



# coaching & sport science review

The official coaching and sports science publication of the International Tennis Federation

## editorial

Welcome to issue 20 – the first issue of 2000. Whilst the look and name are different, there is no change in our objective to bring you the very best in tennis coaching and sport science theory and practice.

The last major ITF coach education project of the 20th century was the 11th Worldwide Coaches Workshop that took place in Casablanca, Morocco in November 1999. Details can be found in the report on the ITF Development Programme 1999 as well as pictures of some of the highlights of the week on the back cover. We would like to congratulate our team who worked so hard to make the workshop such a big success particularly our Development Officers, Frank Couraud, Eileen Warmington, Tori Billington and Karl Cooke.

Whilst the focus of the ITF Worldwide Coaches Workshop is the training of high level players, as part of the ITF's commitment to attract more people into the game of tennis, we are pleased to announce that in conjunction with the Lawn Tennis Association of Great Britain, the first ever ITF Tennis Participation Coaches Workshop will take place in Bath, UK from 19 – 25 June 2000 (the week prior to Wimbledon). The over-riding theme of this ITF Workshop will be "More tennis, more often, more fun" and will primarily be directed at coaches specialising in the area of grassroots programmes / participation.

In the second half of the year, the ITF Regional Workshops will take place:

- |                                     |                 |               |
|-------------------------------------|-----------------|---------------|
| • Central America and the Caribbean | 11 – 17 Sept    | Miami, USA    |
| • Europe                            | 30 Sept – 5 Oct | Slovenia      |
| • Asia                              | 16 – 21 Oct     | Malaysia      |
| • West Africa                       | 7 – 10 Nov      | Cote d'Ivoire |
| • Southern Africa                   | 13 – 16 Nov     | South Africa  |
| • South America                     | 13 – 19 Nov     | Venezuela     |
| • South America                     | 20 – 26 Nov     | Brazil        |

Further details and application forms to attend can be obtained through your national association.

This year we are also starting to produce an ITF Monthly E-mail Newsletter specifically for coaches, with the aim of keeping readers more up-to-date on the various ITF Development initiatives and coaching news. If you have e-mail and would like to receive copies of this, please let us know.

Once again we would like to thank all those coaches that contributed their articles to this issue. If you have any material that you deem relevant and worthy of inclusion in a future issue, please forward it for consideration.

We hope you enjoy our 20th issue.

Dave Miley  
Executive Director, Development

Miguel Crespo  
Research Officer, Development



Speakers at the 11th ITF Worldwide Coaches Workshop.

## contents

- 2 1999 Development Report  
Dave Miley (ITF)
- 4 10 WAYS TO PREVENT ACHILLES TENDON DISORDERS  
Babette Pluim (Netherlands)
- 5 A SYSTEMATIC APPROACH TO TRAINING SESSIONS: BASELINE GAME  
Suresh Menon (ITF)
- 7 FACTS AND FALLACIES ABOUT STRENGTH TRAINING FOR WOMEN  
Paul Roetert (United States of America)
- 8 THE EASY FIVE  
Miguel Crespo (ITF)
- 10 IN THE ZONE  
Janet Young (Australia)
- M*  
*i*  
*n*  
*i*  
*-*  
*T*  
*e*  
*n*  
*n*  
*i*  
*s*
- MINI TENNIS SECTION: PRE-TENNIS AND THE DEVELOPMENT OF MOTOR PATTERNS OF CHILDREN 5 YEARS OF AGE  
Sofía Quezada, Natalia Riquelme, Raúl Rodríguez and Gustavo Godoy (Chile)
- MINI TENNIS SECTION: ITF SCHOOLS TENNIS INITIATIVE  
EXAMPLES OF TENNIS LESSONS AT SCHOOL
- 12 TACTICAL DECISION MAKING FOR ADVANCED JUNIORS  
Ellinore Lightbody (Great Britain)
- 13 A SERIOUS LOOK AT SECOND SHOTS  
Josef Brabenec (Canada)
- 14 THE RELIABILITY AND VALIDITY OF MOTOR TESTS IN TENNIS  
Aleš Filipčič (Slovenia)
- 15 HOW TO HIT THE BALL HARDER BUT WITH CONTROL  
Hans Peter Born (Germany)
- 17 WHAT RESEARCH TELLS US ABOUT...JUNIOR TENNIS  
Miguel Crespo and Karl Cooke (ITF)
- 19 RECOMMENDED BOOKS AND VIDEOS

8th YEAR, ISSUE 20, APRIL 2000



# ITF development report for 1999

In 1999, just over US\$ 4 million was spent on Development projects throughout the world. US \$1.5 million was contributed by the Grand Slam nations via the Grand Slam Development Fund and the balance of US\$ 2.5 million from the ITF. The following is a brief report on the ITF Development Programme and some of the projects carried out in 1999.

The education of coaches continues to be one of the main areas of activity for worldwide development. In addition to the 48 coaches courses held worldwide in 1999 (twenty-four of which were organised jointly with Olympic Solidarity and the relevant National Olympic Committees), the ITF Advanced Coaches Course syllabus was used to conduct six Level II courses. More Level II Coaches Courses will be held in 2000.

The highlight of the year was the 11th ITF Worldwide Coaches Workshop. The ITF Worldwide Coaches Workshop takes place biannually and on this occasion took place in Casablanca from 1-7 November, organised in collaboration with the Fédération Royale Marocaine de Tennis.

It was the first time that the event had been held in Africa and a record number of countries were represented. More than 270 coaches working with high level players in 105 countries attended five days of on-court and lecture room sessions. They were presented with the latest trends in tennis training and fitness by international experts from countries including Argentina, Australia, Belgium, Brazil, France, Great Britain, Spain and the USA. On-court demonstrations included sessions by top coaches Tom Gullikson, Luis Bruguera and Carlos Kirmayr.

Representing the ITF were Dave Miley, ITF Executive Director of

Tennis Development and first speaker, ITF Executive Vice President Juan Margets, who presented on the ITF's vision for tennis beyond 2000, Ismail El Shafei, Chairman of the ITF Coaches Commission and Eiichi Kawatei, Chairman of the ITF Junior Competition Committee. Also in attendance were Diagna N'Diaye, newly-elected President of the Confederation of African Tennis (CAT), Mohammed M'Jid, President of the Fédération Royale Marocaine de Tennis and Tarak Cherif, President of the Fédération Tunisienne de Tennis and Vice President of CAT.

The ITF Coaches Commission met during Roland Garros and the Worldwide Coaches Workshop.

Special long term educational programmes were initiated in China and India involving the use of the ITF's recommended Level I and II Coaches Syllabus. By focusing on training local tutors and translating the syllabus into local languages, the aim of these 3 year projects is to make both of these two large nations self sufficient in Coach Education by the year 2002.

In 1999 the following new publications were produced:

- Being a Better Tennis Parent (available in English, French and Spanish - designed for use by the parents of young tennis players)
- Coaches Review, Summary Issue (available in English - a collection of the first 15 issues of Coaches' Review, the ITF's tennis specific sports science publication)
- Group Tennis Drills for Competitive Players (available in English - forms part of the ITF's recommended Level II coaches' syllabus)

In addition to these new publications, the following books have now been translated into French and Spanish:

- ITF Advanced Coaches Manual
- ITF School Tennis Initiative Teacher's Manual
- ITF Leadership, Management and Administration Manual
- Tennis Practices
- Coaching and Sport Science Review
- ITF Code of Ethics for Coaches

The full-time Development Officers continue to provide support and monitor the success of the various programmes (including the School Tennis Initiative) in the countries in their region. During 1999, two new Development Officers were appointed - Luca Santilli (Italy) for Eastern Europe and Rick Phelipa for the non Spanish speaking Caribbean. There are now nine full time Development Officers.



*ITF Development Officers*

- Nicolas Ayeboua**  
Development Officer, Africa
- Karl Davies**  
Development Officer, Southern Africa
- Prince Madema**  
Development Officer, East Africa
- Dan O'Connell**  
Development Officer, Pacific Oceania
- Gustavo Granitto**  
Development Officer, Central America and Spanish-speaking Caribbean

**Richard Phelipa**

Development Officer, non-Spanish speaking Caribbean

**Miguel Miranda**

Development Officer, South America

**Suresh Menon**

Development Officer, Asia

**Luca Santilli**

Development Officer, Europe

The School Tennis Initiative continued to expand in 1999, with over one million children from 80 countries worldwide now participating in the programme. In September 1999, the first regional mini-tennis seminar took place in Roland Garros, France and was attended by national STI coordinators from the European nations involved in the STI programme.

The ITF Leadership, Management and Administration Manual which was produced in English in 1997 is now available in French and Spanish. Four regional seminars for administrators were held during 1999 in Central America, Africa, Europe and Asia. Sixty administrators from 50 nations have so far attended these regional administrator seminars and more are planned for 2000.

Pretoria, South Africa was the venue for the 22nd ITF African Junior Championships. Thirty countries were represented and the team trophy was retained by South Africa.

Three Training Centres operated during the year. The Central American & Caribbean Training Centre, which had been based in Panama since January 1996, has now relocated to Florida. The new Training Centre opened in Inverrary, Florida in early 1999, based at the Inverrary Plaza Resort in Fort Lauderdale and offering excellent training facilities.

In January 1999, the African Training Centre relocated from Ellis Park, Johannesburg to Pretoria. The Centre re-opened on January 4th and continues to be directed by Kevin Smit, offering facilities for up to 30 players and coaches to attend on a residential basis.

Eleven talented young African players were awarded scholarships

to attend the ITF African Training Centre on a full-time basis in 1999. During the year over 51 players and coaches from 25 African countries attended the Centre on a part-time basis. A third ITF Training Centre operated in Fiji, where a new 6 court regional centre was constructed for use by the players.

The Fund continues to provide strong support for lower level men's and women's professional events. In 1999, the Fund provided the prize money for 49 weeks of men's professional events (including Satellite Circuits and \$10,000 and \$15,000 single week Futures events) as well as for 14 weeks of women's \$10,000 events and 7 weeks of women's \$25,000 events. By providing funding as an encouragement for National Associations to upgrade their women's events from \$10,000 to \$25,000 or \$50,000, the Fund is helping to create a women's circuit which is not only providing a stepping stone for players just entering the professional ranks, but which is also servicing the middle ranked players more effectively. Countries benefiting from grants to upgrade women's events were: Argentina; Denmark; Greece; India; Ireland; Philippines; Poland.

