



wheelchair tennis coaches review



Issue 6 August 2002

Welcome to Issue 6 of the ITF Wheelchair Tennis Coaches Review. In this issue Randy Snow and Dan James look at some of the benefits an able-bodied player can learn from the wheelchair version of the sport. Severine Tamborero from Canada contributes for the first time with an interesting look at game styles in wheelchair tennis. In this edition there is an article on playing in the heat that has been reproduced from the ITF publication *Tennis Medicine for Tennis Coaches*. Also, there is an article emphasising how important it is that coaches are aware of the rules and regulations of wheelchair tennis.

Coach Education continues to be a priority for the ITF Wheelchair Tennis Department. At the Invacare World Team Cup by Camozzi held in Italy a Coaches Workshop will be held that will be attended by more than 40 coaches from all over the world. Presentations will also be made at the European Coaches Symposium and the ITF Regional Workshop in Beijing, China. Also, in the next few months wheelchair tennis coaches workshops will be staged in Greece and Hungary.

If you would like to contribute to this review, or if there is a topic you would like to read about, please do not hesitate to contact me.

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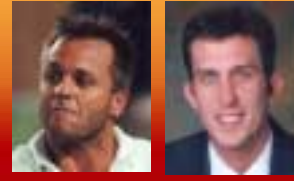
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How can wheelchair tennis help an able bodied players game?

Dan James and Randy Snow



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Randy Snow is a ten-time US Open champion, Paralympic gold medallist, author and speaker. He lives in Dallas, USA.

As wheelchair tennis celebrates its 25-year anniversary, there have been many acts of recognition and letters of support to the able-bodied population for the framework from which our game evolved. After all, wheelchair tennis, with one minor rule adaptation allowing two bounces, is basically the same sport.

At first, the comparisons between the two games focussed on stroke production, strategy and even mobility, derived from the 100-year-old able-bodied sport. But in 1993 Dr. Bal Moore, who coached collegiate tennis for thirty-three years, entered the wheelchair game and initiated distinct contrasts. Noting different grips, power sources, and strategies, Dr. Moore opened a two-way perspective detailing succinct differences in the games.

By looking closely at wheelchair tennis, by turning the lenses around, we are able to identify important lessons that apply to the able-bodied player, or as we tend to say, the “vertical netter.” These ten lessons reveal some fascinating principles that are sure to improve your game. Enjoy and ponder.

1. Path to the ball improves power and position

For the wheelchair player, forward mobility (moving towards the net) creates more power with the created momentum being used to get to the net. Reverse mobility (moving away from the net) creates less power with momentum purchasing more court and a defensive position. Often able-bodied players handicap themselves by simply considering the momentum toward the ball as only positional movement and miss an important opportunity to use this movement to generate momentum into offensive or defensive energy.

2. Utilise the serve return

Because of the abrupt change and contrast between the serve and next shot, and perhaps because of lack of specific practice, most players have a difficult

time making this transition. Due to limited power and trajectory, the serve in the wheelchair game is not an advantage, conversely the serve return is. The return of serve is a prime opportunity for the wheelchair, or able-bodied player, to take advantage of the server being involved in a highly skilled, yet minimally practised shot that requires a transition. Increase the serve return practice and utilise this “weapon” whenever possible.

3. Regardless of circumstance, connect the plane (the racket head) with the sphere (the ball) using forward motion (follow through), and any shot can be made.

Certainly it behoves a tennis player to have the ideal position and proper grip, back swing and follow through, but these particulars are not mandatory in executing a good shot. If anybody knows that ideal circumstances are not a prerequisite, the wheelchair player does. Because of limited mobility and an inability to get out of the way of the ball, the wheelchair player knows that as long as the *plane strikes the sphere with follow through*, the grip, body mechanics, and position do not have to be perfect. The wheelchair player can, and sometimes must, hit a shot without perfect conditions. Get the racket on the ball and finish forward.

