



WELCOME TO COACHES REVIEW !

Welcome to this issue of ITF Coaches Review which features articles from Australia, Canada, Great Britain and the U.S.A. The subjects covered include an article on sleep by Jim Loehr, one on movement by Pat Etcheberry, and one on balance by Paul Roetert. Josef Brabenec gives us some advice on the difficult job of selection while Simon Jones of Great Britain, who was recently Captain of the British 14 & under boys team which captured the ITF's NTT World Team Championships, shares some of the important principles of captaining a team.

Some of our readers will have attended the 9th ITF Worldwide Coaches Workshop which was held in Barcelona, Spain from October 9 - 15 1995. The workshop was a big success with over 240 coaches from 85 nations participating in this unique educational forum.

The international speakers at the event were of the highest calibre, covering a wide range of topics.

The programme began with Alberto Riba and Francesco Solanellas (Spain) giving an in-depth analysis of the factors that have contributed to Spain's great tennis success in recent years.

A meeting of women coaches attending the workshop was chaired by Lynne Rolley (USA). Issues pertaining to women coaches were later reported to the group as a whole by a panel of female coaches. Daria Kopsic (Argentina) gave a comprehensive session on "Developing Competitive Junior Girls".

Canada continues to provide interesting and useful coaching information. Presentations were given by Louis Cayer, Josef Brabenec, Pierre Lamarche and Wendy Pattenden. Rod Thorpe (Great Britain) conducted a session on "Effective Coaching".

New physical techniques were presented by Renato Olaondo (Spain) while Dr Manfred Grosser (Germany) led a discussion on how to eliminate "Burn Out".

"Developing the mentality of tennis players" was discussed by Frank Van Fraayenhoven (Netherlands) assisted by Victor Mion (Netherlands) while Ian Barclay (Great Britain), former coach of 1987 Wimbledon champion Pat Cash, discussed "Taking a Player to the Top".

Miguel Crespo (Spain), Richard Schonborn (Germany) and Nick Saviano (USA) all presented stimulating on-court sessions on improving player training.

Discussion groups were held on a variety of topics, giving participants a chance to communicate openly with the speakers and among themselves. An excellent assortment of films was shown throughout the week-long programme. Brian Tobin (ITF President), Doug MacCurdy

and Dave Miley gave a detailed update on all aspects of the ITF's worldwide activities.

The ITF would like to thank the Spanish Federation, particularly Alberto Riba and his team for the excellent way in which the workshop was hosted ensuring that, once again, the event was a great success.

The ITF Development Department has always believed that mini tennis is the best way to introduce tennis to young players.

Utilising scaled-down equipment and playing surfaces, children learn to play and enjoy the game quickly in a fun and active way.

As no technical teaching is required for mini tennis (children learn by doing), school teachers rather than coaches can be trained to introduce the game.

1996 sees the launch of a new mini tennis programme - **The ITF Schools Tennis Initiative (STI)**, a joint venture between the ITF and member nations of the ITF. The basic concept is that school teachers will be trained to conduct mini tennis classes at schools.

The primary aim of the initiative is to increase the number of people playing tennis worldwide. By helping National Associations to introduce tennis to children aged 6-12 years in schools, the ITF hopes to create more awareness and interest in tennis among its member nations.

The target of the initiative is to bring tennis to over 350,000 youngsters worldwide each year. Whilst the programme will ensure that more young people have the chance to try tennis and have fun, it is expected that by broadening the base of tennis in a particular country, the overall standard of play is likely to improve.

For more information about this unique grass-roots programme, please contact the ITF Development Department in London. The brochure is now available in English, Spanish and French.

Once again our thanks to all the coaches who have contributed articles for this issue of ITF Coaches Review. If you have any material that you deem relevant and worthy of inclusion in a future issue, please forward it to us for consideration.

We do hope you enjoy our 8th issue of Coaches Review.



Doug MacCurdy
General Manager



Dave Miley
Development Administrator

MOVE MORE EFFECTIVELY ON COURT

by Pat Etcheberry (USA)

LGE Sport Science, Inc

(This article first appeared in "The Prince Sports Science Supplement" - Summer/Fall 1995)

How you move to a ball depends on how close your opponent's ball has landed. If it lands just a couple of feet from you, you are going to respond much differently than if it lands on the other side of the court.

Getting to a ball that lands a couple of steps away is easy. You just shuffle your feet side to side. This manoeuvre is the fastest way to move a short distance and it keeps you in a ready position all the time.

If the ball lands farther away, you are going to have to run - to sprint. Here's where many players have trouble. They haven't learned how to run with the racquet. Some players will run with their arm already in the backswing position. Some will run with both hands in front of them, as if getting ready for a two-handed backhand. In both cases, these players are so concerned with how they are going to hit the ball that they're not running

as efficiently as they could. The result is a tremendous loss of speed.

Yes, it is important to prepare early. But make sure you don't prepare so early that you inhibit your ability to run. To run faster, your arms must work with your legs, pumping just as hard and moving as a whole unit. If your arm is extended back behind your hip or you're clutching your racquet with two hands in front of you, your body is not moving as a unit.