Ten National Associations received facility or special grants in 1999. These grants were awarded either for the construction or renovation of national tennis facilities under the control of the National Association, or for special projects within a particular nation.

The provision of tennis equipment to the less developed tennis nations continues to be one of the most important areas of the ITF Development Programme. In 1999 the market value of equipment, including adult and junior rackets, mini-bats, strings and various types of tennis ball, distributed to National Associations around the world was close to one million dollars. The introduction of the Equipment Purchase Programme gives designated National Associations the opportunity to purchase once a year at low cost ITF branded tennis

equipment.

The development of the game continued to benefit through the inclusion of tennis in the Olympic Games. The ITF worked closely during 1999 with Olympic Solidarity on a number of programmes particularly in the area of coach education where 24 Olympic Solidarity Tennis Coaches Courses were organised by the ITF worldwide. In addition 10 young tennis players were awarded Olympic athlete's scholarships, valued at \$14,400 per annum each. The recipients are: Neyssa Etienne (Haiti), Clarisa Fernandez (Argentina), Luis Haddock (Peru), Hervé Hicintuka (Burundi), Alexey Kedryuk (Kazakhstan), Irakli Labadze (Georgia), Richele Lesaldo (Barbados), Tyler Mayers (Trinidad), Kamil Patel (Mauritius) and Valentin Sanon (Cote d'Ivoire).

ITF Teams are a major component of the development programme. In 1999, a greater emphasis was placed at Junior level. Talented juniors at the 14, 16 and 18 & Under level, from less developed tennis nations were invited to join ITF regional teams to participate in tournaments outside their region under the guidance of an ITF coach. In 1999, some 195 players from 78 different countries participated on ITF Teams during the year, including Jarkko Nieminen of Finland, a member of the ITF International 18 & Under Team who won the 1999 US Open Boys Singles title.

It is interesting to note the progress at the professional level of some of the ITF's former team members including Nicolas Lapentti, Mahesh Bhupathi, Leander Paes, Gustavo Kuerten, Wayne Black, Paradorn Srichaphan, Mark Knowles, Karim Alami and Younes el Aynaoui all of whom performed well during 1999 at Grand Slam events. Bhupathi and Paes, who won the Wimbledon and US Open doubles titles became the first men's team in the open era to appear in all four Grand Slam doubles finals in the same year and will be recognised as the ITF World Champions at the Champions dinner in Paris in June 2000.

# 10 ways to prevent achilles tendon disorders

By Dr. Babette Pluim Medical Advisor to the Royal Dutch Lawn Tennis Association

The Achilles tendon injury primarily occurs in long distance runners, volleyball players and to a lesser extent among tennis professionals. It is the result of the chronic repetitive stress of running and jumping. The pain can generally be felt in an area three to five centimetres above the heel bone. Initial symptoms may include a lagging pain in the morning and at the beginning of a workout. Though the pain often disappears during play, it usually returns afterwards only to worsen the injury and make successful recovery increasingly difficult.

Preventive measures:

**1. Warm-up.** Be sure to warm up well. Aerobic exercise of 5 to 10 minutes will increase the blood flow of the Achilles tendon and thus greatly reduce the chances of acquiring tendinitis.

**2. Stretching.** (Photo 1) One of the main causes of Achilles tendon disorders is lack of flexibility of the calf muscles. Generally, shorter tendons tend to be subjected to large amounts of strain during exercise.



Stretching the calf muscles on a regular basis means the tendon will be strengthened slightly, thus providing more flexibility during play. Try to repeat the following exercise 5-6 times for both Achilles tendons: find any large stationary object (a wall or fence will do) and lean against it as shown in the picture. Now slowly flex your hips forward, keeping your back leg straight and heel on the ground. Hold the stretch, which you should feel, in the calf area, for as long as you feel comfortable.



**3. Stretching.** (Photo 2) Use the start position as in the previous exercise; lower the knee of your back leg as far as possible. The stretch should now be felt further down the tendon. Maximum benefit is attained.



**4. Strengthening.** The Achilles tendon is unlikely to present any problems if the calf muscles are relatively well developed. The calf raise is a gentle but effective exercise, which should be performed regularly. Stand in an upright position and slowly raise to your toes (picture). Hold this position for a couple of seconds and then return to the original position. The drill can be made harder by carrying an additional load and varying the speed and number of repetitions. An alternative exercise can be done using the dynaband (photo 5).

**5. Massage of the calves.** Massage after a strenuous workout will help relax the calf and reduce the amount of tension exerted on the Achilles tendon. Also, it will increase blood flow through the tissue, reducing muscle spasms and speeding up recovery.

**6. Proper footwear.** Badly constructed footwear can be a major contributing factor towards Achilles tendinitis. Stability around the ankle is essential, so be sure to check whether the shoe fits snugly in the heel area, whether the heel base is wide enough and if there is adequate heel wedging of 12 to 18 mm vertical height. In addition, the shoe sole should have enough flexibility to allow bending of the toes, thus decreasing the strain on the tendon.

**7. Customised footwear.** As the foot moves from the moment of heel contact to flatfoot, a certain amount of pronation is necessary to allow the foot to adapt to the surface contour. The Achilles tendon will be prone to injury if pronation is excessive. Factors which may increase the pronation include flatfoot, clawfoot, and leg length



inequalities. Use a professionally designed and approved arch support or lift (Photo 4).

**8. Training dangers.** Do not increase the frequency or duration of your workouts too rapidly. Sudden changes of athletic exercise habits have been shown to increase the chances of acquiring Achilles tendon problems. In the case of a dramatic change, such as new shoes or a

different playing surface, try to allow some additional time to ensure proper body adjustment in the new environment.

**9. Existing problems.** If you are already suffering from injury, but are unable to stop playing on the unforgiving hard courts, try using a sorbothane heel cup. This will provide additional shock absorption as well as artificial Achilles tendon elongation, thus reducing the stress on the muscle-tendon unit. Do not push your luck by doing your running exercise on hard surfaces as well, such as the pavement of the streets, but try to find grass or sand instead.

**10. Ankle sprains.** During recovery from a sprained ankle, pain can

often be felt in the Achilles area. This is mainly due to the decreased stability of the ankle, which is compensated for by the tendon. The pain can be minimised by using a brace or having the ankle professionally taped. In addition, the muscles around the ankle can be strengthened by standing on a trampoline or by using a dynaband (Photo 5).



## *a systematic approach to training sessions: baseline game*

*By Suresh Menon (ITF Development Officer for Asia)*

*A continuation of the article that appeared in ITF Coaches Review, Issue 16*

After doing an appropriate warm up and some co-ordination exercises the players should position themselves on the baseline.

(Use only 1 ball for the following exercises) / (Players are assumed to be right handers)

### **Exercise 3**

#### **Drill 1**

The players begin a baseline rally in which the object of the exercise is to maintain consistency and to work on developing a good rhythm for the next exercise. By using only one ball, it forces the players to be more focused thereby reducing the number of unforced errors and keeping the ball in play for the entire exercise. Time - 2 minutes.

#### **Drill 2**

The court is divided as shown in Fig 3(a). The players hit the ball cross court into Zone A as shown in Fig

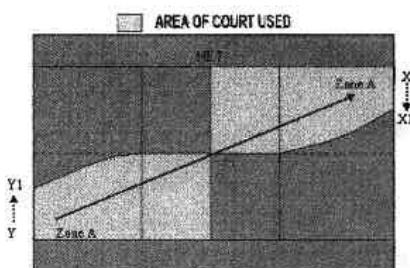


Fig 3(a)

3(a) & 3(b). The object of the drill is to work on consistency. The ball is hit with medium pace and in an arc over the net. The players are required to hit only forehands thereby forcing them to recover from position X & Y towards position X1 and Y1 after hitting the



Fig 3(b)

ball as shown in Fig 3(a) Time - 2 minutes.

#### **Drill 3**

The players still work on consistency but now increase the pace on the shots. After hitting the first 5 balls, the players increase the pace on the 6th and subsequent shots and attempt to put the ball away. Time - 2 minutes.

### **Exercise 4**

All the drills (1, 2 and 3) are repeated on the opposite side of the court (emphasis now on the backhand). The players then take a 5-minute break.

### **Exercise 5**

#### **Drill 1**

Now the players hit the ball into zone B as shown in Fig 5(a) & (b). This drill requires the player to hit a more angled crosscourt return that forces his opponent out of the court. The players continue to work on consistency attempting to hit a

minimum of 15 balls during each rally. Figure 5(a) shows player X hitting a deep forehand shot followed by sharp short cross forehand. Time - 2½ minutes.

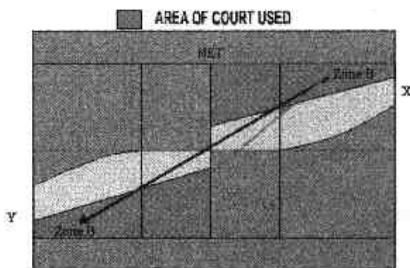


Fig 5(a)



Fig 5(b)

**Drill 2**

The players continue to work on consistency but now increase the pace on the shots. After hitting the first 5 balls, the players increase the pace on the 6th and subsequent shots and trying to play a winner. Time - 2½ minutes.

The players can incorporate a game which requires them to open the court by hitting sharp crosscourt shots and after 6 shots either player is allowed to try and hit a winner down the line. This teaches the players to be patient and wait for the opportunities to open the court before hitting winners.

**Game: Down the line winner**

Rules: The winner is the first player to obtain eleven points. An error costs one point. A down the line winner earns 2 points while an error on an attempted down the line winner costs 2 points. Players are required to hit only in Zone B as shown in Fig 5 (c). After each player has hit the ball for the 3rd time, he/she is allowed to hit down the line winners. The opponent must retrieve the ball back down the line

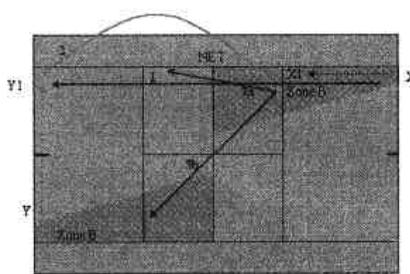


Fig 5(c)

to Zone B. If the down the line shot is weak, the player can either have the choice to hit a sharp cross court for a winner or wrong foot his opponent by going back down the line again.

