennis Australia (the governing body of tennis in Australia) conducted a 3 hour training session that was designed to equip participants with the skills and knowledge required to deliver its recently launched national MLC Tennis Hot Shots program.



This program uses modified equipment (including low compression balls, short racquets and small net) and uses a small playing area. All participants were assessed as competent at the completion of the course.

A Special Secondary school for children with autism in the local community was approached to see if it would like tennis coaching delivered at its school. It was explained to the school that a group of Physical Education students had recently completed a tennis coaching course and were looking for 'work experience' as part of the requirements to complete the Adapted Coaching unit at Victoria University.

The offer to the school was quickly and gratefully accepted! Arrangements and plans were then put in place for a series of 10 lessons to be conducted over 12 weeks (with a break of 2 weeks for school holidays). The sessions were to be conducted on Wednesdays 2.15 – 3.15pm.

The format of the sessions followed a regular routine starting with a couple of group warm-up activities (e.g., 'Octopus', 'Follow the Leader', Relay games) for those keen to participate. It was not mandatory for all children to participate but all were warmly encouraged to do so. The warm-up activities were followed by a one-on-one session with a coach and an assigned child. Pairings were done in consultation with the school principal and addressed any special requests (e.g., one girl's preference to work with a female coach). In total, 12 children with autism (6 boys and 6 girls) with autism were selected by their school to participate. Their ages varied from 10-12 years of age. The children varied in terms of their communication and social skills and sporting interests.

In preparation for the sessions, coaches prepared a weekly lesson plan that was discussed with the Adapted Coaching unit co-ordinator (herself a former professional tennis player and qualified Tennis Australia Club Professional coach). At the end of each session, all coaches participated in a debriefing session in which they shared experiences of what 'worked', what challenges were faced and how these were addressed and what (if any) adaptations or modifications were made to lesson plans during the course of the lesson. At the end of the 10 sessions all coaches completed a questionnaire that asked them to reflect on their experiences.

EXPERIENCES OF COACHES

Without exception, all coaches reported the opportunity to coach children with autism had been a most rewarding, enlightening and/or positive one. This was not to say that the opportunity had not been uneventful, challenging or demanding at times. Yes, it had been for many of the coaches but overall they were most grateful for the experience and they felt it would 'stand them in good stead' for all

future coaching roles. Coaches reported feeling more confident, and having higher self-esteem, as a result of the program.

Guidelines for Coaching Children with Autism

Based on their experiences, coaches in the program offered a range of suggestions for others who might be interested in coaching children with autism including:

Get to Know Your Player

- No two children with autism are exactly alike. Each child has his/her unique set of interests, abilities, personality and potential. Coaches should make a conscious decision to get to know the child, and specifically, what he/she likes to do, has an interest in and wants to learn. It is from this starting point that coaches can develop relevant, meaningful and enjoyable activities that will regularly engage the child.
- A starting point to gauge the interests, goals and abilities of a player is to communicate directly with the player. Ask him/her to tell, draw or show you what he/she likes to do. If additional information or clarification is required, then coaches can ask the child's parents, carer or support person and/or observe the child's behaviour.



Pay Attention to Behaviour

- Coaches should not necessarily expect a child with autism to be able to easily verbalise their feelings, thoughts and emotions. They are often demonstrated via a child's behaviour. For example, running away from an activity will often indicate a child's frustration or boredom with that activity. Coaches should look for clues in a child's behaviour to gain an understanding of that child's reaction to various activities. Often behaviour is a more reliable way of knowing what the child might be thinking than the words he/she uses.
- Facial expressions, body language and/or gestures can also be an effective means of communication for a child with autism. Equally, coaches should be mindful to adopt these non-verbal means of communication rather than simply relying on verbal communication.
- Coaches should avoid specific 'triggers' (e.g., being near balloons or loud noise) that may cause anxiety or stress for a child with autism. Coaches may become aware of these in the course of their sessions, or alternatively, can consult with the child's family, carers or school staff. Avoiding or reducing troublesome 'triggers' can facilitate a productive session for a child with autism.

Build on Routines and the Familiar

- Structured and predictable routines, activities and environment work well with children with autism. Coaches should therefore be aware of the need for 'sameness' and structure when planning and conducting sessions. For example, starting a session with a regular warm-up activity followed by a favourite game is generally conducive to positive engagement. If a break-time (for a drink, snack or rest) works well for a child, then this can become part of a regular routine to incorporate 'time-out' during a session. Ending the session with a familiar routine (game or activity) can help signal the finish of the day's tennis program.
- If any changes are anticipated (e.g., school holiday break from the tennis program) then it is best to prepare the child over several weeks leading up to changing the routine. This can be effectively

achieved with the use of some visual material/cards/scripts that depict 'change' and provide a visual schedule of activities to come. Coaches can repeatedly refer to these visual items in the weeks leading to a change in the routine thereby consolidating understanding and reducing anxiety and stress for the child.