When you need to sprint, **sprint!** Run just as you would if you weren't holding a racquet. Pump your legs **and** your arms. **Explode** to the ball. All your mental and physical energy needs to be centred on reaching the ball quickly. Once you get closer, then you can start setting up for your stroke. Remember, if you don't get to the ball, it doesn't matter how good your strokes are. So always concentrate first on reaching the ball.

PROTECTING THE SLEEP CYCLE

by James E. Loehr, Ed.D. (USA)

LGE Sport Science, Inc

(This article first appeared in "The Prince Sports Science Supplement" - Summer/Fall 1995)

Sleep - The Largest Recovery Wave

Apart from breathing, satisfying thirst, and eating, sleep clearly is the most important recovery activity in our lives. It's also the body's largest circadian rhythm. Disruptions of this critical recovery rhythm can have serious health performance consequences.

Due to overtraining and disruption to the sleep cycle, tennis players often suffer from what sleep experts call chronic sleep deprivation.

The relationship between competitive stress and sleep is essentially circular. Excessive stress causes sleep mechanisms to fail; the failure of sleep mechanisms produces more stress.

It would be logical to think that the more sleep you need, the easier sleep comes. This is not the case, unfortunately.

Sleep is actually a very sensitive indicator of stress and recovery balance. Ironically, excessive stress often blocks the very thing needed most.

Just how much sleep an athlete requires depends on the individual and the current volume of stress. Many sleep studies have been made that isolate people for weeks from all time cues, alarms, or clocks. These studies show that

under normal stress conditions, people naturally sleep about one-third of the time - about 8 hours out of every 24.

Athletes in training generally require 8 to 10 hours of sleep each night. During that eight to ten-hour recovery phase of sleeping, researchers have discovered that individuals pass through four to six distinct ultradian cycles of sleep every 90 to 120 minutes. Each cycle has five stages.

Stages One and Two are periods of light sleep during which muscles relax, body temperature and blood pressure fall, and brain waves pulse between four and eight cycles per second. This type of sleep consumes nearly half of one's total sleeping time.

Stages Three and Four are periods of deep sleep. Here metabolic rate and muscle tension reach their lowest levels, and brain waves decline to less than four cycles per second. Sleep researchers have linked feeling deeply rested upon awakening with successful entry into Stages Three and Four of the sleep cycle.

Stage Five is called REM (Rapid Eye Movement) sleep. Breathing quickens, blood pressure and heart rate become irregular, and brain waves accelerate from 13 to 35 cycles per second. Most dreaming occurs during REM.

Take Unlazy Naps

Of further interest in the context of recovery and sleep for tennis players, is the urge to nap. Although often thought of as a sign of laziness, the desire for an afternoon nap is actually a natural biological rhythm. According to sleep researchers, the need to sleep typically occurs twice within a 24-hour cycle.

The first circadian trough coincides with darkness and is strong and prolonged. The second occurs in middle to late afternoon; its strength depends on the volume and depth of sleep the previous night. An afternoon nap as short as ten minutes can provide substantial physiological and psychological recovery, particularly if it is synchronized to the body's natural urge to rest. Increased energy, concentration, alertness, and motivation have been associated with afternoon naps. Current data suggest that naps generally should not last longer than ninety minutes. Awakening from a nap feeling groggy and tired usually indicates a continuing sleep deficiency.

How Sleep Cycles Get Off Track

Exam pressures, late night parties, and early-morning phone calls usually have only a temporary effect. Many other factors affect natural sleep cycles for longer periods.

Many think caffeine doesn't bother them or that it's only found in coffee. Not true. Tea, soft drinks, and chocolate all contain enough caffeine to deny sound sleep to people who have become very sensitive to this stimulant.

More athletes are more sensitive to caffeine than will admit it, for fear of having to give up a favourite beverage or snack. Anyone who is emotionally tough - or who aspires to be - will have no difficulty choosing a good night's sleep over the momentary pleasure of caffeine intake.

If you're not sleeping as well as you think you should, look for simple solutions first. You can't be sure that caffeine isn't the culprit even if you don't take any after noontime unless you test carefully for it.

It isn't hard. First, identify every source of caffeine in your regular diet and then make sure you avoid all of it for three days. It can take that long to flush all the residual caffeine out of your system. If you're very sensitive to caffeine, it doesn't take much to shatter sleep.

Caffeine works as a stimulant that interferes with several processes contributing to healthy sleep. Sensitivity to it grows slowly over time until it abruptly becomes critical. Many people who in the past could drink their fill of coffee anytime and still get a refreshing night's sleep suddenly can't anymore. Sometimes just a morning wake-up or two of coffee - or caffeine-laden soft drinks in the afternoon - can keep them restless long into the night.

Other common sleep enemies include alcohol; irregular sleep hours; the timing of meals; exercise intensity, duration, and timing and the volume of overall stress.

Alcohol works as a central nervous system depressant to suppress part of REM sleep. This is one reason why "sleeping it off" produces a hangover - the drinker was unconscious without gaining the enormous benefit of REM sleep.