4. Control the controllable

The mobility model for wheelchair tennis consists of three components: react-negotiate-recover, or RNR. Simply stated react is to the ball, negotiate is the execution of the stroke, and recover involves the mobility after the shot has been hit. Due to the mobility limitations of the wheelchair player, it is of utmost importance that this cycle be understood and honoured. Quickly determine the point of intersection, execute the best stroke possible and for certain, avoid being distracted by the stroke. Immediately recover back to the bisected middle of the court. Albeit playing with legs may present the luxury of being lackadaisical, playing like the wheelchair player from a mobility perspective will significantly enhance your readiness thus improve your game.

5. Wound opponent before taking the net

Wheelchair players do not have the benefit of indiscriminately coming to the net. Limited reach and dimensional mobility do not allow unrestricted access of the short court. The wheelchair player must be selective in picking the right time to approach by making sure their opponent is in trouble. Before taking the net, make sure that not only is your shot selection in a desired area but that your opponent is stretched as well.



6. Hit up to bring the serve down

The success of a serve is not based on the height of the player, rather on the stroke itself. The wheelchair player clearly faces a trajectory disadvantage during the serve however many of the top players in the world have very successful first serve percentages. Successful serving starts with an upward motion that creates the necessary spin needed to bring the ball down. To bring your serve down, an upward motion is encouraged.

7. Generate power through a consistent hitting zone

The wheelchair player does not incorporate deep back swings, does not have the use of legs and sometimes is limited in available

muscle. These perceived limitations, however, do not preclude the wheelchair player from hitting with power. For more power, increase racket speed during impact for a longer hitting zone and your power will improve.

8. Geographically conceal your weakness

Most players have a favourite stroke, a strength. And usually, accompanying this strength is an unwanted yet admitted weakness. Due to mobility or muscle

considerations, in order to be successful, the wheelchair player must find a way to hide these shortcomings. By planning mobility outcomes, or, where he will be when the opponent strikes the ball, a player can at times hide this weakness. For example, a right handed wheelchair player who uses a power chair may only have a forehand since the mechanism that drives the chair is



positioned where it inhibits stroke execution on the backhand side. By prioritising the ad court, with high anticipation of balls being directed to the deuce side, a player can not only hide the weakness but also invite shots to the strength. Although this example may seem extreme, geographic position can bait an opponent into hitting away from the weakness thus solicit the ball to the “open” court or strength.

9. Traffic light your mental court position

Every available advantage is sought in wheelchair tennis and being conscious of mental court position after an attack is no different. With mobility a constant concern, quickly labelling the effectiveness of an offensive shot can pay dividends for the “wheelie” tennis player. This metaphor does not mandate that the player should attack during green situations, rather, it prods the mind into determining what mental state to defend. With green indicating continue to attack, yellow representing more of a cautious status and red suggesting more of a failed or defensive effort, sometimes it helps the tennis player to use the Stop Light metaphor to help determine what mental action is needed relative to court position. Like the wheelchair player, quickly ascertain what your mental state is and hold your ground.

10. Gratitude is a verb

We all have disabilities, circumstances. With some more visible than others, no one on the planet is without a challenge. When someone has a serious accident resulting in a permanent impairment there is a tendency to withdraw, to put up walls, to stay in a safe place. It takes a willingness to grow, a need to face our fears, a desire to venture outside the comfort zones to play wheelchair tennis. With no intention of selling melodrama or pity for the wheelchair player, as it is certainly the last thing desired, our suggestion here is that when you go to the court, to play in your league or a sanctioned tournament, arrive with a high level of gratitude. Participation in life with unwavering gratitude not only grounds us in what is important, but it also balances our being, which can free us to perform at our highest level.

After spending several hours playing wheelchair tennis, both from a chair and on his feet, during a tennis camp sponsored by the Florida Section and The First Coast Tennis Foundation, US Open finalist Todd Martin replied, “I get it, this is just tennis in a wheelchair.” As trite as Todd’s words may seem, with his comments he captured both the charm and the kinship of our game. Whether vertical or “wheelie” tennis, or in life for that matter, by breaking out the pieces, evaluating the parts, then putting them back together, ongoing discovery will occur. And ongoing discovery is more valuable than a brand new bicycle. We encourage you to incorporate these top ten lessons and wish you continued discovery along the way.