**Example See Fig 5(c)**

During a rally between X & Y, X decides to seize the opportunity and hit down the line (1). Y is forced to stretch and hit a defensive backhand shot that falls just inside the service line (2). X moves to position X1 and has the option of going either for a cross-court winner (3a) or hit behind Y for a down the line winner (3b). This drill is a realistic simulation of a match play type situation.

All the exercises are repeated on the opposite court (emphasis on the backhand). The players then take a 5-minute break.

**Game: Depth Charge**

Rules: First player to reach 11 points wins. Players hit crosscourt forehands and each time they hit into Zone A, they get two points. The first one to reach a score of 11 wins.

After completing the drills described, the players take a 5-minute break.

**Exercise 6**

**Drill 1**

The players hit the ball into Zone C as shown in Fig 6(a) & 6(b). This drill requires the player to hit a deep

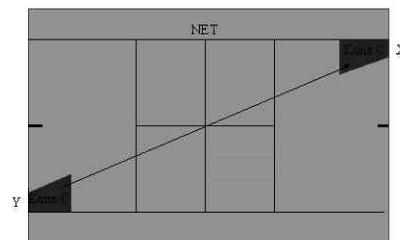


Fig 6(a)

cross-court shot. The players continue to work on depth, accuracy and consistency. They should try to hit a minimum of five balls continuously. Time - 2½ minutes



Fig 6(b)

**Exercise 7**

All the exercises are repeated on the opposite court (emphasis on the backhand). Players take a short break.

**Exercise 8**

Hitting the forehand shot from the backhand or advantage court (inside out forehand) has become one of the most important shots in tennis. This shot has become an important weapon for many of today's top players. The forehand shot can be hit aggressively and with greater angle, which forces the opponents out of the court. The opponent is also forced to hit a backhand, which tends to be slightly weaker for many players.

The advantages of the inside-out forehand are as follows:

- The players can disguise the shot to be hit either crosscourt or down the line.
- The angular momentum created by the stroke allows the player to generate greater power.
- It can be used effectively as an approach shot.
- The inside-out forehand, because of its greater angle and penetration, forces the opponent out of the court giving the player



Fig 8(a)

the opportunity to take advantage of the open court.

The importance of this shot necessitates that more emphasis be given to it during the training sessions.

#### Drill 2

The players hit the ball towards target P as shown in Fig 8(a). The players should hit a minimum of 15 balls continuously, working on consistency. As the players get more consistent, they should attempt to increase the pace on the shots and hit as close to the target as possible. Time - 3 minutes

#### Drill 3

The players hit at both target P & Q. Players hit at target Q (Fig 8(a)) whenever there is an opportunity to do so i.e. when the opponent hits a weak return. They should continue to focus on consistency and attempt to hit a minimum of 10 balls keeping in mind to hit only forehands. Time - 5 minutes

Game: *No Backhands*

Rules: Players work on hitting only inside out forehands in the half court. Players then attempt to force their opponent to hit a back hand shot. In doing so the player earns

two points. All other errors are one point. First to reach 11 points wins.

#### Summary

It is important for the players to begin the practice session by developing a good rhythm. This is achieved by beginning with an easy task. As the session goes on the intensity of the practice is gradually increased. By ensuring success from the very beginning, the players' confidence increases which helps to ensure that they remain motivated and enthusiastic for the entire practice session.

## *facts and fallacies about strength training for women*

*By Paul Roetert, (USA)*

This article first appeared in *Strength and Conditioning*, December 1998

#### Introduction

This article refers to another one written by W.P. Ebben and R.L. Jensen published in the magazine "Physician and Sportsmedicine, 26(5), 86-97, 1998". I felt it important to highlight this article since it provides a positive commentary on strength training for women to the coaches.

Women have traditionally participated less in strength training programmes than men. This has been partly due to gender stereotypes but also to limited opportunities. The purpose of the article I have mentioned was to debunk some myths that block opportunities for women to participate in strength training.

The authors begin with a brief background about the lack of research historically. They say that, besides a social stigma, there has been a lack of accurate information, which in turn has led to misconceptions that have kept women away from strength training,

or at least kept them from training in optimal ways.

The article highlights several conclusions of research studies to counter the following misconceptions:

1. That strength training causes women to become larger and heavier. (Rather, strength training improves body composition by helping to reduce body fat while increasing lean weight).
2. That women should use different training methods than men. (There is no evidence to suggest that women are more likely to get injured during strength training than men).
3. That women should avoid high-intensity or high-load training. (Women, like men, should train at intensities high enough to cause adaptation in bone, muscle, cartilage, ligaments, and tendons).

Consequently, women should strength train in the same way as men, using the same programme design, exercises, intensities, and volumes relative to body size and level of strength.

The authors warn that, even

though women possess about two-thirds the strength of men, measuring the strength of women in absolute terms fosters misconceptions. Physiological factors such as size and body structure provide a better explanation for strength differences between men and women than the influence of the hormones. Furthermore, relative strength differences between men and women are small when the amount of lean body mass is factored into the strength equation.

Rather than basing strength training programmes on preconceived ideas about gender, each athlete should be assessed as an individual and meet her own needs and goals.

The article concludes by outlining the benefits of a strength training programme specific to:

1. Bone and soft tissue: Strength training reduces the risk of osteoporosis and improves cartilage, tendon and ligament strength.
2. Lean body mass vs. Fat: Compared to fat, muscle is

↪ page 11

# the easy five

By Miguel Crespo (ITF)

## 1. ONE GOAL OF THIS ARTICLE

It is often said that a tennis coach is only as good as their drills are. However, as it happens with all sayings, this is not completely true. In fact, from the experience of watching successful tennis coaches working with all levels of players including beginner, intermediate and professional players, we can provide some useful tips:

1. Not too many drills: Top level coaches do not seem to use an excessive number of drills. They stick to drills that they know how to do well and work very well for their players. Some of them only use a dozen drills (Alvarez, 1990), others not more than twenty.
2. Use of variations: These coaches tend to use the same drills with several variations in order to make them more attractive for their players and more realistic and close to the match play situations.
3. Use of drills players like the most: They use more frequently those drills that players love to do. Why? Because players perform at 100% when doing their favourites.
4. Use of drills in the correct order: Smart coaches know how to order their drills so that they work from a closed situation (repetition, far from match play situations) to a more open one (variation, close to match play situations, decision making).
5. Use a games based approach: These coaches plan their drills as if they were matches (i.e. they use scoring systems, play for points or prizes, etc.) in order to motivate their players.
6. The important thing is not what you do but rather how you do it: Successful coaches set high standards and focus themselves on the quality of the drill (i.e. high intensity level, no mistakes, correct decision making, good attitude of the player, etc.)

and do not accept anything less. The purpose of this paper is to present five drills that can be used for each one of the different match situations, namely: serve, return, baseline game, approaching or at the net, and passing the net player.

## 2. TWO ASPECTS TO BE WORKED ON EACH SESSION

We can work on thousands of aspects in each session (technique, tactics, physical conditioning, mental skills, etc.). However, if we consider the contents of a training session no matter the level of the players, we can easily agree that in order to cover all the demands of the players we have to work on two key aspects:

- a) Known skills: Skills or abilities already introduced by the coach and that may need further practice by the players. In case they do not master the skills properly in different situations (rally, match) we should work on the stabilisation of the movements (technique, footwork) or patterns (tactics), or in case they make mistakes we should work on the improvement of the movements (technique, footwork) or patterns (tactics).
- b) New skills: Skills or abilities that the coach wants to introduce to the players. Although the coach may decide to focus on new skills within a session, it is usually recommended to dedicate one part of the session to work on the basic fundamentals of the game (i.e. to repeat the basic strokes, movements and patterns of the five game situations).

## 3. THREE METHODOLOGIES WHEN DRILLING

When performing a drill the coach can choose from three different methodologies or procedures

depending on his goal. These are the following:

- a) Basket feeding: This is very good for working on repetitions, warming up, corrections and closed situations (no decision making).
- b) Coach feeding: This is good for a more realistic drill since the coach can control the pace and rhythm of the rally. However, it is almost impossible with top players. In these situations, the coach has to be in the volley or in one corner of the court.
- c) Players rally: This is the best one for working open skills (playing points, resembling tactical patterns, etc.). However, it can be also used for consistency (figure 8 drill) and speed and endurance (trios).

The most important thing is to combine all these three methodologies according to the coach criteria and goals for the session.

## 4. FOUR STEPS TO FOLLOW IN EACH DRILL

This traditional procedure is very important when doing any drill. The four steps to follow are the following:

- a) Explanation: Briefly describe the drill. It is recommended to refer to the tactical applications of the drill (i.e. why are we doing this, in which situations should we play like this and what can we use this for).
- b) Demonstration: Especially with beginners or large groups. When dealing with advanced players, it may be unnecessary. In these cases, the coach has to tell the players one or two ideas in which they have to focus on (i.e. no mistakes, quick footwork, high intensity, etc.).
- c) Practice: The two previous points should be dealt fairly fast. Try to

start hitting as soon as possible. Ensure high drill quality by providing the right intensity and rhythm to the drill. Understand that players, even the best ones, need time to warm up in the drill and that the best performance is achieved after several minutes. Intersperse work and rest periods to allow necessary recovery. Determine the best number of repetitions and series for each level of players.

- d) Feedback: Use effective questioning and positive feedback during the practice and the rest periods among series. Avoid saying the obvious (just long, hit late, etc.) and be aware of the player's reactions to your comments.

### 5. FIVE GAME SITUATIONS TO PRACTICE AND DRILLS AS AN EXAMPLE FOR EACH ONE

Below we present five drills to work on each of the game situations. These drills are taken from different coaches. We have called them: "The easy five".

- a) Serve: Service test (Tilmanis, 1988)

Player plays a match against himself only serving. Player has to serve first and second serves to both service boxes as if in a match. Coach assesses the power of the first server in order to be considered as such. Player wins a point if he enters first and second serves. If he misses the first serve, he has to enter the second. If he double faults, he loses the point.