Consistency of sleep hours is an important element in the healthy regulation of sleep. Constantly changing the times of going to bed and getting up is highly disruptive to natural sleep rhythms.

The consumption of large meals just prior to sleep is also disruptive. This is primarily because of the natural stress associated with the digestion of food.

When overall stress is high, particularly if much of it is emotional stress - fear, guilt, dread, frustration, anger, and so on - these negative emotions can overpower the body's natural need for sleep.

Mentally Tough Tips to Relieve Insomnia

1. Develop sleep rituals and follow them.
2. Go to bed and get up at the same time as often as possible.
3. Get up at the same time regardless of the depth of sleep.
4. Exercise daily but not too close to bedtime.
5. Eliminate long naps during the day (10 to 15 minutes is okay).
6. Eat a high carbohydrate snack before bedtime.
7. Avoid caffeine and alcohol.
8. Get a half hour of sunlight within thirty minutes of awakening.
9. Don't look at your clock if you awaken during the night.
10. Keep your bedroom at a cool temperature, well-ventilated and dark wherever possible.
11. Employ specific recovery strategies such as nutrition, tensing and relaxing muscle groups, sleep images, etc. to assist in your efforts to gain control over the sleep cycle.
12. Resist the temptation to become angry, frustrated or upset when you can't sleep. Negative emotions simply increase arousal and decrease the likelihood of sleep. Simply relax and enjoy the quiet time.

THE PRINCIPLES OF A WINNING TEAM

by Simon Jones (Great Britain)

(This article first appeared in "Coaching Excellence" and appears with the permission of the LTA coaching department)

The nature of tennis means that competition is highly individual, but there are certain times in the year when a group of individuals comes together to play as a team. Unlike natural team games like hockey when the competitors have to interact during play, tennis (except doubles) is still an individual sport. When running a team, much attention must still be given to the individuals and their specific needs.

There are, however, several differences in team events that can really add to the performances of individuals. In order to take advantage of this, a good team spirit needs to be generated.

Ways to develop team spirit

Gather the team together at the start of the campaign and clearly establish the goals and objectives for the team. It's important to apply the S.M.A.R.T.E.R. principles (specific, measurable, agreed, realistic, timed, exciting and recorded) to this goal setting. Totally unrealistic targets will lose all credibility with the players. The goals should also be such that they can be referred to at regular intervals throughout the year, which will help establish team identity. Priorities for any team I work with are discipline, effort, individual goals (technical, tactical and mental), preparation, professionalism and, of course, teamwork.

A team uniform also helps develop this identity - e.g. tracksuits. Other ways to establish a team identity is to look for areas where the group can do things together, such as eating together, shopping, trips to the cinema, games of football, basketball and regular team meetings.

It is essential that the Captain or coach really knows the players very well. This means spending as much time as possible with the players during the year of the events, both off court as well as on. In this way it is possible to understand the players and how they respond to each other. It is essential that team spirit is not jeopardised by individual differences between players, so it is important to spot these problems in advance so that harmony is achieved at the most important times.

It is important that the team feels that the Captain is 100% behind them, sharing and taking responsibility for success and failure equally. The captain needs to care for the team as individuals and people as well as players. This should create the supportive environment required for peak performance.

Rules and discipline specifically set for the team help to enhance team identity. Strict guidelines often lead to greater player security, especially in younger players. However, try to make team events a special fun occasion that players will remember and aspire to in the future. For example, make practices shorter, sharper and more fun than normal; take the players out to enjoyable places; allow

a little extra in the budget to treat the team. I also keep certain off-court activities for team-events only.

Training camps prior to big events are very effective in getting the team up for the event. I believe it's better to hold these camps at venues where the team can be on their own without distractions from others. Also, there is usually plenty of time to get involved in 'bonding' activities.

One of the most important 'rules' is that other members of the team must support their team mates when they are playing. Vocal support can help a lot.

In a team situation it is a good idea to delegate extra responsibilities to individuals that they normally would not have. These responsibilities are directed at helping their teammates and help to promote the idea of 'all for one'.



*Team Spirit
A Powerful Force.*

Other opportunities to develop team spirit

It doesn't necessarily take a specific team competition to develop team spirit. A coach can take a group to an individual tournament and still gain much of the benefits of team identity. Often when planning for team competitions, it is necessary to alter players' schedules and get them together for certain tournaments. These are the times when team spirit can be developed in individual events.

The pressures of playing for a team are different to those of individual competition, but they are such that can produce extraordinary performances from individuals.

Team Spirit - a powerful force!

TRAINING ENERGY SYSTEMS IN TENNIS PLAYERS

Mike Christmass, Sue Richmond, Tim Cable and Peter Hartmann (Australia)

The following research was gathered by the authors at the University of Western Australia and was first published in "Coaching Excellence".

Scientific research continues to improve knowledge of the technical requirements of successful tennis performance, yet little research is available to assist coaches in the area of fitness training for elite tennis performance.

Match statistics were collected on 8 male county level players during 90 minute competitive singles matches. The match statistics were characteristic of high performance players competing on outdoor, hardcourt surfaces. Rallies averaged 10 seconds duration with 17 seconds recovery. The proportion of total match time spent in actual play was approximately 23%.