Find Own Space and Area

- Minimising or reducing extraneous stimuli and distractions (e.g., noise, other players and direct sunlight) can be effective in gaining, and maintaining, a child's attention and interest. Finding a quiet and uncluttered area can be most conducive to engagement. For example, a coach may face a child away from others in the group or 'partition off a special area' solely for the use of that child. Given many children with autism often prefer to be alone and avoid large groups (The National Center on Physical Education and Disability, 2012), one-on-one sessions with a coach in a demarcated area away from distractions can work well.

Show and Less Tell

- Using demonstrations and visuals is generally much more effective than using verbal instructions. Verbal instructions should be minimised or avoided as children with autism are often visual learners and greatly benefit from mimicking and following visual cues including demonstrations and cue cards. In these instances coaches should be mindful to execute their demonstrations well and use preparation time to develop cue cards, photos and pictures that effectively express 'the thousand words' they might have otherwise said.
- At all times any verbal communication needs to be clear, concise and consistent. To this end, it is useful to provide explicit and positive direction (e.g., "you need to walk" rather than "don't run") using a calm voice and assertive tone. As noted above, appropriate gestures, facial expressions and body language can greatly assist to communicate and reinforce one's message.

Incorporate Restricted and Repetitive Patterns of Behaviour

- Generally children with autism have restricted and repetitive physical patterns of behaviours such as spinning, rocking and hand-flapping (The National Center on Physical Education and Disability, 2012). Coaches might endeavour to work with some of these behaviours. For example, if a child repeatedly throws objects, then involving that child in a game of throwing a ball at a target can be effective in helping to learn a service action and directional control.

Be Your Player's Eyes and Ears

- Coaches must at all times be vigilant to potential safety risks. Providing a safe environment has to be the number one priority of any coach. Not only is it a coach's duty of care to do so but children with autism may not be aware of potential dangers or risks to themselves and others. Under these conditions, coaches must be on alert to consistently facilitate a safe and fun learning environment.

Attend to the 2 'Ps' - Preparation and Planning

- Lessons tend to run much more smoothly when attention is devoted to thorough planning and preparation beforehand. This involves consideration of what equipment is required for the planned set of activities, how much time should be allocated to the various activities and contingency plans for the 'unexpected' (e.g., lack of engagement from the player, all planned activities are completed quickly or it starts raining). It is best to plan for the 'unexpected' as it often occurs! Coaches can effectively do this by giving thought to, or discussing with others, what range of scenarios could possibly occur during any one lesson and having a contingency plan ready.

- There is no doubt that having equipment ready and visuals and activities planned not only minimises the time a child has to wait but also reduces uncertainty and anxiety for that child. Transitioning between activities (e.g., warm-up game to hitting on the court) tends to go smoothly when change is planned and timely.

CONCLUSIONS

The experiences of the coaches described in this paper highlight a number of key coaching principles that apply when effectively coaching any person or group (Martens, 2004; Young, 2010). Coaching children with autism appears to be less about teaching technique and giving instructions and more about a coach's mindset and approach. Making a difference in someone's life is certainly a possibility when a coach embraces and relishes the opportunity to offer inclusive coaching to all, including children with autism. Just ask the coaches in the Victoria University program. It was such good fun for everyone!

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Psychological variables that impact the performance of junior tennis players

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ABSTRACT

The aim of this paper is to discover the level of certain psychological variables of a group of junior tennis players, in order to set a path for the development of their psychological training. The research was made on 53 male junior tennis players from 8 clubs in the Murcia region, with an average age of 16.81 ± 1.17 years. The players completed Gimeno et al's Sport Performance Psychological Characteristics Questionnaire (2001). Findings show that most players present high values in stress control categories, impacting on performance assessment and team cohesion, while a group showed low values in the categories of motivation and mental skill.

Key words: Tennis, psychological status, performance

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INTRODUCTION:

Sport performance is the result of the integration of the player's physical (strength, speed, endurance, balance, and coordination), technical (command of the sport movements), strategic-tactical (knowledge of the sport strategies, tactical decisions) and psychological skills (keeping concentration, to self-regulate the arousal levels, self confidence or cooperation with the rest of the team) (Williams & James, 2001).

Even though athletes can differ at the physical, technical, and tactical-strategic level, at elite level they do not differ so much, and the command and management of psychological skills is more relevant when explaining their performance ups and downs or different performances at different times. Thus, the psychological aspect becomes very important for any sport activity, and the knowledge of these variables becomes also very important to understand how they impact the athlete's performance. They can then be trained during training sessions and competition to optimize both their game and their results (Campos, 1996).