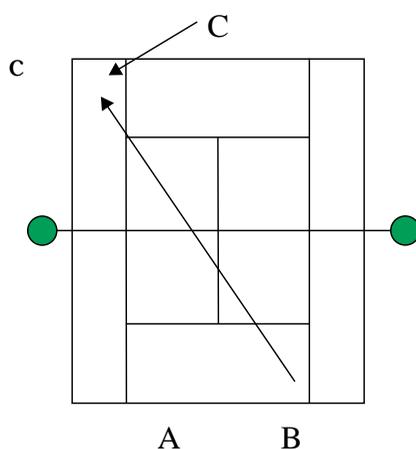
- b) Return: Offensive & Defensive  
 Defensive return phase: Player A serves first serves and B returns. If player A hits an ace, he gets two points. If he double faults he loses one point. If he hits two first serves in a row he gets one point. If player B passes the return over the net gets one point. If he hits a winner return he gets two points. If he misses the return he loses one point.

Offensive return phase: Player A serves second serves and B returns.

If player A hits an ace, he gets three points. If he double faults he loses two points. If he hits in two second serves in a row he gets one point. If player B passes the return over the net he gets one point. If he hits a winner return he gets two points. If he misses the return he loses two points.

- c) Playing from the baseline: Express trio (Cascales, 1999)

This is a groundstroke drill from the baseline for three players. Players A and B on one side have to play cross court aiming to hit the ball inside the alley or very close to the singles side line. Player C has to run to hit back every single ball. No mistakes allowed. When player C seems to be tired according to the coach's criteria, the coach feeds an easy ball to the middle of the court and the player has to run and play a winner. Players rotate.



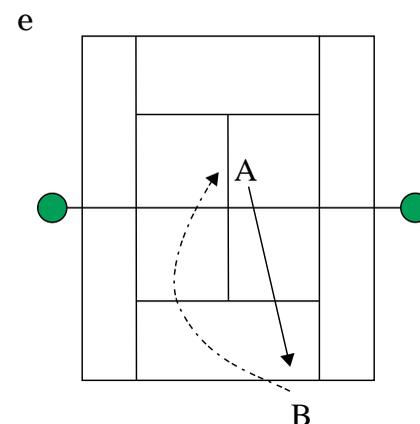
- d) Approaching or at the net: In and out drill (Cascales, 1999)

Player A stands in mid court, Player B feeds a mid court ball which bounces in the service box. Player A hits an approach shot to player B and comes in. Player B hits a groundstroke for A to volley. This sequence is repeated three times. When this is completed players play the point after the approach. Players rotate.

- e) Passing the net player: Smash and pass drill (Piles, 1999)

Player A is at the net and player B is on the baseline. Player B feeds a lob

to player A who has to smash to the deuce court. If he misses the smash, player B wins the point. If player B can not hit the smash back, A wins the point. If player B hits a lob back, player A has to hit the smash to the ad court. If player B can not hit the smash back, A wins the point. Player B can hit a lob or a smash and players play the point. Players play the best of 10 points and then rotate.



### 6. CONCLUSIONS

We have presented five basic drills which can be used for the different five game situations. Coaches should notice that these drills have to be adapted according to their players' level in order to get the most out of them.

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The author wishes to thank Charles Applewhaite and Simon Jones for their contribution to the structure and the title of the article.

# in the zone

By Janet Young, Ph.D. (Sport Psychologist, Australia)

*Occasionally tennis players feel totally immersed in their game, as if playing on automatic pilot.*

*Reflecting on these inspired and effortless performances, tennis players know they have played in what has been termed the "Zone".*

Tennis provides the opportunity for participants to experience heightened mental states when everything seems to 'click'. Various terms are found in the sport literature to denote these special or extraordinary moments and include 'zone', 'flow' and 'out-of-mind' experiences. These unique moments are associated with peak or superior performances and, as such, are highly valued and extremely meaningful. They are frequently cited as the motivation for many tennis players to continue a long involvement with the game. Tennis players simply seek to recapture those cherished times when they played in the zone.

The question therefore arises as to how such a desirable state as the zone can be achieved. Can tennis players be taught to attain the zone or is the zone a chance occurrence? Under what conditions is the zone

most likely to occur? What factors prevent and disrupt the zone and what are the distinguishing features of the phenomenon? To address these questions, we recently conducted a study in conjunction with Tennis Australia. The purpose of the study was to investigate the nature and conditions of the zone in tennis. In gaining such an understanding, it was envisaged that tennis players could be guided to more easily achieve, and maintain or repeat, the somewhat elusive zone.

Thirty-one Australian professional female tennis players competing on the Tennis Australia Challenger and Satellite Circuits and the Australian Open participated in the study. Participation in the study involved each tennis player relating a zone experience (if one had occurred), nominating factors that they thought facilitated, interrupted and prevented the zone from occurring and responding to three psychological questionnaires (the Flow State Scale, the Experience Questionnaire and the Paratelic Dominance Scale).

The study found that the nature of the zone was temporary and of relatively short duration; a more frequent occurrence in training than

in competition; and, associated with an optimal, yet not necessarily a victorious, performance. Characteristics of the zone were gleaned from the tennis players' narrative accounts and included a number of interrelated qualities. These qualities were focusing on the present moment, being challenged yet having the ability to match the demands of the situation, effortless merging of action and awareness, loss of concerns about oneself and the performance outcome, feeling in control and receiving clear feedback.

While tennis players used different words, their descriptions of the zone were remarkably similar. For example, one tennis player recalled:

*I'd probably describe it as running on auto, just playing on instinct. There was no self-doubt. I felt invincible. I knew I could play any shot at any given time. My concentration and focus was so spot on, it felt like I had so much time to hit the ball where I wanted to.*

In all instances the zone was described as a most positive, memorable and rewarding experience. Recollections of the experience included: "...the zone) was very clear, nothing I will ever

**Table 1**

*General Factors Facilitating, Preventing and Disturbing Zone Experiences of Australian Professional Female Tennis Players*

Facilitate the zone	Prevent the zone	Disrupt the zone
Preparation (physical and mental) (1)	Preparation problems (2)	Preparation problems (6)
Positive mood (2)	Non-optimal mood (3)	Non-optimal mood (4)
Experience and control of arousal (3)	Inappropriate experience and control of arousal (4)	Inappropriate experience and control of arousal (5)
Motivation (4)	Problems with motivation (5)	Problems with motivation (3)
Focus (5)	Inappropriate focus (1)	Inappropriate focus (2)
Situational/ environmental conditions (6)	Situational/ environmental conditions (6)	Situational/ environmental conditions (1)
Positive feedback (7)	Negative feedback (7)	Negative feedback (7)

*Note:* Numbers in parenthesis reflect the relative importance of each general factor for each category.

forget”; “awesome”; “feel on top of the world”; “felt like the rest of the world had stopped” and “out of this world”.

In terms of the conditions affecting the zone, the study found the zone was a sensitive and volatile state influenced by an array of personal and situational factors. While tennis players considered they had some control over many of these factors, should a tennis player reflect on the zone during its occurrence, the momentary experience was lost.



*How do tennis players attain and maintain the zone?*

Tennis players nominated 360 independent factors that they considered facilitated, prevented and disrupted the zone. For clarity in the presentation of these factors, a series of analyses was conducted, whereby factors expressing a similar idea were organised into 21 general factors influencing the zone. The results of these analyses are presented in Table 1.

Table 1 illustrates a pattern or similarity to the general factors influencing the different stages of the zone process. For example, focus is important for starting the zone; and, in the absence of focused attention, the zone state is prevented from occurring. Likewise, when

motivation is present, the onset of the zone is facilitated. Conversely, problems with motivation for tennis players can either prevent or disrupt the state.

The study's identification of factors influencing the zone suggests that a program to guide tennis players to attain and maintain the zone should be designed to:

- a) Optimise those factors perceived by tennis players to facilitate the onset of the zone;
- b) Minimise or negate those factors perceived by tennis players to prevent or disrupt the zone; and,
- c) Assist players to re-interpret or restructure factors that they perceive to hinder or disrupt the zone.

In general, factors affecting the zone suggest that tennis players should be guided to:

- Set goals
- Prepare (mentally and physically) fully for the challenge
- Immerse themselves in the task to the exclusion of attending to disruptive situational factors
- Maintain a positive attitude
- Respond to feedback
- Maintain an appropriate response to arousal.

Moving beyond these 'blanket' guidelines, any program designed to guide tennis players to attain the zone needs to be tailored to the individual and address the individual's awareness and interpretation of salient factors. It is the individual's thoughts and feelings in response to factors, rather than the objective factors per se, which need to be addressed.

For example, maintenance of an appropriate response to arousal is considered important for the majority of tennis players to attain the zone. For some individuals, this means feeling relaxed and calm prior to and during competition. Alternatively, some tennis players need to feel excited and energised to play their best. Similarly, considerations of being physically fit and mentally prepared involves an individualised approach. Considerations may relate to an

individual's level of fitness, practice regime, pre-match routine and warm-up, acquisition of sound technique or mental training. In a further example, maintenance of appropriate focus may involve considerations of a number of specific task cues, including those watching the ball or adopting an aggressive strategy for playing vital points throughout the match.

In a similar vein, considerations of eliminating, negating or re-interpreting situational and environmental factors are important if the zone state is to be maintained. For an individual, disruptive extraneous factors may include those of poor weather and playing facilities, unlucky draws in tournaments, family problems and bad umpiring decisions. Tennis players can be guided to focus on the task at hand to the exclusion of these irrelevant and disruptive factors. Alternatively, tennis players can be trained to re-interpret extraneous factors. For example, for the tennis players who report windy conditions as a disruptive factor, these individuals can be guided to re-interpret this factor as the opportunity to use the weather conditions to their advantage to unsettle the game of their opponent.

In summary, the study's findings suggest that the zone is no longer to be considered an 'out of reach' or chance event. We can make it happen. And when we do, we will know we have achieved something special irrespective of the outcome of our match.

*contd. from page 7*

metabolically active and increases metabolic rate, fat oxidation, and caloric expenditure.

3. Psychological well-being: Women who engage in strength training benefit from improved self-esteem.

Training programmes should focus on functional exercises that benefit sports and daily activities such as multijoint, multiplanar exercises that develop inter-muscular co-ordination, proprioception and balance.

# tactical decision making for advanced juniors

By Ellinore Lightbody (Great Britain)

## 1. INTRODUCTION

The purpose of this article is to present several ideas and drills which may help the coach to increase the tactical decision making process of their junior tennis players.