Game styles in wheelchair tennis

Severine Tamborero



Séverine Tamborero has 15 years of coaching experience. She has been a national touring coach for Tennis Canada since January 2000. She is the Director for the Tennis Montreal junior elite programme and personal coach for 4 international athletes. Severine is a Tennis Canada Level 3 coach and is in the process of completing a wheelchair tennis specific level 4.

During the past few years I have observed that the game styles in wheelchair tennis are different from the ones in the able-bodied game. Why? There are three reasons.

The first reason relates to the physical abilities (level of injuries) of the player. Through my Tennis Canada Level 4 coaching certification research, I was able to make a direct correlation between the physical limitations of a player and the technical limitations of a shot.

The second reason is the mental toughness (and personality) of the player. For example, a player who is a fighter and will never give up will be able to rally with an opponent and play a consistent game style. Conversely a player who is not patient will need to develop a different style of play.

The third relates to the two bounce rule. The position of a player on the court when hitting the ball (first or second bounce) will influence the tactical possibilities and the style of play.

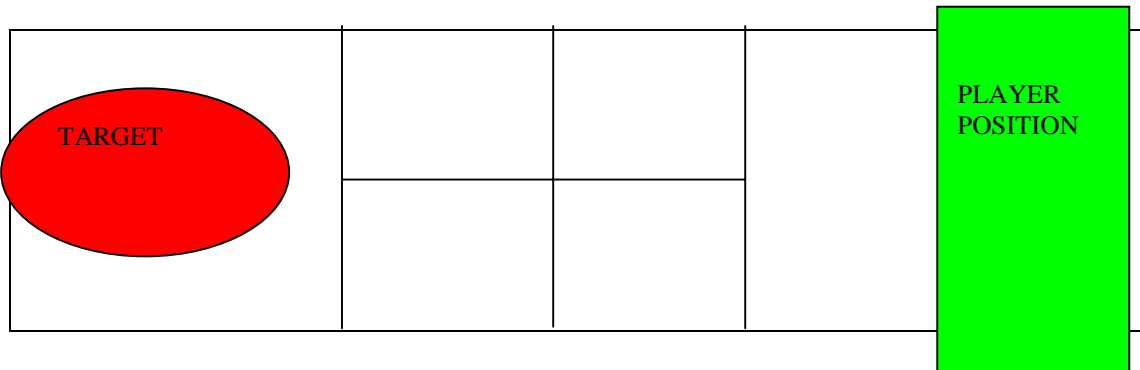
A game style will be identified based on the shots or specific tactical situations that a player uses most in match play. I have divided the game into four general game styles. As follows

- 1) POWER
- 2) PRECISION
- 3) CONSISTENCY
- 4) ALL ZONE PLAYER.

The following section will describe each game style in more detail and show where the player will be positioned on the court.

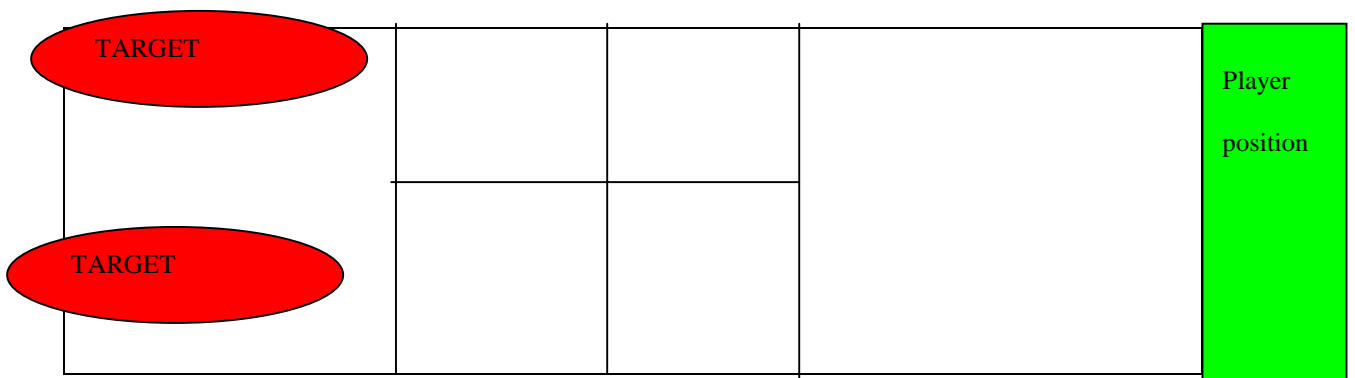
1. The POWER baseline player (i.e. Ricky Molier, Esther Vergeer)