Many researchers have tried to understand if these psychological variables really have an impact on top level athletic performance, and if so, to what extent (Ezquerro, 2008; Ruiz, 2008). This paper considers a group of junior tennis players, and discusses their psychological variables and what they are (Gimeno, Buceta & Pérez-Llanta, 2001):

- Stress control includes two categories, the first one has to do with the characteristics of the athlete response in relation to training and competition demands, the second one, considers those potentially stressful situations that can trigger stress and in which control is key to reduce its possible damage.
- Influence of assessment on performance: Characteristics of the athlete response to situations in which they evaluate their own performance or think they are being evaluated by those who are significant for the athlete.
- Motivation: Athlete interest for continuous training and improving, setting and working on targets, the importance of sport as opposed to other activities and aspects of the athlete life and the cost/benefit relationship of the activity.
- Mental skill: It includes psychological skills that can favour sport performance.
- Team cohesion: It refers to the athlete integration in his sport group and it includes the interpersonal relationship with the other members of the team, the level of satisfaction when training with their team mates, the individualistic attitude towards the rest of the group and the importance they give to "team spirit".

Many authors have evaluated the level of these psychological variables in sports like football (García, Sánchez-Alcaraz, Gómez & López, 2012; Lavarello, 2005), judo (Gimeno et al. 2007), basketball (García, López, Borrego, Sánchez-Alcaraz & Gómez, 2012) and tennis (Pérez-Llanta, Buceta, López de la Llave, Gimeno & Ezquerro, 2001).

Thus, the aim of this research is to determine the level of certain psychological variables (motivation, stress control, team cohesion, impact of the performance and mental skill evaluation) in tennis players, so as to set certain guidelines for the direction in which to develop psychological training.

METHOD

Sample

The research was conducted on 53 male junior tennis players from 8 clubs in the Murcia Region, with an average age of 16.81 ± 1.17 years. All players had played tennis for over 3 years and trained an average of 8.56 ± 2.34 hours a week.

Instrument

The players completed Gimeno et al's Sport Performance Psychological Characteristics Questionnaire. (2001), it consists of 55 items that measure stress control variables, the impact of performance assessment, motivation, mental skill and team cohesion.



Procedure

The procedure used for the administration of the questionnaire consisted of personal visits to six tennis clubs, always bearing in mind that responses are anonymous and all questions must be answered. Finally, SPSS 20.0 for Windows was used for the statistic data.

RESULTS AND DISCUSSION

Table 1 shows the descriptive statistics of each variable in the questionnaire. Findings indicate that players showed higher values in the following categories: stress control, impact of performance assessment and team cohesion, and lower values in motivation and mental skill that coincide with García et al. (2012), for a group of basketball players.

Figure 1 also shows the levels (high, medium and low) presented by the players in one of the psychological variables. Over 50% of the players showed high values in performance assessment (70,6%), stress control (64,7%) team cohesion (17,6%). On the other hand, the lowest values that players presented were related to the mental skill category (41,2%). These values coincide again with those presented by García et al. (2012) in their research with basketball players.

VARIABLE	SCALE	MEDIA	TYPICAL DEVIATION
Stress control	0-80	56.00	9.07
Influence of performance assessment	0-45	31.23	5.83
Motivation	0-31	18.94	3.13
Mental skill	0-34	18.58	3.20
Team cohesion	0-24	19.84	2.78

Table 1: Levels presented by the players in each psychological variable.

CONCLUSIONS

The psychological factor is key for the success of sport practice. This paper studied the level of psychological variables (stress control, impact of performance assessment, motivation, mental skills and team cohesion) in junior tennis players.

Analysis of findings shows great deficiencies in the dimension of motivation and mental skill in particular, different from stress control skill variables, team cohesion and impact of performance assessment, whose values were very high.

Still, for a better understanding of this phenomenon, we suggest studying psychological variables by means of qualitative research to get a deeper knowledge of this issue. This paper concludes stressing the need and importance of the sport psychologist for athlete development in general, and tennis players in particular.

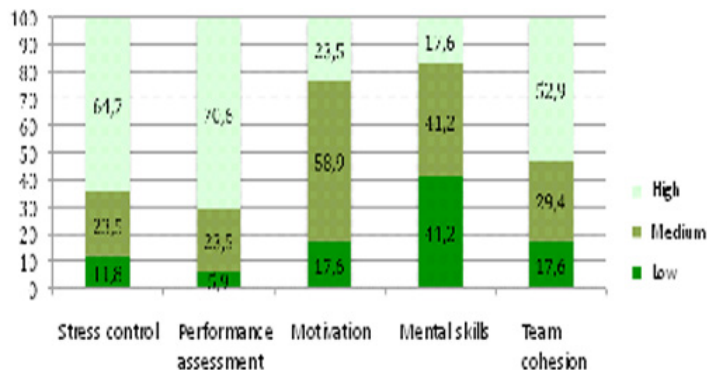


Figure 1: Levels presented by the players in each psychological variable.