The qualities of the performance/excellence players can be summarised as follows:

- Physical: High intensity.
- Mental: Commitment to chase every ball.
- Technical: Sound, quality movement, balance, racket head speed.
- Tactical: Take ball early, aggressive play encouraged.

In this article, we are going to deal specifically with the tactical qualities.

## 2. TACTICS AND DECISION MAKING PROCESS

The practice situations presented below are designed to recreate patterns that occur in matchplay. Players have to work in order to achieve an understanding of these patterns of play and the likely responses to certain situations. By doing so, players develop an understanding of what they like to do in certain situations. We should try not to stifle individualism but to provide an understanding of what is realistic for them.

As per the decision making process, players should understand that to make the best decisions they have to:

- Gather information.
- Become aware of the options.

But, above all, they have to realise that during matchplay they have to do this in less than half a second.

## 3. DRILLS FOR IMPROVING TACTICAL DECISION MAKING

The aims of the following practices include:

- To recreate realistic situations that occur in matchplay.
- To repeat these situations in order to improve competence in dealing with them.
- To achieve a high intensity during practice.
- To improve both reception and projection skills.
- To encourage players to make positive decisions.
- To help players understand how to work from a closed to open situation.
- To improve movements to get weight behind the ball.
- To develop aggressive powerful shots.
- To recognise when the opponent is in difficulties.
- To improve the decision making process in two ways: by exploring options to put the opponent in difficulties and by understanding what to do next.

The modern game is based on speed and power, thus players are always encouraged to:

- Hit on the rise.
- Play inside the court whenever possible.
- Play with power and generate pace.

The first tactical goal I have chosen is "to sneak or not to sneak" when dealing with a moon ball. This goal can be worked in a progression of 4 drills from closed to open.

Drill 1: How to deal with a moon ball.

4 players per court. Coach feeds a moon ball to player A. A has to hit a drive volley. B defends this situation. Players play the point. C and D then rotate in.

Drill 2: How to deal with a moon

ball. React to opponent's movement.

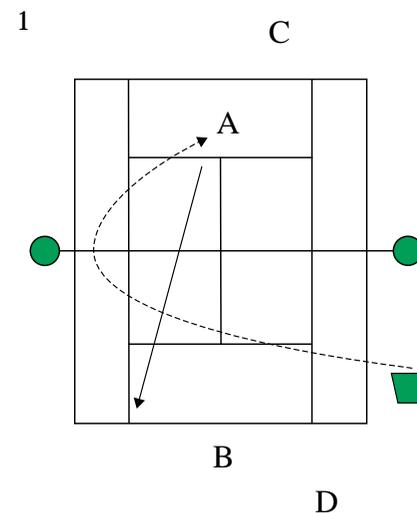
4 players per court. Coach feeds a moon ball to player A. A has to decide between two options: replying with a moon ball or hitting a drive volley. B moves in for a drive volley if A hits a moon ball or defends if A hits a drive volley. Players play the point. C and D rotate in.

Drill 3: How to deal with a moon ball. When to change trajectory.

4 players per court. Coach feeds a moon ball to player A. A rallies cross court to B. A chooses when to moon ball. Players play the point. C and D rotate in.

Drill 4: How to deal with a moon ball. Open situation.

4 players per court. A serves to the "ad" court. Players rally cross-court. Both players can moon ball. Players play the point. C and D rotate in.



The second tactical goal is how to use the change of pace to create space and how to counter the short angle. This goal can also be worked in a progression of 4 drills from close to open.

Drill 1: When to change direction and what to do next.

4 players per court. A and B rally cross court. A changes direction. Players play the point. C and D rotate in.

Drill 2: Use the short angle to open the court.

4 players per court. Coach feeds a short ball. Player A hits an angled shot. B hits the ball back to where it came from. A hits down the line. Players play the point. C and D rotate in.

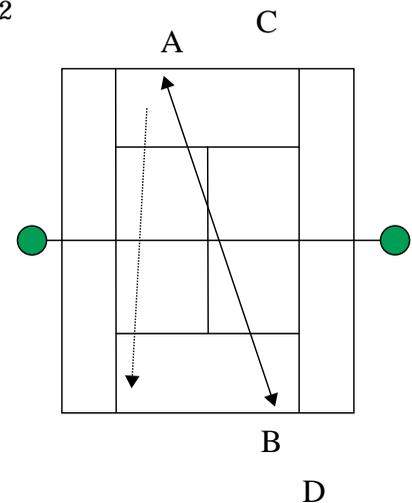
Drill 3: How to limit the use of the short angle.

4 players per court. Coach feeds a short ball. A hits a short cross court. B plays down the line. Players play the point. C and D rotate in.

Drill 4: Attacking and defending.

4 players per court. A plays aggressively (attacking from the baseline, approaching and coming to the net, sneaking in with a drive volley) and B plays defensively (trying to pass and playing low down the middle). Players play the point. C and D come in.

2



## *a serious look at second shots*

*By Josef Brabenec (Canada)*

Most of us, coaches or tennis players, are quite familiar with the importance of service and return of service or first shots for server and receiver. How many of us coaches or players have ever paid attention to second shots? The importance of second shots has become increasingly evident with physically stronger players and with modern technology of rackets resulting in faster and more powerful strokes. During the last decade 60-75% of all the points in a match have been decided after a maximum of 4 shots or less - which means that each player performs 2 strokes. As a server, the player must consider two elementary situations:

1. In case of serve and volley: the volley becomes the server's second shot which should increase the odds of the server winning the point. Therefore a well controlled, deep first volley is a must.
2. In the case that the server stays back, his second shot - forehand or backhand - should establish his dominance in the point. Dominance could be established by pace and placement of the forehand or the backhand, or by a deep approach shot. The forehand should be used most of the time as a powerful weapon of

attack. The inside-out forehand often used from a run-around backhand position is a particularly powerful stroke from this position.

A good service often opens the opponent's court for seemingly easy second shots, which have been wasted many times by haste and over-anxiousness. The expectation arising from an obvious opportunity

produces, as a by-product, the heavy burden of making the best of it.

It is preferable to use a controlled shot rather than an attempted winner, which could be missed. In general, servers win between 14 and 20% of the points on their second shots depending on the court surface. The slower the surface the lower the percentage is.

Receivers' second shot usually



reflects the degree of success of the return of service. In the case of successful receivers, their second shot could be a winning passing shot or a forcing groundstroke, which will create a dominant court position. In both cases, the second shot of the receiver should be hit with authority. When they receive a weak second serve, the receiver may decide to chip and charge so that his second shot will be a volley or a smash. Setting up for a put away shot as the server prepares to hit the second serve is often used to intimidate particularly in women's tennis.

When the return of service is weak, the receiver is then faced with a situation in which he or she is required to play a defensive shot such as the lob or a "go for broke" shot. In

general, the receiver wins 6 - 11% of the points in a match with his second shots. The second shot efficiency favours the server nearly 2:1.

In doubles, the second shot is more important than in singles. The server's second shot should be almost always his first volley, which has to be played crosscourt at receiver's feet, or hit hard at receiver's partner at the net from high returns. At any time, when the serving team plays a solid second shot, the chances are 3:1 that they will win the point.

If the server is faced with a difficult low volley or half volley, it is smart to play such a volley often down the line, because the receiver's partner will usually move across to try and intercept the "regular"

crosscourt volley.

The receiver's second shot in doubles, when staying back, should be played preferably as a heavy drive down the middle or short crosscourt with topspin (only if the player can play such a shot) or a lob down the line over the server's partner.

Be aware that if you use the first two choices with enough consistency, your partner at the net may often help you.

In case the receiver follows the return to the net, his volley (second shot) should be aimed basically to the feet of the server. Remember that at any time in doubles the receiving team has a good "crack" at their second shot, they have 50:50 chance to win the point.

## *the reliability and validity of motor tests in tennis*

*By Aleš Filipčič, Ph.D. (Professor Faculty of Sports, Ljubljana, Slovenia)*

### INTRODUCTION

In the field of motor skills it is important to consider basic motor abilities as well as specific tennis capacities. Since these measurement procedures have not been carried out on a sample of the Slovenian players before, it was decided to determine the reliability and the validity of the motor tests.

#### Objectives

1. To establish the reliability of the measurement procedures of basic and special motor skills of tennis players,
2. To establish the reliability of the coaches' grades,
3. To establish factor validity of the chosen motor tests and
4. To establish predictor validity of the chosen basic and special motor tests.

### METHOD

#### Subjects

A sample of 43 Slovenian tennis

Table 1: Predictor variables – Motor abilities.

No.	Measured ability	Name of test
1	Lower body power	Quadruple jump
2	Lower body power	Sargent Jump without racket
3	Lower body power	Sargent Jump with racket
4	Upper body power	Throwing a cricket ball
5	Upper body power	Throwing a 2-kg ball
6	Acceleration speed	20-meters run without racket
7	Acceleration speed	20-meters run with racket
8	Foot movement speed	Fast stepping protocol
9	Flexibility	Flexibility of trunk
10	Flexibility	Flexibility of shoulders
11	Flexibility	Flexibility of hips
12	Agility	Fandrill
13	Agility	Hexagon
14	Agility	Side steps
15	Co-ordination	Bouncing tennis ball with racket
16	Repetitive Power	Sit-ups
17	Endurance	2000-m run

players, aged between 15 and 23 volunteered as subjects in the measurement of basic and special motor abilities, and anthropometric variables.

Variables: The predictor variables consisted of motor and anthropometric tests.

The criterion variable was established on the basis of subjective judgements of six coaches, who were grading the actual tennis successfulness of the players. The players were all well known by the coaches and were graded between one and five. The coaches were instructed to grade within the context of the sample. The coaches were advised to use the following basic grading criteria: the actual successfulness, a judgement of talent and the technical and tactical qualities of the player.

### RESULTS AND DISCUSSION

Reliability of the Motor Tests: High reliability was evident for some of the basic motor tests: a 20-m run without racket, Sargent Jump without racket, throwing a 2 kg ball, and all flexibility measurements.

It can be concluded, that the majority of the tests have adequate reliability coefficients and can therefore be used in future research.

Reliability and Validity of the Coaches' Judgements: The values

Table 2: Predictor variables - anthropometric.