The anaerobic (lactic) energy system

Increases in the concentration of lactate in the blood indicate the operation of the anaerobic (lactic) energy system. The operation of this system is necessary to provide energy for highly intense, short bursts of exercise, but the resulting accumulation of lactate can be associated with fatigue.

In this study, lactate levels in the blood increased significantly during the matches, but only in some players. Previous generalisations suggesting that lactate does not accumulate to an appreciable extent during tennis are in contrast to our results which indicate that lactate accumulation does occur, and appears to vary greatly between players.

Finding: In this study, players taking more steps in each rally showed higher lactate levels than those taking fewer steps. However, coaches should note that those players moving more in the same match, accumulating more lactate and therefore theoretically more vulnerable to fatigue were not necessarily losing to a superior player. Instead, movement patterns of players are an important factor determining the extent of lactate accumulation in a match.

Recommendations for training:

- * coaches identify those players with highly intense movement patterns i.e. more split steps/rally; faster central recovery. Clearly, players with different playing styles require slightly different training programs (i.e. baseline versus serve and volley). It is also important to note that within a particular style of play (i.e. baseline) players may have a more intense movement pattern which may result in higher lactate levels
- * ensure these players have a sound aerobic fitness base which will assist recovery between points

- * for these players include a proportion of high intensity aerobic interval training. Such a training session could involve 4-6 repetitions of a 1km (0.64 miles) run at 90% of maximum with a 5-10 minute recovery between each run

Finding: the level of glucose in the blood also increased, although again only in some players. This result supports the notion that tennis does involve periods of very high intensity exercise.

Recommendation for training: coaches should focus on improving players' capacity to recover between repeated bouts of high intensity exercise that may occur during play. The aerobic energy system is important for recovery between points (see weeks 1-8 of the training programme outline).

Finding: although not measured in the present study, the explosive nature of singles matches and the increasing demands for power in the modern game indicate that the phosphocreatine energy system is extremely important in energy production for tennis.

Recommendation for training: coaches should ensure fitness activities in the weeks prior to competition during each training cycle emphasise the development of agility, acceleration and power.

Aerobic energy system

The level of glycerol in the blood typically increases during long duration, low intensity exercise, such as long distance running (i.e. activities which rely heavily on the aerobic system for energy). The increase in glycerol in this study was associated with the duration of play which is a similar response to that seen in long distance running.

Recommendation for training: a sound aerobic base is essential to enable players to maintain performance over the long periods involved in match-play (3-4 hours) and over consecutive days during a tournament. However, coaches should also recognise the importance of training the aerobic energy system to improve recovery between points.

Outline of a training programme for tennis

The coach must be able to co-ordinate training the various components of the energy systems within the overall training programme. The following outline provides some suggestions:

(Assumptions: a 12 week cycle/term of training leading to a major competition. Players have completed 2 weeks

of active rest prior to the start of the current term and have developed a sound base level of general fitness in the preceding terms).

Weeks 1-5 - building the aerobic base. The aim during this period is to improve the efficiency of the aerobic energy system. Weekly training during this period should include 3-4 distance runs of 5-6km (3.1 - 3.7 miles) performed at an intensity of 70-80% maximum heart rate. The time taken for the 5-6km run should be improved during this period rather than increasing the distance.

Weeks 6-8 - transition. Preparing for the maximum intensity training to follow and also improving the ability to recover between points. During this period, one distance run is progressively replaced with an interval training session each week. The first interval session is a 5-6km fartlek run. During this run, sprints of 30-60 seconds duration are alternated with slower running of similar duration for recovery. During the second and third weeks, the additional interval sessions are conducted on-court.

Work periods on-court should consist of tennis-specific movement patterns performed at high intensity for

15-45 seconds, with a 1:2-3 work/recovery ratio, allowing incomplete recovery. One session may involve 2-3 sets of 4-5 repetitions.

Weeks 9-12 - developing agility, acceleration and power. In preparation for competition, the emphasis is specific on-court agility, acceleration and power based activities. Ensure correct movement patterns; rackets and shadow strokes should be included.

Work periods should consist of tennis-specific movement patterns performed at maximum (100%) for 5-10 seconds, with a 1:4-6 work/recovery ratio, allowing complete recovery. Best times should be recorded and improved. One session may involve 2-3 sets of 5-6 repetitions.

Acknowledgements: the authors acknowledge the support of the Applied Sports Research Program of the Australian Sports Commission who funded this study; Dr B Dawson and Dr S Green for comments on the manuscript; this study was presented at the 'First World Congress of Science and Racket Sports' held at Liverpool John Moore's University, Liverpool in 1993.

CO-ORDINATE TO ACCELERATE

Paul Dent (Great Britain)

(This article first appeared in "Coaching Excellence" and is reproduced with the permission of the LTA Coaching Department)

Tennis is combative in nature and as such provides a constantly changing playing environment for its participants. It is a game which, more often than not, requires an acceleration phase followed immediately by a deceleration phase just prior to having to perform a co-ordinated fine skill before instantly accelerating once again to continue the cycle. Moreover, all of these phases must be performed in relation to a moving ball.