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Using apps to improve coaching: The Tennis Australia Technique App

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ABSTRACT

This article will describe how using apps can improve your coaching, detail the benefits of video analysis and explain the functionality of the Tennis Australia Technique App. It will also detail how the appropriate skill development and technique information for Red (5 – 8 years), Orange (8 – 10 years), Green (9 + years) and Yellow stage players can be communicated to players of that age.

Key words: apps, coaching, technique, analysis

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INTRODUCTION

In 2012, consumers spent on average two hours each day using apps, an increase of 35 percent over last year. There are in excess of 800,000 Apple Apps and 700,000 Android Apps available to consumers and this number will continue to grow in 2013. Apps are easy to use, easily accessible, inexpensive and available on a variety of platforms. There are apps available for everything imaginable, with an average retail price of US \$1.58. Apps for teaching and education are the second most popular category (behind games). Many video analysis apps exist for sport, including tennis: Ubersense, Coaches Eye, Tennis Coach Plus HD, SwingReader, SwingPlane HD, MiiMOVE, Excelade and now the Tennis Australia Technique App.

The use of innovative analysis tools such as apps can improve coaching, engage players and demonstrate that the coach is up to date with modern technology. Video analysis provides a powerful tool that gives the player evidence of where they are at technically and also allows for improvements to be tracked over time. It also allows for information to be shared and communicated via popular social media.

The benefits of using apps to improve coaching

The eye can only process about 10 frames per second and perceive them individually yet the use of the built in cameras in mobile devices allow a coach to capture 25 images per second. Capturing 25 images per second combined with the ability to pause, advance or go back frame by frame and zoom in is a significant advantage in analysing a player's technique because you can detect detail that you otherwise would not.

We also know that many learners prefer a visual learning style compared to an auditory learning style (VARK), these findings endorse the use of video analysis that can be easily implemented via video analysis apps on mobile devices (Apple and Android).

Some of the most important benefits of using a video analysis app are that it creates a record of performance of the stroke so that improvement can be tracked over time. Likewise, regressions in technique can be easily identified, recorded and presented to the player to get them back on track quickly.

The use of video analysis apps can provide evidence to players and parents that they are improving. The use of innovative apps with many annotation tools and functionality is engaging and promotes the coach as up to date with modern technology and can be seen as a value add benefit. One of the most critical benefits is that these types of apps provide real time analysis and feedback that can be provided to the player/coach, often opening up previously untapped communication channels between all of the stakeholders involved in the player's development.

TENNIS AUSTRALIA TECHNIQUE APP FUNCTIONALITY

Record vision

Vision can be recorded on the device (e.g. iPad or iPhone) easily via the record button. It is recommended that you position yourself so that the player being filmed fills up most of the screen and that you are perpendicular (at right angles) to the component of the stroke you wish to analyse.

Compare

One of the most common and informative functions of the Tennis Australia Technique App is the ability to compare your player side by side. This functionality allows the coach to comment on the differences (and similarities) of the player's stroke and the correct technique. Additionally it is valuable and motivating for the player to compare earlier versions of his/her stroke to view improvements. The Tennis Australia Technique App also has an overlay function where the transparency can be altered for the players being compared.

Analysis tools

The Tennis Australia Technique App has a number of annotation tools to highlight your analysis. The ability to draw lines, measure angles and insert shapes can be used effectively to highlight your analysis. Additionally, the ability to insert text, take screenshots and provide comments via the Voice Over function add to the analysis options available to the coach. It is recommended that a systematic observation of the player's technique occur so that the most appropriate intervention is offered. The use of the annotation tools should focus on primary flaws or serve to reinforce positive aspects of the player's technique.

Learn mode

The Tennis Australia Technique App has model strokes (Forehand, Double-handed backhand, Single-handed backhand, Backhand



Image 1: The single-handed return of serve comparison of an Orange stage (top) v Green stage (bottom) player.

slice, Forehand volley, Backhand volley, Overhead, Serve, Forehand return of serve, backhand return of serve and Double-handed return of serve) for players of all stages: Red (5 – 8 years), Orange (8 – 10 years), Green (9 + years) and Yellow ball . The Learn mode videos can be used as stand-alone videos to present ideal technique to a player or within the Compare mode via side by side or overlay functionality.



Image 2: A screen grab of some of the annotation tools to highlight the coaches analysis.