No	Measured ability	Name of test
1	Morphology of the body	Arm length
2	Morphology of the body	Elbow diameter
3	Morphology of the body	Shin size
4	Morphology of the body	Upper arm skin fold

for the coaches' grades were shown to have satisfactory reliability for a criterion variable.

The Analysis of the Results: Those tests that attained an adequate level of reliability were then used in further research. Five factors were isolated after applying the analysis: agility, repetitive power, flexibility, explosive leg power and quickness of arm movement.

Based on the data analysis a battery of tests was formulated.

Five basic motor tests were chosen:

20-m Sprint without racket; Sargent without racket; Throwing a heavy ball; 2000 m run; Fast stepping.

One tennis specific test: Hexagon

Three anthropometric measurements:

Arm length; Elbow diameter; Shin size.

### CONCLUSION

One of the aims of this research was to establish the condition of players regarding basic and tennis motor abilities that are important for successful tennis performance and are obtained through training. Based on this data more successful planning and evaluation of the training process and the influence of training on player capacities is possible.

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# *how to hit the ball harder but with control*

*By Hans Peter Born (National Coach, German Tennis Federation)*

### WHAT TYPE OF TRAINING DEVELOPS THE ABILITY TO HIT THE BALL HARDER?

Racquet head speed is getting more and more important in world class tennis. Besides quick feet, a quick arm is also a key to being able to compete successfully. However, increases in the racquet head speed

will normally lead to losses in control. Therefore, the coach has to look for drills that emphasise both, racquet acceleration and control.

Which drills help increase the racquet head speed?

Many players use too much power when trying to increase the racquet

head speed, which usually leads to stiff and slow swings. Instead a player wanting to swing faster needs to focus on being relaxed in order to support the natural stretch reflex of the body. Studies by Kleinöder and Mester at the University of Sport in Cologne indicate that pre-stretching of the muscles is essential for a fast



swing.

The following drills are recommended to help the players relax:

- Breathing out on ball contact helps develop a more relaxed swing.
- Swinging with 3 fingers. The player holds the racquet with 3 fingers and swings normally.
- Heavy racquet head. The player swings with a racquet heavier than normal. (Pre-Stroke)

Other acceleration exercises include the training of the neuromuscular co-ordination by loading and unloading the muscles.

A faster swing speed is achieved by alternately swinging heavier and lighter objects.

- Perform 10 FH/BH with the "Pre-Stroke" exercise followed by 8 "Quick Forehands" or "Backhands".
- Alternate two-handed backhands with a bat and with a racquet. (6 to 10 times)
- Quick medicine ball overhead throws followed by quick serves (8 throws and 8 serves)
- Pronation with wrist weights (1 to 3 kg) while lying down followed by serves. (8 pronations and 8 serves)
- Alternate between a badminton

racquet and a tennis racquet, especially on overhead strokes.

Ball control is not important in these drills. They can also be performed off the court. However, it is very important that all the drills are performed at maximum speed.

#### WHICH DRILLS PLACE AN EQUAL EMPHASIS ON SPEED AND CONTROL?

Control of a fast swing is accomplished through topspin. The goal should be that the player needs to learn to control the ball speed by using different amounts of spin. The racquet head speed should stay constant in all swings.

Drills to develop a feel for topspin could be the following: 2 players hitting with each other.

- Players alternate hitting balls with a lot of spin, with little spin and with no spin.
- Players play at different heights over the net.
- Players play with different lengths. Control the length through spin.
- Players learn to use the different amounts of spin in different game situations.

Neutral shots:

- Players hit balls 0.5 to 1 m over the net with medium spin landing close to the baseline. This should allow the player to hit without making too many mistakes and without being attacked by the opponent.

Offensive shots:

- Play fast shots with less spin to pass with or force mistakes from your opponent.

Defensive shots:

- On the run: Players hit high over the net 1 to 3 m to get out of a defensive position.
- Against a fast deep ball: Players make a short swing with little spin using the speed of the oncoming ball.

Short ball: Players should use lots of spin to make the ball drop. It is good for playing angles, approach shots and passing shots.

#### HOW TO PRACTICE THESE DIFFICULT SHOTS IN GAME SITUATIONS?

- Different types of shots with basket feeding: The coach feeds balls and works on the technique.
- Rhythm drills: All these different types of shots can be practised as part of the common rhythm drills that are part of every practice (FH to FH; BH to BH; one player hits down the line the other one crosscourt, etc). For example: If the players are hitting FH to FH, they should vary their shots hitting one neutral, one high and one aggressive.
- Match situations: The following drills will help teach the players how to use these different shots during competition.
  - Players A and B hit balls to each other. Player A hits a high and deep ball. Player B returns the shot as best as he can. Player A tries to catch the ball early and play aggressively.
  - Down the line approach off a crosscourt shot. A and B play neutral shots cross court and are only allowed to hit down the line when approaching the net.
  - Down the line winner off cross court rally shot: A and B play neutral cross court shots and are only allowed to hit down the line to go for a winner. If the down the line shot is not a winner the opponent will get two points.
  - Choosing the right shot: Player A plays a point against B. The coach starts the point forcing the player into a given match situation. The player needs to choose the correct shot in response to this first ball by the coach. The point is played. For example: If the coach hits a forcing ball to the corner, the player needs to respond with a high defensive cross court shot and play the point to an end. Match situations need to be practised over and over to teach the players when to use the different types of shots. The player needs to know:

- When to hit neutral?
- When to hit aggressive?
- When to play defending?
- When to play an angle or an approach?

The quality of the practice will increase according to the tasks set by the coach.

### CONTROLLING THE FAST SHOTS: HOW CAN THE PLAYER LEARN WHAT HE IS CAPABLE OF?

Drills that help in this area can be the following:

- Play a number of neutral balls. Once the number is reached, the players should try to play faster.

Goal: To find out what speed of ball can be controlled.

- The already known rhythm drills (crosscourt, down the line, Z drills) can be used. The players play to each other increasing the speed of the ball until they make a mistake. For example: Player A and B play crosscourt neutral shots. They play five shots at a speed where they are sure not to make a mistake, then they play five faster ones, followed by five as fast as possible.
- Match situations without mistakes: For example: Player A approaches down the line; B

plays a short angle passing shot; A plays a volley. The player needs to execute this stroke combination 5 times without a mistake. If a mistake is made, they need to start all over again.

### Conclusion

To summarise: The goals of the above mentioned drills are:

1. Learn to accelerate the racquet.
2. Learn to control the fast racquet head.
3. Develop a feel for a controlled topspin shot.

# what research tells us about ... junior tennis

By Miguel Crespo and Karl Cooke (ITF)

### The Role of parental involvement in youth sport participation and performance.

Male and female tennis players attending a regional tennis academy, with a median age of 13, provided information about the role their parents play in their tennis game, their self-esteem and their rankings.

This information was used to examine the association between parental support and parental pressure and the players' enjoyment of tennis. Players who reported a high level of parental support reported significantly greater enjoyment of tennis, viewed tennis as a more important part of their lives and fell lower in state ranking than players who reported a lower level of parental support.

The data provided no evidence that parental pressure is an important influence on the participation and performance of young tennis players.

Hoyle, R.H. & Leff, S.S. (1997). *The Role of parental involvement in youth sport participation and performance*. Adolescence. Spring.

### Is an 11-year-old tennis player indifferent to competition stress?

The best 16 young players in the Auvergne region of France (mean age 10.9) took part in a study to evaluate stress in competition situations, compared with that observed during a training session. Anxiety levels were measured with the SCAT Questionnaire (Martens) and the results of salivary cortisol tests.

No significant differences in stress levels were found between competition and training situations. Cortisol levels did not change during training. A moderate increase was noted during the first two rounds of the Auvergne championships competition, with no difference in the third round. The researchers conclude that the high levels of stress described in adult tennis players are not found in young tennis players.

Pandelidis, D. Et al. (1997). *Is an 11-year-old tennis player indifferent to competition stress?* Arch. Pediatr. March.

### Competitive stress in junior tennis players

The article states that children tend to lose concentration when under constant pressure and the loss of concentration interferes with performance, leading to injury. Some experts suggest that highly stressed players may use injury as an acceptable alternative to risking failure in high pressure competition or to quitting.

The effective management of stress in adolescent players can reduce injury, enhance performance, and prevent premature burn out.

Seven males and three females tennis players aged from 11-15 participated in a study which evaluated the effectiveness of a model to address competitive stress. The phases of the model are the following: Quality of life, Health problems, Behavioural causes, Predisposing, enabling and reinforcing factors, Intervention strategies, and evaluation of the programme.

Results showed that the model helped to find the most pervasive

health problem identified in junior elite tennis players of the sample, i.e., stress illness. Evaluation strategies will determine if the interventions reduced stress and enhanced performance in the players.

*Dunlap, P. y Berne, L. (1991). Addressing competitive stress in junior tennis players. JOPERD, 62, 1, January, 59-63.*

### Player and parent perceptions in junior tennis

The purpose of this study was to determine the perceptions of players and parents regarding the importance of winning and losing, sustaining effort during competition, and sport-related behaviours of players and parents. 101 players and 45 parents completed questionnaires designed to address the areas of interest. Results determined that: 1) Winning is very important to the players and over one-third of the parents, 2) Only 5% of the players and 7% of the parents indicated that they become upset following loses in which players put forth considerable effort, 3) 33% of the players indicated that their parents had caused them embarrassment during tennis matches. Because adults serve as role models to young athletes, educating parents about appropriate tennis-related behaviours is warranted.

*DeFrancesco, C. & Johnson, P. (199). Athlete and parent perceptions in Junior Tennis, Journal of Sport Behaviour, vol. 20, no. 1, 29-36.*

### Burnout in competitive junior tennis

The study reports results from a project designed to examine burnout in competitive junior tennis players. 30 junior tennis burnout and 32 comparison players completed a battery of psychological assessments. Results showed that burnout players had: 1) higher burnout scores, 2) less input into training, 3) were more likely to have played college tennis, 4) more likely played up in age division, 5) practice fewer days, 6) were lower in external motivation, 7) were higher in amotivation, 8) reported being more withdrawn, 9) were less likely to use planning

copying strategies. It was concluded that in addition to a variety of personal and situational predictors of burnout, perfectionism plays a particular important role.