This player will approach the game with intensity but will probably not be able to keep it up forever. He/she likes to hit early and win points with power.



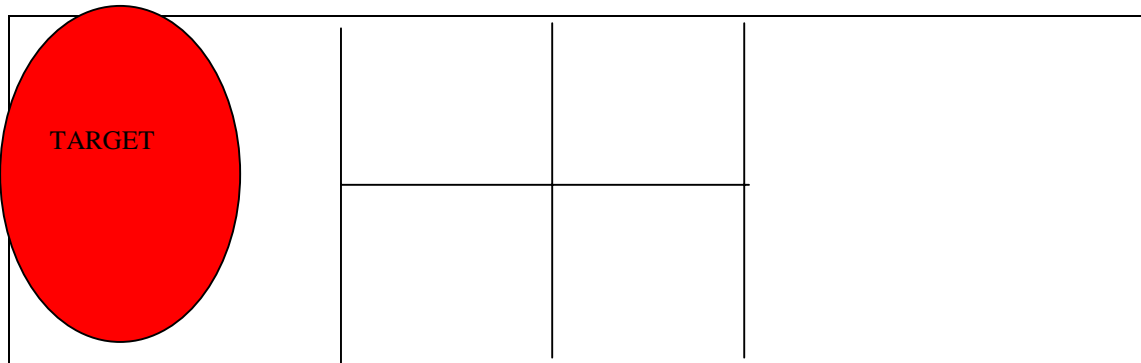
2. The PRECISION baseline player (i.e. Paul Johnson, Djoke Van Marum)

This player will focus on using angles and precision to win points. He/she will easily change the rhythm of a rally and make the opponent move all over the court.



3. The CONSISTENCY baseline player(i.e. Simon Hatt, Chiyoko Ohmae)

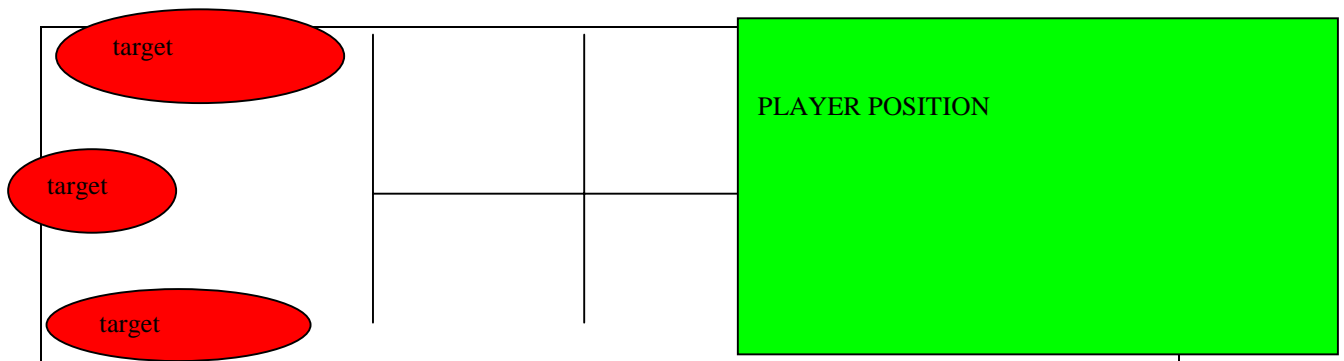
This player is patient. He/she will sit well behind the baseline and play low risk shots.