Alan Jones (one of our most successful elite performance coaches) has often stated that 'players are often stroke-conscious, rather than being ball-conscious.'

Almost every striking of the ball in tennis is comprised of two distinct phases:

1. preparing (receiving) phase.
2. hitting (sending) phase.

If we look carefully at these two phases, we can identify which fundamentals each comprises:

Receiving the ball:

- * Response time is the ability to make an actual response to a fast approaching ball which is vital, especially when returning serve or at the net

- * Ball judgement. Through an early and accurate identification and interpretation of the ball's spin, speed, direction and height the player can be in the correct position earlier
- * Speed of footwork. In elite level tennis, a 10 stroke rally will sometimes only take 15 seconds to complete. This high playing tempo, coupled with a reported average of four changes of direction per point, necessitates that speed of footwork is a vital ingredient to high performance tennis
- * Body segment preparation and speed of preparation. As time is a limiting factor in tennis, it is essential that players can rapidly prepare their body for the hit. To hit the ball with power and the necessary control and help prevent the risk of injury, an optimum number of body parts need to be used in the hitting action. These body parts need to be recruited in the preparation phase. This is not easy as the body part recruitment (or preparation) often needs to be done at speed
- * Dynamic balance. With its necessity for improvisation, agility and the need for control of the ball when moving and changing direction at speed, tennis requires that the player has dynamic balance

Sending the ball:

- * **Timing/contact point.** Most top coaches in the world will tell you that the most important part of the stroke is the contact point. This timing element of the stroke is a common feature within the multitude of individual stroke techniques of the best players in the world
- * **Body nimbleness and improvisation.** Players need to improvise on certain shots. This can only be done if the player can effectively manipulate the racket head and nimbly manoeuvre her body or some of its parts e.g. having to change direction while off-balance but still able to do so, with control of the ball
- * **Touch and feel.** Tennis, first and foremost, is a control game. The concepts of 'feel and touch' underlie control. The ability to make fine changes in the racket trajectory and its force are common in all so called 'talented' players. This, however can be improved and developed if taught and trained in the proper way and at the correct time
- * **Dynamic balance.** Accelerating to a moving ball and then decelerating rapidly just prior to impact to control the ball and then recover efficiently, requires very good dynamic balance
- * **Rhythm and speed of release of body parts.** Most of the top players in the world have hitting actions which can be described as 'rhythmical' and 'flowing'. Players need to be able to sequentially use their body parts and initiate the stroke from the legs. This rhythmical flow of power through the body depends on the correct sequencing of all the links in the 'co-ordination chain'. It is therefore important for players to be aware of the different body segments available for the hit and how they best fit together

Due to both the time limit in tennis and the need to generate racket head speed, it is important to have the ability to co-ordinate the different body segments at speed.

Co-ordination, speed of co-ordination and movement are the essential ingredients of efficient technique. This information is not new but a greater understanding of its fundamental importance may prompt us as coaches to make a change of emphasis in how we train players.

We need to develop the co-ordination skills involved in getting to and hitting a moving ball rather than over-emphasising the end-product of the shape or look of the stroke. The following drills provide just a few ideas on how to do this. The greater the repertoire of movement and co-ordinative experiences that can be developed at an early age, the better.

Improving response time (general training)

- * **The either/or drill.** Coach and player face each other, approximately one metre apart. Coach holds one ball

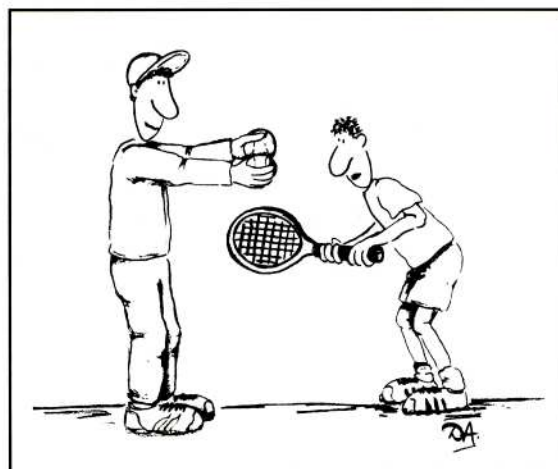
in each hand and then drops a ball from either hand. Player has to react and 'touch' the ball with the racket before it bounces on the floor

Speed of Footwork - Specific Training

- * **Inside-out forehand drill.** Coach rally feeds from the advantage court service-line to provide the player (who is also playing in the service box) with a forehand, inside-out forehand and backhand

Variation - the player hits a forehand volley as the fourth shot in the sequence. This encourages the player to move back behind the backhand so that they can more easily move through the shot and onto the volley at the net

- * **Fast feet alley drill.** Coach stands, with her back to the net, about 1.5 metres in front of the player who is positioned in the middle of the advantage court tramlines on the baseline. The coach handfeeds six balls into the centre of the tramline for the player to hit alternate forehands and backhands. As the coach is feeding, she should be walking backwards towards the net. The player must hit both forehands and backhands to the advantage court over the other side of the net. The feeding should force the player to move fast between hits