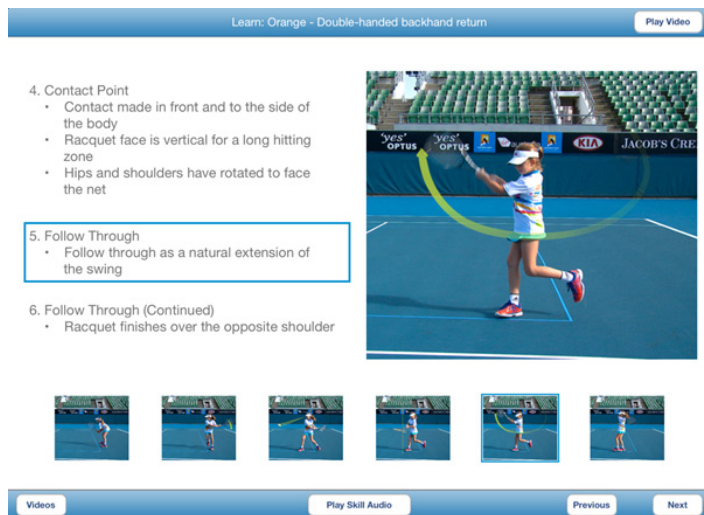


Image 3: The Learn mode information for the double-handed backhand return of an Orange stage player

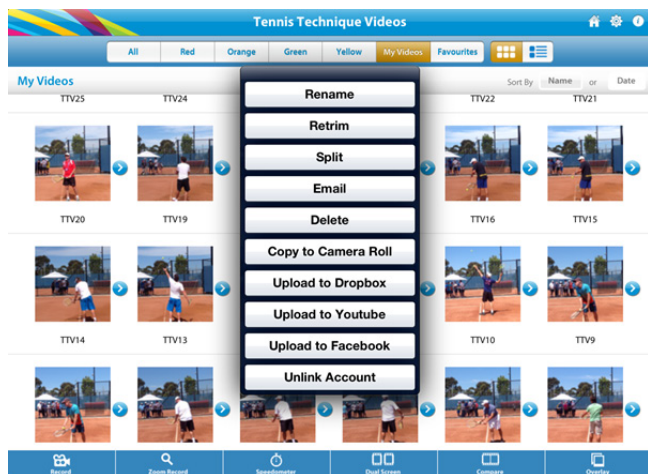


Image 4: The management and communication options for your files

The Learn mode offers the stroke fundamentals for the preparation, backswing, forwardswing, contact and follow-through for each of the strokes. The information and detail provided is relative to the stage of development. For example, compare the information given for the serve in the Red stage (5 – 8 years) and a Yellow ball stage (Table 1).

SERVE	RED STAGE (5 – 8 YEARS OF AGE)	YELLOW
Ready	Assume a basic side on position. Grip: #3 Eastern forehand grip to a #2 Continental grip.	Serving stance – within a range of acceptability. From ‘feet perpendicular to the net, front foot angled towards the net post and back foot behind the front, parallel to the baseline shoulder width apart to a slightly closed stance. Non hitting hand supports the ball and throat of racquet. Grip: #2 Continental.
Backswing	Release ball toss at approximately eye level.	Able to achieve a coordinated throwing action. Tossing arm raises up towards the net post and ball released at about eye level. Palm of hitting arm remains down facing the ground. Rhythm: High point of toss equals high point of racquet (often called ‘trophy’ position). Transfer of body weight onto the back leg (Back knee flexion at 110° ±10°).
Forwardswing	Elbow bends to initiate coordinated over arm throwing motion.	Elbow bends to initiate throwing motion. Extension of elbow up to impact. Racquet follows an upward swing path. Rhythm: Ball toss drop synchronised with leg drive up.
Contact Point	Achieve a basic coordinated throwing action.	Contact points vary due to the type of serve executed. Eyes focused on impact point. Shoulder over shoulder rotation evident. Shoulders rotate parallel to the net.
Follow through	Follow through as a natural extension of swing.	Achieve a balanced recovery.

Table 1: Serve content for Red Stage (5 – 8 years of age) and Yellow ball player.

Time Delay

The Time Delay function allows the coach to delay the action (by a range of 5 to 30 secs) so that players can view themselves and get immediate feedback. This function lends itself ideally to group sessions or squad sessions where the coach is using a traditional drill or a Spanish style drill with a pre-determined number of shots. An example could be the coach asking the players to highlight or emphasise leg drive on ground-strokes. Having completed the stroke/drill, the replay is delayed by a pre-determined length of time, to enable players to observe their performance against the goal of using leg drive in ground-strokes.

Manage and communicate your files

The Tennis Australia Technique App has the functionality to easily manage and communicate your files. Your files can be named and renamed, trimmed, split and copied to the camera roll. Files can be communicated via email and uploaded to Facebook, YouTube and Dropbox.

This functionality is very useful to the coach. The coach is no longer required to transfer files from a video camera to his computer, open an analysis program, import the files and then analyse them. Consider a young player having a lesson with her coach, the coach can analyse the performance and immediately email to the parent who is watching the session from the side of the court and wants to view it on his/her phone, right there and then.