PLAYER
POSITION

4. The ALL ZONE player(i.e. David Hall, Maaïke Smit)

This player has a great sense of anticipation. He/she is able to play the point from the baseline or move into the court and up to the net (with power or precision) to end the point.



Conclusion

I believe that it is important to identify a player's game style in order to solidify his/her game. To determine a game style make sure that the player understands their physical limitations (i.e. to play an all zone style a player needs to be very athletic, to have a lot of strength and speed.) and personality.

Know the rules!!

Mark Bullock,
ITF Wheelchair Tennis Development Officer



It is important as coaches that our understanding of the game extends beyond the technical, tactical, physical and mental aspects required on the court. Coaches should have a good understanding of the sport as a whole in order that they can give sound advise to players. In some cases this may mean being aware of the rules and regulations that govern the NEC Wheelchair Tennis Tour, the Invacare World Team Cup and the Paralympics. It may also mean having a knowledge of the eligibility criteria required to play wheelchair tennis competitively.

The NEC Wheelchair Tennis Tour

As the coach of players on the NEC Wheelchair Tennis Tour you should ensure you are familiar with the rules and regulations of wheelchair tennis so that you can effectively advise players which tournaments they should be entering. The goals set by the coach and player will determine which tournaments they enter. If a player is looking to build some confidence and get some wins it may be more appropriate for a player to enter a CS5 category of tournament rather than a Super Series or CS1.

As a coach you should be aware of how the ITF world ranking system works and how the points are awarded for the various events. You should also ensure that your players are aware of how the system works.

There are a wide range of rules and regulations that coaches should who look after players on the NEC Tour should be aware of. The rules and regulations are available on the ITF website: www.itfwheelchairtennis.com. The rules are amended annually so it is important that coaches and players keep up to date with the changes.

For example, try this test.

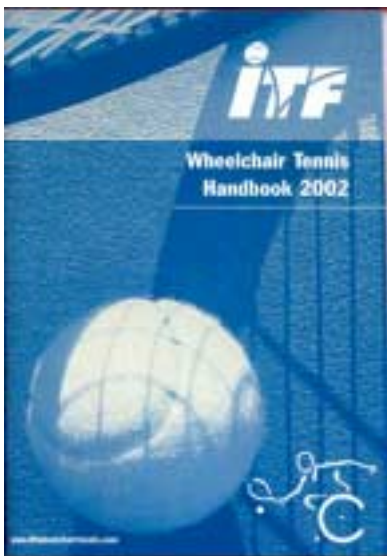
Can you answer the following questions?



1. What is the set draw size for a CS4 tournament in the Asia/Oceania region?
2. How many points will your player be awarded for winning the second draw doubles at a CS4 event?
3. What is the entry deadline for a Super Series event?
4. How many points will your player get for winning the consolation at a CS3 tournament?
5. How many tournaments does a player need to play to get a ranking?

6. How many tournaments count towards the ranking on (a) the men's ranking (b) the women's ranking and (c) the quad ranking?

It is useful to plan in sessions to discuss various aspects of the rules and regulations of the sport with your players. This can be done in wet weather sessions or when a player is injured. Encourage your players to be knowledgeable about the sport - it may give them that extra edge on the court or help them to select the right tournaments to improve their ranking to qualify for a future Paralympic games.



Eligibility

Coaches should have a good knowledge of the eligibility criteria required to play wheelchair tennis. Whilst coaches cannot be expected to be medical experts they should have enough knowledge to give potential players sound advice. Alternatively, they should be aware of where to refer players to check out their eligibility to play the sport.

Coaches should also have an understanding of the criteria required to play in the quad division. This has become more important in 2002 as players wishing to compete on the NEC Wheelchair Tennis Tour in the quad division have to be classified. The eligibility rules and

regulations are in the ITF Wheelchair Tennis Handbook which is available on the ITF website: www.itfwheelchairtennis.com.

Conclusion

There are many aspects of the rules that coaches and players should be familiar with. This article has looked at two particular areas. The more informed coaches are with regard to the regulations the better advice they can pass on to their players.