The either / or drill

Body Part Recruitment or Body Agility

- * **Wrong-footing drill.** Coach feeds balls from the service-line to the forehand and backhand of the player who is positioned on the baseline. The coach is attempting to wrong-foot the player who has to play full, attacking strokes off every feed

Dynamic Balance - Tennis Specific Training

- * **High volley/low volley drill.** Coach feeds the player a high backhand smash immediately followed by a low forehand volley from which they have to play a drop-volley. Coach feeds 6-8 balls alternating between the backhand smash and the low forehand volley

SLICING THE SLICE

by Howard Brody, Ph.D. (USA) - Professor of Physics at the University of Pennsylvania and a member of the USTA Sport Science Committee

(This article first appeared in the winter 1995 issue of "USTA Sport Science for Tennis" and appears with the permission of the USTA)

Over the years you may have heard that it is difficult to return a sliced ground stroke with a slice. That it is much wiser to hit flat or even use some topspin when your opponent has sliced (put backspin on) a shot to you. Is this true - and if it is, what is the reason?

When a flat or topspin shot bounces, it acquires topspin due to the court friction acting on the ball. A moderate drive of 60 mph, with little or no spin, will gain about 40 revolutions/sec of topspin after the ball bounces. If a ground stroke is hit at 60 mph with a moderate topspin of 30 revolutions/sec, after bouncing it will have acquired 65 revolutions/sec of topspin. These shots will be relatively easy to return with backspin (sliced), since they are spinning in the correct way already (see diagram). All your racket has to do is turn the ball's direction around - the spin will take care of itself.

When a 60 mph drive with moderate backspin bounces, it ends up with essentially NO spin and stays low after

the bounce. If you try to slice back such a shot, not only must you turn the ball's direction around, but you must also supply the energy needed to get the ball to spin. If you want to slice back a slice, you must hit the ball harder (swing your racket with greater speed). In addition, since sliced shots bounce lower, you will have to lift your return higher to clear the net. To make matters more difficult, the spin on flat and topspin shots after the bounce tend to bite into your strings and lift the ball to a larger angle. Since sliced shots have little or no spin after the bounce, to get your return to go over the net, you must lift it even more.

Conclusion:

If you want to return your opponent's sliced backhand with a slice of your own, you must hit the ball harder and lift it higher over the net than you would if you were returning a flat shot by your opponent.

A QUESTION OF BALANCE

- HOW GOOD ARE YOU AT RUNNING FOR A WIDE SHOT, STOPPING, SETTING UP AND STAYING BALANCED?

by E. Paul Roetert, Ph.D. (USA) - Administrator of Sport Science for the USTA.
(This article was provided courtesy of the USTA)

One of the most important things in becoming a good tennis player is to be in the correct position to hit the ball. Not only does your footwork have to be good to be able to run to the ball, but you also have to be balanced once you get there. The concept of keeping your body and racquet under control while you are moving is often referred to as **dynamic balance**. To have a stable base of support, the feet should be positioned underneath you and approximately shoulder width apart.

Of course this is not always possible, especially when you get pulled wide on a shot. The trick is to keep control of your centre of gravity as much as possible while you are playing. The centre of gravity is best described as the point about which your body balances most perfectly. For example: Pick up a pencil and hold it across your finger so it balances perfectly. The point at which the pencil stays without falling is its centre of gravity. The centre of gravity in boys and men is usually a little higher than in girls and women. To see the difference, try the following test.

You'll need:

A straight-backed chair

A friend

- Face the wall, touching it with your toes, then take two steps backwards and put your feet together.
- Ask your partner to place the chair between you and the wall.
- Lean forward until your forehead touches the wall. Let your arms hang straight down, with your hands just above the sides of the chair.
- Now, in one motion, try and stand up straight.

You've probably noticed that this exercise is easier for girls than it is for boys. This is because the centre of gravity is lower in girls. During an actual point in a match, your centre of gravity may even fall outside of your body in

certain points. Reaching or lunging for shots pulls the body off balance which slows the next movement and keeps you from producing power on your shots. Keeping the centre of gravity in line with your base of support gives optimum balance and, lowering your centre of gravity, makes you more stable.

Make sure you train with your teaching professional or coach on a variety of movement drills that work on

developing your dynamic balance and controlling your centre of gravity. To help you understand some of the latest footwork and movement drills, the USTA recently produced a videotape entitled **Advanced Footskills for Tennis** featuring movement training specialist Mark Grabow and USTA National Team members and coaches. Balance, recovery and proper technique are demonstrated for each drill. The tape is available in the USA through Human Kinetics Publishers at 800-747-4457.

SELECTION - IS IT PART OF A COACHES JOB OR NOT?

Josef Brabenec Sr. (Canada)

As a former coach and team manager in Czechoslovakia, head coach in a major tennis club in Vancouver, provincial and national coach, and later Davis Cup and Fed Cup coach-captain in Canada, I very often had to deal with the question of SELECTIONS.