CONCLUSION

Players are becoming increasingly savvy with the use of technology. Coaches need to keep pace and the use of video analysis apps (this article featured the Tennis Australia Technique App) can improve coaching, especially as many learners are visual/kinaesthetic learners. Additionally, the files captured can motivate and engage the player even more as they have evidence of their improvement. Many annotation tools exist to assist the coach with their analysis and these can be easily communicated to many stake-holders. The Learn mode provides model strokes and content for all stages (ages) and all strokes. This allows the National Sporting Organisation (Tennis Australia) to provide a technical resource to many coaches and players.

So what's next? What other apps can improve coaching? Additional suggestions put forward include a Coach Activities App, Tactics App, Pro Player App, Hot Shots App, FPMS App, Cardio Tennis App, Movement App, Charting App, Strength & Conditioning App, Annual Plan App, Tennis in Schools App, Psychological Skills App, Competition Formats App and Tournament Formats App.

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Exercises to learn and correct the serve

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ITF Coaching and Sport Science Review 2013; 59 (21): 19 - 21

ABSTRACT

This article presents different exercises aimed at learning and correcting the serve. It explains key aspects of the serve such as the arm external rotation and the flexibility on the extension of the back. It also proposes exercises that can be used for the psycho-motor stage, for the preparation stage, for adults, and for prevention and warming up.

Key words: serve, exercises, learning

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INTRODUCTION

After having tested and evaluated a number of players over a long time, I consider that primary motor learning is key. It prevents the future player from having important limitations in this movement and reduces the risk of injury when working on the serve. We must consider the movement of the shoulder joint, but it is necessary to differentiate if it is a throwing or an impacting movement.

For a long time we said that Argentinians did not serve well because their primary education did not include enough sports that involved throwing. This is partially true, but we must also consider whether we are talking about movements that involve throwing objects (baseball, basketball) or movements in which the shoulders have a resistance role (swimming, volley ball, etc.).

I consider it very important, from the psycho-motor stage from mini tennis up to the professional or adult stage, to perform movements that are consistent with the motor action that we expect for the player in the future.

The exercises must be related to the sensitive motor stage the child is in, and carried out with the alternative element that favours the correct motor print. This will allow the right transmission from the racket to the tennis ball.

Before going straight to the exercises, I would like to make a brief introduction about the importance of the external rotation of the arm, and the flexibility in the extension of the back. Bob Prichard has written a very interesting article on the subject.

External rotation of the arm

Recent research shows that an important factor always present in all good servers is that their external rotation of their arm is noticeably greater than that of other players.

This knowledge will help us to work in order to improve this aspect from early stages so that the player can reach his/her maximum potential.

Flexibility in the extension of the back

This aspect is not vital to service performance but it cooperates with the external rotation of the arm, and it can be developed by stretching the abdominal muscles.

It is important to use alternative working elements like elastic bands, medicine balls, American football balls, different types of balance platforms, etc.

We must have a whole set of different exercises, since each individual has his/ her peculiarities and it is not always possible to use the same approach to solve a problem.

The exercises we are going to present can be classified as follows:

1. Exercises for the psycho-motor stage.
2. Exercises for the preparation stage.

3. Exercises for the competitive stage.
4. Exercises for adults.
5. Preventive and warming up exercises.

EXERCISES FOR THE PSYCHO-MOTOR STAGE

At this sensitive stage of the child's development, the exercises related to the serve motor movement aim at working with the primary print of a movement that requires a lot of coordination of the different levers. This movement will have a fundamental role in the game. At this stage we must dissociate and target the development of the different skills that are needed for the serve.

We must work on the following serve skills:

1. Balance

Balance is an element of motor skills that evolves with age and is closely connected to the maturity of the central nervous system. At the age of four the child can improve their dynamic balance and at about seven they can keep their balance with closed eyes.

2. Jumping

This motor skill in which the body is in the air because of the impulse generated by one or both legs, requires balance and coordination. No doubt, jumping is a more difficult skill than running; it implies more vigorous movements, in which the time in suspension in the air is greater.

3. Throwing

We must consider the relationship between this technical movement and the serve. When throwing, the non dominant arm is involved (to toss the ball). The types of throwing we find in beginner children include:

- Over the shoulder throwing.
- Lateral throwing.
- Back- forward throwing.

We are going to focus on the forward throwing only.

4. Hitting

The skill of hitting implies using the dominant arm with an object (the racket) to hit another (the ball). It is necessary to involve the technical movement of the serve, a complex movement in itself. Hitting skills take place in different planes and in very different circumstances: over the shoulder, laterally, back -forward, and with a racket. The success of the stroke will depend on the size, weight, adaptation of the hitting object to the hand and the characteristics of the object to be hit. This success is also conditioned by the position of the core and its limbs before and during the hitting phase.

When doing these exercises it is very important for the child to keep the axis of his head in line with his spine without leaning his head sideways.

EXERCISES FOR THE PREPARATION STAGE

During the first stages, it is very important to work with dissociation exercises of the lower and upper parts of the body. We must try to make the child keep his balance and throw his head in line with the longitudinal axis. For this reason, it is key to work with elastic bands to balance the scapula.