Performance below par? Blame it on the heat

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FACSM

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This article has been taken from the ITF publication Tennis Medicine for Tennis Coaches.' The author discusses the impact that heat can have on a players performance. It seems likely that some of these considerations may be more important for wheelchair tennis players. In particular, quad players have to be aware of the impact that heat will have on their performance as some of them do not have the ability to sweat.

As you are well aware, many things can, and do adversely affect performance. The adversary that I plan to discuss here is the heat.

Playing in the heat requires extra conditioning. In hot weather the body has only one way to cool itself: evaporation through sweating. (In cold weather the body is cooled by radiation, convection, and conduction, in addition to evaporation.) Extra body heat must be disposed of to keep the body temperature within safe limits (37-38 degrees centigrade). If the body temperature rises too high, normal body functions are upset and heat stroke can result. (Heat stroke is a very serious medical emergency that can be fatal.) The higher the ambient temperature and humidity, the slower sweat evaporates. To compensate for slower sweat evaporation your body sweats over a greater percentage of your skin surface. (The body has three million sweat glands that draw fluid from the blood to produce sweat.) The heart must work harder to supply blood to the greater surface area of skin. For the heart to work harder a higher level of fitness is required. If that higher fitness level is not achieved your heart will not work harder resulting in decreased blood volume and increased body temperature. As little as a 2% loss in body weight can have a negative effect on your performance.

How is a higher level of fitness achieved? First of all you must sweat heavily in practice. When you exercise in the hot sun with your shirt off or just a jog-bra you may not sweat heavily enough and will not acclimatise as well as someone training in cold weather with many sweat suits. In other words do not avoid sweating during practice by dressing differently from how you would dress during competition. Sweating is the body's way of regulating temperature but fluid lost from sweating must be offset as much as possible by fluid replacement. Getting acclimated to hot weather takes two weeks. During that time your sweat glands enlarge, your blood vessels will widen, and your sweat will become less salty. An acclimated athlete loses almost no salt in his sweat or urine.

So what is it that is lost in sweat? Contrary to popular belief you lose more water than salt in sweat. Popping salt tablets elevates the level of salt in the blood and may increase the chance of stroke. (Forty years ago it was not uncommon to find salt tablets courtside right beside orange slices!) In healthy

people taking too much salt is more dangerous than not taking enough. If your body requires extra salt you will crave it and will find yourself gravitating towards popcorn, chips, peanuts, and other salty foods.

To recap an acclimatised athlete loses almost no salt in his sweat or urine in hot weather. In contrast the amount of potassium excreted in the sweat and urine during hard exercise may be ten times what it is at rest. Lost potassium must be replaced through the diet to avoid undue fatigue. Fruit juices and bananas are good dietary sources of potassium.



So how does one know if one is drinking enough? Thirst is not a good indicator of dehydration because you can lose 1 to 2 kilograms of fluid before you experience thirst. If you are well hydrated you should be producing copious amounts of clear urine before you start exercising. You should drink as much as you can

during exercise. Experiments in runners and cyclists show that if you drink plenty of liquid before you exercise and continue to drink small amounts during exercise you will not experience adverse gastrointestinal symptoms. Stomach discomfort and nausea occur only if you delay drinking until **after** you become dehydrated. You can weigh yourself before and after a practice session or a match to determine how much fluid you have lost. You should replace at least 1 litre of water for every kilogram decrease in body weight.

What is the best fluid for replacing sweat lost during a match? Before 1984 the American College of Sports Medicine (ACSM) stated that water was the best fluid for replacement. Since then, however, several studies have shown that in certain circumstances it may be advantageous to take drinks with added carbohydrates (fuel) and/or minerals (electrolytes). Your choice of fluid depends on whether or not you need to replace fluid rapidly, whether or not you need to replace fuel, or both. During exercise most people prefer hypotonic drinks (drinks that are more dilute than body fluids) because they are absorbed more rapidly and cause less gastrointestinal problems than

isotonic or hypertonic drinks. The larger the volume and the cooler and more dilute the drink the faster it will pass from the stomach to the intestines. Once it gets to the gut the speed of absorption depends on the concentration of the drink. Small amounts of carbohydrates and electrolytes will actually speed water absorption provided they are hypo- or isotonic. A hypotonic sports drink can be made at home using the following recipe:

20 grams of glucose

1 litre warm water

Pinch of salt (approximately 1 gram)

Dissolve sugar and salt in water, allow to cool, and keep in the refrigerator.