In my opinion, any development programme requires periodical regrouping of the players involved. For some players this will be a promotion, for others this will seem like a demotion. The purpose of any selection will dictate the criteria to be used. Two facts should be recognized:

1. A selection cannot be totally democratic and will always involve some subjective judgements.
2. The younger the players are, the less meaningful are the results of their matches (under 12s).

These two facts must be respected by the parents and by the club's or federation's officials who, in most cases, try to intervene even to the extent of dictating to the coach though they often have very little knowledge of exactly what is involved in a specific selection. The officials, usually volunteers, want totally objective criteria so that nobody can blame them at a later date. Let's face it, such fool-proof criteria does not exist!

As I said before, different criteria must be used for different levels of selections. The first selection is usually for:

A. TALENT IDENTIFICATION

This involves the selection of children from the basic introductory tennis programme in a club. It should be based on:

- (i) simple tests of motor skills like running, jumping, throwing and catching the ball - simple all-round activities.
- (ii) empiric judgement of a coach.
- (iii) interest and determination of the youngster (eg how often you see a youngster in a club hitting a ball against a wall on his own).

Basic training programs will usually be organised in "a club tennis school". To make such a program work there should be regular regrouping (selection) of the children (every 2-3 months) according to the progress of the individuals. Two or three levels should be created and the children placed in a particular group by the coach.

B. SELECTIONS FOR REGIONAL HIGH PERFORMANCE PROGRAMME

When selection involves talented youngsters under 14 or under 16 years of age, the following criteria should be applied for the selection:

- (i) the youngsters' attitudes and desires,
- (ii) their mastering of stroke technique and tactical awareness,
- (iii) actual performance and future potential as seen by a coach,
- (iv) physique and fitness.

C. SELECTION OF PLAYERS FOR NATIONAL TRAINING CENTRE (NATIONAL TEAM)

Age category: players under 16 and under 18 years of age.

With players of this level selectors should look for:

- (i) mental strength, training work ethics and commitment and readiness to play full time,
- (ii) match results,
- (iii) physique (size, mobility, etc.)
- (iv) potential versus age.

D. SELECTION FOR SPECIFIC EVENTS

like Youth Cup, Sunshine Cup, Continental Cup; Davis Cup, Fed Cup and Olympic Games.

My opinion is that no committee of “well meaning” volunteers should make the final selection. The selector, in this case, should probably be the national coach. After consulting 2-3 assistant coaches who have been working with the players, the following should be taken into account when the selection is made:

- (i) that latest performance (national ranking is not so important),
- (ii) adaptability to surface (outdoor, indoor, clay, hard, fast, slow etc),
- (iii) the need for good doubles players (at least one doubles specialist should be selected irrespective of his singles ranking or performance),
- (iv) their ability to perform in a team vs performance as an individual,
- (v) need for lefthander (for training, for doubles),
- (vi) recent injuries,

(vii) ability to rise to the occasion.

For specific Cup events the coach-selector should choose the players with the best results and in the best form shortly before the event. Age, future potential, full time commitment, etc. are secondary in the case of selection of players for the Davis or Federation Cup ties where the name of the country is at stake. The best player at the given time should be the deciding factor.

Any selection should be the sole responsibility, with full authority of the coaches, in charge (club coach - regional coach - national coach).

A player’s results, fitness and size are quantifiable qualities which are obvious and public knowledge. All other factors of performance such as a player’s attitude, mental strength, stress management, training work ethics, behaviour on and off court and their aims are the factors best known only to the coaches. Therefore it should be the expert judgement of the coach that makes the final selection even if some people will consider it subjective. Do not forget the following fact: it is in the best interest of a coach to select the best players for the task at hand, because the coach’s job may well depend on the results achieved. There is nothing new about the fact that if a team loses, the coach is the first to be blamed and risks being fired.

NIFTY DRILLS FOR NIFTY FEET

by Donald Chu, Ph.D. (USA)

(This article first appeared in USTA Sport Science - Spring 1995)

Ever wonder how certain players can be so “nifty” on the court. Their footwork is quick and precise and they always look like they are in balance. You wonder how some of these players can make things look so easy. The fact is that these players are “centred” over their base of support. What does that mean you ask?

This means that the player’s centre of gravity (a point on the body around which their weight is distributed) is always in an imaginary area between their two feet (base of support) as they are moving laterally, setting up for shots, and moving up and back on the court. It is possible to get the body’s centre of gravity outside the body and outside the base of support. When this happens the player is usually accelerating in a specific direction and is “out of balance”. Being out of balance is good when you want to move in a specific direction, and bad when you want to change that direction.

Tennis players need to learn to move their feet quickly, keeping their centre of gravity over their base of support so they can start, stop, and change direction quickly. Here are some drills that can help the tennis player learn how to move in ways that teach the “art” of staying balanced while they are moving.

The following drills can be performed on the court or any large area that allows the cones to be set up at, or close to the

prescribed distances. The equipment needed to do all of these drills is a maximum of six plastic cones. A stop watch gives the coach and tennis player objective feedback for goal-setting and goals to be accomplished.