*Gould, D., Udry, E., Tuffey, S. y Loer, J. (1996). Burnout in competitive junior tennis players: I. A quantitative psychological assessment. The Sport Psychologist, 10, 322-340. Gould, D., Udry, E., Tuffey, S. y Loer, J. (1996). Burnout in competitive junior tennis players: II. Qualitative analysis. The Sport Psychologist, 10, 341-366.*

### Mental training programme for junior tennis players

The article presents a model of mental training programme for junior tennis players. The contents of the programme were the following: Introduction, profile of elite players, goal setting, keeping a log, video

analysis of play, imagery, relaxation and energising, coping with mistakes and losing, the day of the competition, coping with stress, anxiety and anger, the importance of the body image, what to do between points, games and sets, attentional focus, post competition review, analysis of game performance.

The programme was developed in 10 sessions. The integration of observations from matches with material obtained from the interviews provided a strong base for a mental training programme.

In conclusion, the programme was considered to be successful and reinforced the belief that children over 11 years of age can cope with mental skills training.

*Davis, Ken. (1992). A mental training program for elite junior tennis players. Sports Coach. 15 no. 3., 34. July-September.*

## general guidelines for submitting articles to ITF coaching and sport science review

### Format

Articles should be word-processed preferably using Microsoft Word97, but other Microsoft compatible formats are accepted. The length of the article should be no more than 2,000 words, with a maximum of 4 photographs to be attached. Diagrams should be done using Microsoft Power Point or any other Microsoft compatible software.

### Author(s)

When submitting articles please state the name(s), nationality, academic qualification(s) and representation of an institution or organisation that you wish to appear in the article.

### Submission

Articles may be submitted at any time of the year for consideration for future publication. A 3.5" (90mm) microdisk (IBM formatted) should be sent with the article saved on it, plus a printed copy of the article and copies of the photographs or diagrams to be included. These items should be sent by post to: The Development Department, International Tennis Federation, Bank Lane, Roehampton, London, SW15 5XZ, England or to Miguel Crespo ITF Development Research Officer, C/ Pérez Báyer, 11,10-A, 46002 Valencia, España. Or by Email to Miguel Crespo <dualde@xpress.es>.

### Note

Please note that all articles commissioned for ITF Coaching and Sport Science Review may also be used in on the ITF's web site, ITF Online. The ITF reserves the right to edit such articles as appropriate for the Internet. All articles online will receive the same credit as in ITF Coaching and Sport Science Review .

# recommended books and videos

## books

### ITF Competition Formats Manual

The ITF Tennis Development Department has recently published the ITF Competition Formats Manual. This publication is designed to help coaches and tournament organisers increase participation in competitive tennis by encouraging the use of a variety of competitive formats in events at club, regional and national level. Successful examples and illustrations from over 25 countries are included.

This manual is the latest addition to the ITF Coaches Education material and will be a vital tool for anybody involved in competitive tennis at any level.

For more information on this book and any of the other ITF Coaches Education publications, please contact the ITF Tennis Development Department, e-mail: [development@itftennis.com](mailto:development@itftennis.com)

### Competitive Tennis

*By Lutz Steinhöfel*

Year: 1999. Level: Advanced. Pages: 175. Language: English. Originally published in German, this book gives the tennis coach a detailed overview of up-to-date training exercises for competitive tennis. A broad spectrum of over 150 exercise lessons with numerous variations are displayed in more than 70 diagrams, together with notes and commentary.

The reader can be either player or coach and can fit into either singles, doubles, group and conditioning training. All the exercises are suited for any player as an individual training programme for any of these combinations.

For More information contact: Meyer & Meyer Verlag, Von-Coels Strasse 390 D-52080 Aachen, T (0241) 95 81 00, F (0241) 958 10 10. Price approx.: \$29.

### Sport Psychology Library: Tennis

*By Judy L. Van Raalte & Carrie Silver-Bernstein*

Year: 1999. Level: Advanced. Pages: 148. Language: English. This is an interactive manual organised in six sections: beating the players you hate to play, dealing with pressure, handling things that you can't control, enjoying doubles, managing when your game falls apart, and staying in the game. Each section is loaded with detailed chapters full of interactive tips and drills that lead the player through self-evaluation and the development of on-court strategies for a better game.

This book is designed to help a player identify his or her talents and then take advantage of those skills to win more matches. The book has a dual psychologist/coach perspective, which will benefit players in building confidence, improving focus, managing anxiety, and increasing motivation.

For More information contact: FIT. Tel. / fax. 1-304-599-3482, e-mail: [fit@fitinfotech.com](mailto:fit@fitinfotech.com). Web site: [www.fitinfotech.com](http://www.fitinfotech.com). Price: \$12.95.

### Deportes individuales en Primaria (Individual sports in Primary School)

*By Felix Zurita Molina*

Year: 1998. Level: Beginners and intermediate players. Pages: 163. Language: Spanish. This book presents the main concepts and ideas to develop tennis in Primary Schools. The contents are the following: Global concept of the sport, individual sports, teaching methods in physical activity, tennis in the school, development of the game, facilities and equipment, technical components of tennis, teaching the strokes, teaching programme, laterality, competitive tennis, etc.

For more information contact: Proyecto Sur de Ediciones, S.L., C7 San Juan no. 2, 18100 - Armilla (Granada). Spain. Tel/Fax. 34 - 958-

5503 81. E-mail: [proysur@arrakis.es](mailto:proysur@arrakis.es). Price aprox. 10 \$.

### Enseignement dans le club (Teaching in the club)

*By The French Tennis Federation*

Year: 1998. Level: Beginners and intermediate players. Pages: 86. Language: French. This book presents different organisational models to organise tennis at club level. The contents are the following: From the tennis school to the junior club, the basis of the junior club, entrance to the junior club, activities at the junior club, facilities in the junior club, planning at the junior club, organisation, etc.

For more information contact: Fédération Française de Tennis, 2, Avenue Gordon Bennett, 75016 Paris, France. Tel: 33 1 47 43 48 00. Fax: 33 1 47 43 04 94.

### Crecer (Growing)

*By Fernando Segal*

Year: 1999. Level: Advanced. Pages: 348. Language: Spanish. This book is written for officials, professors, coaches, and specialists interested in the development of tennis and other sports.

The contents are the following: The cell theory, how to use this book. Part I: Development: The Development Programme: Goals, analysis, mission, diagnosis, structure, actions, how to evaluate it. Part 2: You are the most important person: Introduction. Organisation and planning, body language, communication, space, message, goals, motivation, values, emotional intelligence, being a leader. Part 3: Marketing: The marketing plan, action plan, working styles, personal marketing, methodology. Part 4: Resources: Promotion area, Technical Area, Competition Area. Conclusions.

For more information contact: Editorial Stadium, E-mail: [fsegal@sinectis.com.ar](mailto:fsegal@sinectis.com.ar) or [stadium@roma-stadium.com.ar](mailto:stadium@roma-stadium.com.ar)

# 11th ITF Worldwide Coaches Workshop Casablanca, Morocco November 1999



*Record attendance: 270 coaches from over 100 different countries attending.*



*Tom Gullikson with ITF Development Officer for East Africa, Prince Madema.*



*Luis Bruguera*



*Davis Cup Centenary Dinner*



*ITF Development Officers*



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# Mini-Tennis



By Sofia Quezada, Natalia Riquelme, Raúl Rodríguez and Gustavo Godoy  
(Metropolitan University of Sciences of Education, Santiago, Chile)

The purpose of this article is to study the influence of pre-tennis on the development of motor patterns of children of 5 years of age. In order to do this we conducted research, which included practical work with kids of this age using pre-tennis activities.

The motor patterns studied were the following: running, throwing, catching, jumping and hitting.

Pre-tennis can be defined as a series of exercises and games oriented to stimulate the co-ordination abilities, which will facilitate the learning of tennis technique. It is also a means by which to solve motor problems through the adaptation of movements and manipulation of objects. This could be done with kids aged 4-6 years.

Pre-tennis can be considered as a means to achieve a logical and natural transition to mini-tennis. Mini-tennis is the game that adapts the characteristics of tennis to the abilities and dimensions of children aged 7 to 10 years.

The specific goals of our research were as follows:

1. To increase the motor abilities of the kids through pre-tennis activities.
2. To stimulate the relationship between the

child and his or her peers through fun activities that might facilitate social development in daily life.

The hypothesis was to test if pre-tennis activities help to develop basic motor patterns in 5-year-old children.

In order to test it, we worked with 15 children with a mean age of 5 years old during 3 months in their Physical Education classes. These classes took place twice a week each class was 45 min long. The total number of classes completed was 22. The same two teachers worked with the children for the duration of the study.

The contents of the lessons included pre-tennis activities, which were performed in the multi-sport area or the gymnasium of the school using the appropriate mini-tennis equipment.

Contents of the pre-tennis programme included activities with ball, bat, bat and ball, hoops, ropes, balloons, cones, mats, individual exercises, in pairs, in threes, in groups of four or more, etc.