Photo 1. Exercises with elastic bands.

Exercises for adults must be fundamentally driven towards injury prevention and in second place towards stroke performance. If there is no injury, we must make the adult work his shoulder joint freely from his body, since this will help him to generate more acceleration at impact.

PREVENTIVE AND WARMING UP EXERCISES

The exercises proposed here are shown in the next photos.



Photo 5. Before starting the exercises, try to find an anatomic position to work.

Photo 2. Exercises on unstable platforms.



Photo 6. Work to align the longitudinal axis of the leg.



Photo 3. Exercises with an American football.



Photo 7. This exercise uses bands to work on the scapular stabilization to prevent future injuries.

EXERCISES FOR THE COMPETITIVE STAGE

When working with professional players, I always work with each player's coach, since it is the coach who must understand the mechanism of the movement and the importance of not going back to the previous motor print. It is always convenient to look for a concrete improvement by means of photo or video analysis in order to get a specific control of the problem presented by the player and the coach.

EXERCISES FOR ADULTS

The exercises proposed for adults are shown in the photos.

Photo 8. Works on the rotation of the arm in relation to the shoulder, in the antero posterior axis.



- Nimbleness.
- Correction of the movement with medicine ball.
- Balance.



Photo 9. This exercise is strongly related to the previous one, but the rotation of the shoulder with the arm is like a "lateral windmill".



Photo 10. The articulation must try to achieve maximum dissociation between the arm and the body, to achieve an excellent warming up and a future nimbleness.



Before starting to serve freely, I always recommend to serve reducing the supporting base working on balance and, then, after 10 or 20 serves, start serving freely.

CONCLUSION

The serve is a complicated motor movement which can be improved in many ways. This article shows how some of the components of the serve can be worked with simple exercises that are very important to improve the action of the serve. But, the serve is not a stroke that only juniors can improve, adult tennis players can also do so. The serve is key and fundamental for success in a tennis match, thus, to include these exercises in the coaching programmes for players of all levels and ages can really help them to improve their level and satisfaction when playing tennis.

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Photo 11. Working with bands tries to get the feeling and balance of the muscular groups involved when raising the arm.



Photo 12. Working with a medicine ball (in which the weight depends on the age and bio-type) involves all the body chain.

Photo 13. This exercise improves the dissociation of the lower body by means of a twist.



Photo 14. Before starting to use the racket, we make the complete movement with a medicine ball.

Recommended books

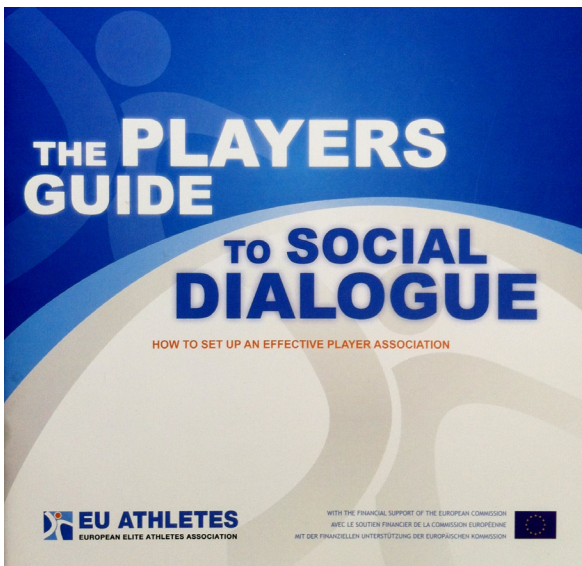
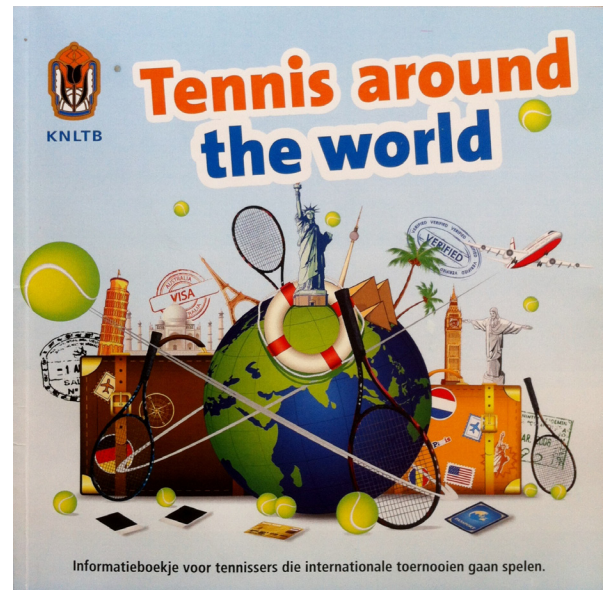
TENNIS AROUND THE WORLD – INFORMATION FOR TENNIS PLAYERS ON HOW TO PLAY INTERNATIONAL TOURNAMENTS

Author: Babette Pluim, Claudia Smit, Dorian Driessen, Sandy Oskam, Charlotte van der Heijden. Language: Dutch & English. Type: 39 page booklet. Level: Advanced. Year: 2012.