Drill #1 The Cross

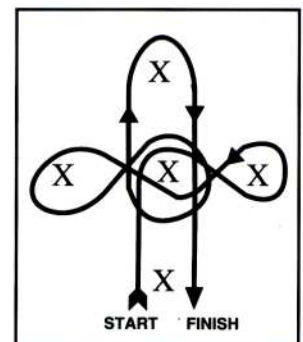
Equipment: 5 plastic cones

Set-Up: Arrange the cones in the following pattern:

Action: Start by running forward to a point in front of the centre cone, then change direction by shuffling laterally and begin to weave a figure 8 around the cones. After shuffling laterally through all three cones, accelerate forward, running around the forward cone and finishing back at the start. This action can be timed to see how long it takes to navigate the course.

Alternate Drills:

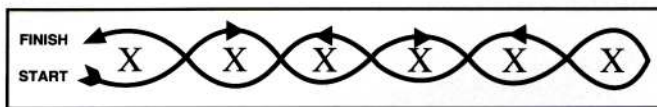
- 1) Repeat the drill going both left and right when starting the weave portion of the drill.
- 2) Have the player repeat the drill three times in a row to stress anaerobic endurance.



Drill #2 The Snake

Equipment: 6 plastic cones

Set-Up: Arrange the six cones 3-4 ft. apart along the baseline.

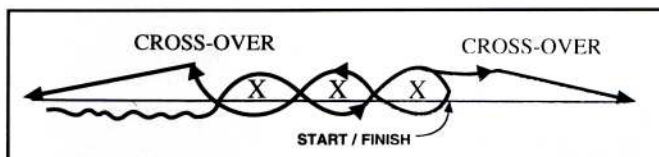


Action: Start at one end and weave through the cones using a lateral shuffle. Do this against time for three repetitions.

Drill #4 The Sidewinder

Equipment: 3 plastic cones

Set-Up: Arrange all three cones on the baseline with the middle cone on the centre of the baseline and the other cones 3-4 feet on either side of the first cone.

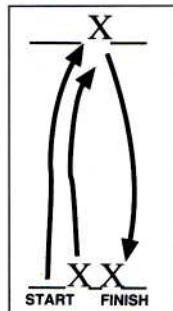


Action: Start at one end of the cones and begin shuffling laterally, weaving through the cones to the right or left then moving in the opposite direction. Once having weaved all the way through the cones three times, take a cross-over step and sprint to the sideline. Touching the sideline, return by shuffling along the baseline and begin weaving in the opposite direction for a total of three times, then take a crossover step and sprint to the opposite sideline. Repeat the drill until each sideline is touched three times.

Drill #3 The Exchange

Equipment: 3 plastic cones

Set-Up: Place two cones on the centre of the baseline, and one on the service line.

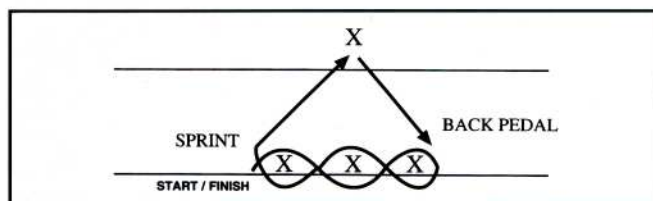


Action: Start on the baseline, pick up one of the cones and prepare to sprint to the service line. On "go", sprint to the service line and exchange cones. Place the first cone down before picking up the second one. Repeat this action by sprinting back to the baseline and exchange the cones there. Repeat this action for 30 seconds and count the number of pick-ups for total score.

Drill #5 Shuffle Split

Equipment: 4 plastic cones

Set-Up: 3 cones placed along the baseline as in the previous drill. The fourth cone is placed 4ft. in front of the service line.



Action: Weave through the cones starting from either the left or right side. After finishing the weave, sprint forward and perform a split step at the forward cone. Then back-pedal to the opposite side of the cones in the starting area and repeat the drill until six split steps are performed.

10TH ITF WORLDWIDE COACHES WORKSHOP

Following the success of the 9th ITF Worldwide Coaches Workshop which was held recently in Barcelona, Spain in conjunction with the European Tennis Association and the Real Federación Española de Tenis - the ITF wishes to begin preparations for the next Worldwide Workshop. The 10th ITF Worldwide Coaches Workshop will be held around October/November 1997 and we would invite member nations interested in hosting this unique educational event to submit their proposed bid to the ITF Development Department before 30 June 1996.

In submitting a proposal to act as host nation for the Workshop, National Associations should consider the following:

1. The venue for the Workshop should be located close to an airport with good international connections.
2. The venue should have a court with seating for approximately 300 people for the on-court presentations.

An indoor court may be necessary for the on-court presentations if the weather at that time of the year requires it.

3. The venue should have an indoor lecture room which will seat up to 300 people.
4. Hotel accommodation should be reasonably priced and within walking distance of the venue. Ideally all of the participants should be accommodated in one hotel.
5. The host nation would be expected to provide appropriate staff members to organise a conference of this size.
6. Proposals should include any items which the host nation would be able to provide such as meals, audio visual equipment etc.

All proposals for hosting this event must be submitted directly in writing by the National Association of the country concerned to the ITF Development Department, by June 1996.

9TH ITF WORLDWIDE COACHES WORKSHOP - 1995



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