In order to evaluate the performance of the children, they were tested before and after the programme. The tests used were the following:



1. Running: 9-metre shuttle run
2. Throwing: 5 overhead throws of a tennis ball to a target
3. Catching: 5 catches of a tennis ball thrown by the teacher
4. Jumping: 5 long jumps with feet together
5. Hitting: 5 hits of a low pressure ball with a plastic bat

Each test had specific items which children had to accomplish according to the different competencies established from previous studies done. For example: the throwing test included the following items:

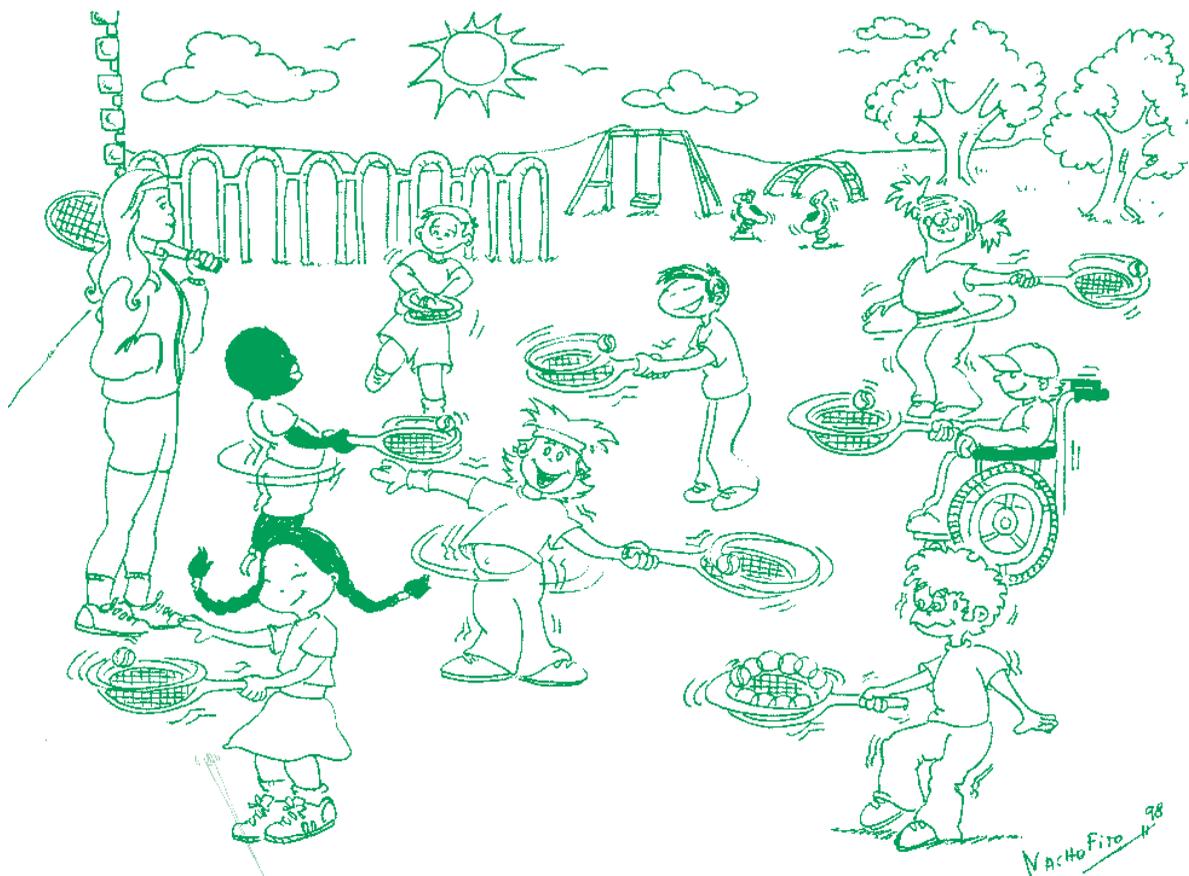
- Preparation: Arm back above the shoulder, flexed position. Trunk rotates towards the throwing arm
- Throwing action: Movement to the front and downwards. Use of the wrist. Trunk flexed forwards following the movement.
- Recovery: Body weight moves forward. Same leg as the throwing arm is moved forwards.

All trials were filmed in order to study and compare their performance before and after the pre-tennis programme.

The main conclusions of our research were the following:

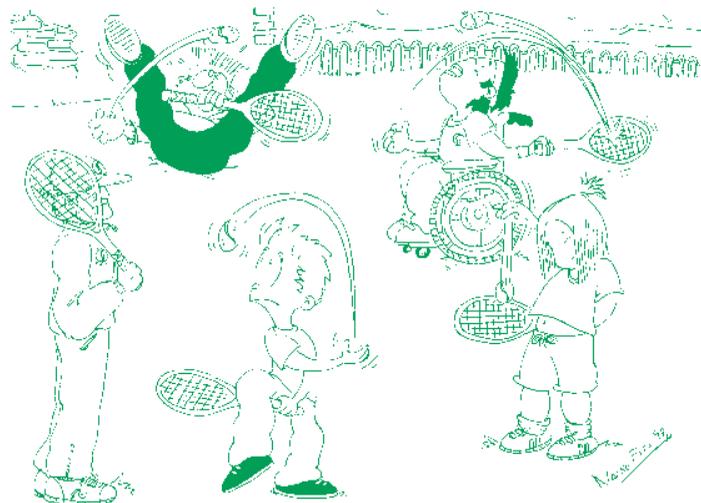
- Results showed that all children significantly improved in all the motor patterns studied.
- The percentage of improvement in the different motor patterns studied varied depending on the subject.
- Several children improved much more than expected. They learned motor patterns of the so-called mature stage of development.

The overall conclusion is that pre-tennis activities can be used as a means to develop basic motor patterns of children aged 5 years, which will lead to a better adaptation to the following practice of any sport.

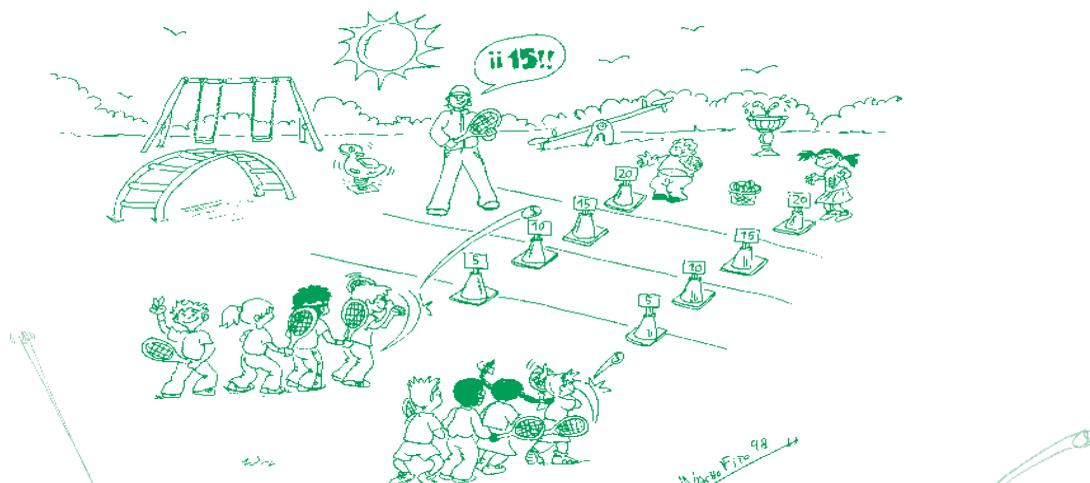


## 2 ONE HOUR LESSONS FOR CHILDREN 5 - 8 YRS OLD

<b>LESSON 7</b>	<b>Theme:</b> PROPELLING THE BALL WITH THE RACKET AND MOBILITY
<b>Objective</b>	To hit the ball upward & forward.
<b>Warm up</b>	<u>Shadows:</u> Team leader takes the group through a sequence of strokes, demonstrating, footwork and racket control.
<b>Games / Exercises</b>	<u>Bounce master:</u> Make students bounce the ball with the racket in different ways. Student who bounces the ball in the most ways wins.
<b>Variations</b>	Hit the ball up and forward starting the exercise off with a hand toss upward, etc.



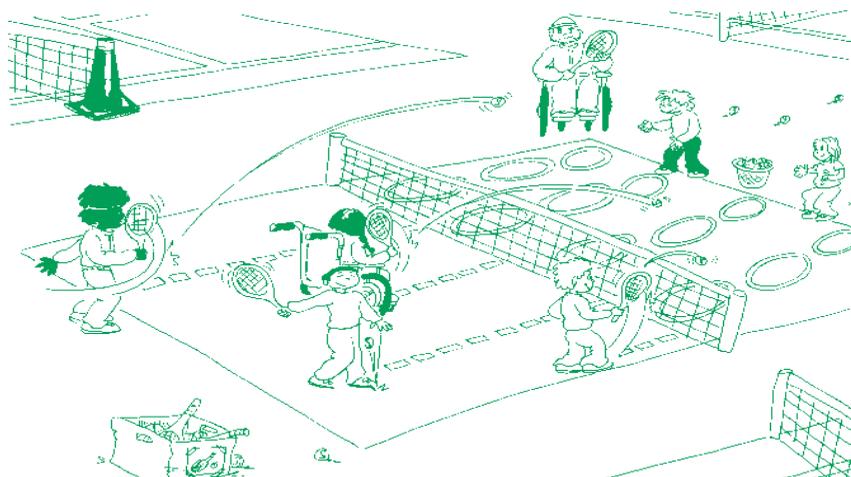
<b>LESSON 8</b>	<b>Theme:</b> PROPELLING THE BALL WITH THE RACKET AND MOBILITY
<b>Objective</b>	To hit the ball in a specific direction.
<b>Warm up</b>	<u>Lion tamer:</u> A is the tamer, the racket is his whip, B is the lion and has no racket. B faces A. As A moves his racket sideways, forwards and backwards, B moves following the direction of the racket.
<b>Games / Exercises</b>	<u>The ladder:</u> Teacher sets out different cones or lines forming a ladder. Each student has to let the ball bounce and hit it with the racket to the specific zone chosen by the teacher. Student who manages to hit ball to correct zone the most number of times wins.
<b>Variations</b>	Hitting the ball far away, placing the feet in various positions, hitting to the right/left, to the wall, using both faces of the racket, etc.



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## 2 ONE HOUR LESSONS FOR CHILDREN 8 – 10 YRS OLD

<b>LESSON 7</b>	<b>Theme:</b> PROPELLING: UNDERARM SERVING
<b>Objective</b>	To introduce the range of actions to put balls into play.
<b>Warm up</b>	<u>Bounce ball tiggly</u> : All students carry a ball on the strings of the racket while trying not to get tagged by "it". When caught, the student stands still and taps the ball up in the air or taps the ball down to the ground.
<b>Games / Exercises</b>	<u>The underarm service machine</u> : Students hit 10 underarm serves starting close to the net and moving back. Use targets. The first one to reach the baseline without missing is the winner.
<b>Variations</b>	Partner catches the ball with his hand or racket cover to score 1 point.



<b>LESSON 8</b>	<b>Theme:</b> PROPELLING: OVERARM SERVING
<b>Objective</b>	To introduce the range of actions to hit balls over the head (serve & smash).
<b>Warm up</b>	<u>The line man</u> : All students should stay on the lines. Student who is "it" attempts to tag as many students as possible but he can only walk on the lines, while rest of students can run on the lines.
<b>Games / Exercises</b>	<u>The service machine</u> : Students hit 10 overarm serves starting close to the net and moving back. Use targets. The first one who reaches the baseline without missing is the winner.
<b>Variations</b>	Serve grip, stance and swing, toss and hit with follow through, etc.