This booklet is a reference for young tennis players and their coaches travelling around the world. The guide focusses on various important aspects of an extensive and good preparation, adequate nutrition, medical treatment, injuries, mental health, and doping.

The booklet is practical, and a must, for young players starting to play international tournaments, since it gives an insight into the measures that need to be taken off the court to keep possessions and oneself safe, to stay injury-free and to prevent doping charges or contracting deceases. Besides the helpful tips, there is a section devoted to nutrition which can aid the performance of the player.

For more information please contact: bpluim@euronet.nl



THE PLAYERS GUIDE TO SOCIAL DIALOGUE – HOW TO SET UP AN EFFECTIVE PLAYER ASSOCIATION

Author: Simon Taylor, Jim Souter. Language: English. Type: 31 page booklet. Level: Advanced. Year: 2009.

The booklet is a guide written by players associations for players on how to set up a professional players association, i.e. a powerful collective voice that will help to protect and promote the interest of the players. It gives insight into the experiences and mistakes of other players who have set up associations themselves. The guide explains that establishing an association is hard work and it will take time to see a return on investment. However, the guide gives helpful ideas and practical tips relating to technical issues, attracting members and getting a return on investment. It explains the key task of the association: social dialogue, i.e. sitting down with clubs, and what to do when social dialogue turns into legal cases.

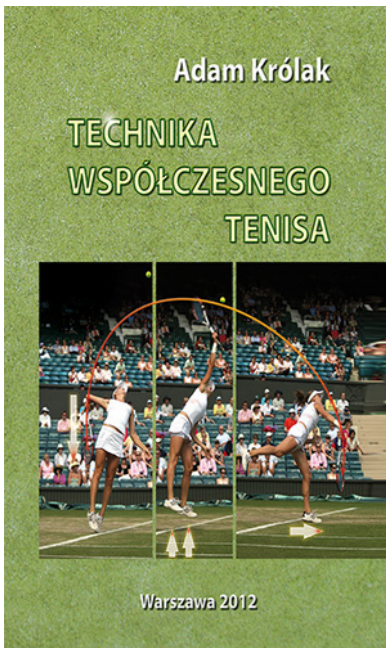
For more information please contact: info@euathletes.info or www.uni-europa.org

HIS WAY – SEĆANJE NA KAROLJA SELEŠA

Authors: Vladimir Todorović. Language: Croatian. Type: 111 page booklet. Level: All levels. Year: 2012.

This booklet is a tribute to the coach and father of Monica Seles, the late Karolj Seles. Seles was a one of a kind tennis coach, who never played tennis, and had a great talent for arts. The booklet portrays the type of man he was, highlighted by caricatures drawn by Seles himself. Celebrities, not only from the world of tennis, such as actresses, soccer coaches, journalists, architects and former Olympians give an account of their friendship or relationship with this extraordinary man. HIS WAY is a great read for everyone interested in the human behind the coach and father of the great tennis player Monica Seles.





TECHNIKA WSPÓŁCZESNEGO TENISA (CONTEMPORARY TENNIS TECHNIQUE)

Authors: Adam Królak. Language: Polish. Type: 276 page book. Level: All levels. Year: 2012.

This book is a great reference and guide for people from all levels of play. Highlighted with great (action shot) pictures, the book explains every shot extensively. From the serve to the volley, it gives an account of the sequences and dissects the shots of ATP and WTA tennis players, such as Roger Federer, Venus Williams, Rafael Nadal, and Martina Hingis. In addition, the technical and tactical aspects (of the players) are discussed extensively. Finally, the biomechanics of the shots and the tennis game are touched upon and players are being compared based on different factors. The book is recommended to all coaches looking for great and clear action shots with basic and extensive explanations of all tennis shots.

TENNIS AUSTRALIA TECHNIQUE APP

Authors: Tennis Australia Coach Development. Language: English. Type: App for iPhone and iPad Level: Intermediate and Advanced level. Year: 2013.

This book is a great reference and guide for people from all levels of play. Highlighted with great (action shot) pictures, the book explains every shot extensively. From the serve to the volley, it gives an account of the sequences and dissects the shots of ATP and WTA tennis players, such as Roger Federer, Venus Williams, Rafael Nadal, and Martina Hingis. In addition, the technical and tactical aspects (of the players) are discussed extensively. Finally, the biomechanics of the shots and the tennis game are touched upon and players are being compared based on different factors. The book is recommended to all coaches looking for great and clear action shots with basic and extensive explanations of all tennis shots.



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