Drinks consumed after exercise should contain lots of minerals and carbohydrates. Fruit drinks that contain potassium are highly recommended.

The American College of Sports Medicine in 1996 published a position statement on fluid and electrolyte replacement. The statement is as follows:

- Eat a balanced diet and drink adequate fluids during the 24 hours before an event.
- Drink about 500 ml of fluid two hours before exercise.
- Consume enough fluids to replace water loss through sweating.
- Ingested fluids should be cooler than ambient temperature and flavoured to enhance palatability.
- Proper amounts of carbohydrates and electrolytes should be added to replacement fluid for events longer than one hour.
- During intense exercise longer than one hour a fluid containing 4-8% carbohydrates should be consumed at a rate of 600-1200 ml/hr.
- Sodium should be included in the rehydration fluid to enhance palatability if exercise lasts longer than one hour.

You should not expect to perform as well in the heat as in the cold. In one study six athletes cycled on a stationary bicycle at a set resistance. When the surrounding temperature was 2 degrees

they could cycle for 73 minutes before experiencing exhaustion. When the temperature was increased to 33 degrees they could only cycle for 35 minutes. A tennis player may lose up to 15 miles per hour from his serve in the heat. Why does heat have such a negative effect on performance?



- Your heart must work harder.
- Your muscles do not work as efficiently.
- It takes more calories to exercise in the heat.

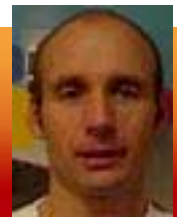
So what is the bottom line? **Do not expect or attempt a peak performance in conditions of extreme heat.** Look out for signs of dehydration such as decreased weight or concentrated urine. Take precautions before, during and after competition to avoid heat-related illness. Wear clothing that is light and vapour-permeable. White clothing reflects the sun's rays while black clothing absorbs it. Consider covering your head. (Some athletes wear hats and pour water over them thus cooling the head where 20% of body heat is lost.) Allow two weeks for acclimatisation by daily 1-2 hour training sessions in the heat. Start your match well-hydrated and drink as much as possible during and after the match. As usual an ounce of prevention is worth a pound of cure. Stay cool!

References

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Player Education

Mark Bullock, ITF Wheelchair Tennis Development Officer



In Issue 2 of the *ITF Wheelchair Tennis Coaches Review* I wrote about some of the issues that coaches should be aware of when working with players who are travelling on the NEC Wheelchair Tennis Tour. Giving players information on what to expect when travelling is an important part of the role of the coach.

As coaches we should be providing our players with a broad tennis education to equip them to play on the Tour. As the sport of wheelchair tennis becomes more professional and the players more high profile then their actions of players come more under the spot light. We should be preparing our players to deal with the media, know what to expect during anti-doping and make them aware of how their behaviour reflects on the sport.

In this short article I will consider some of the issues that coaches should discuss with their players who are travelling on the NEC Wheelchair Tennis Tour.

Dealing with the media

Are your players media friendly? Giving a good television interview is not only good for the sport as a whole but it enhances the players value in the eyes of a potential sponsor.



Attending official functions

Sometimes players will be asked/required to attend official functions. As coaches when we travel with players, especially young players, we can attend functions with them to ensure that they are comfortable in such an environment. Successful players may have to speak in public,

so this is something coaches can prepare players for in coaching sessions etc.

Anti-doping

Anti-doping takes place on the NEC Wheelchair Tennis Tour. Are your players aware of the list of banned substances? Do they know the procedure required of them if they are selected for testing? You may be able to get someone through your national federation to talk to the players about what to expect, or even take them through a mock test.

General behaviour

Players should be aware that their behaviour in public while attending a tournament reflects on the sport as a whole. Coaches should make players aware of their responsibilities as ambassadors of the sport.

Conclusion

Coaches have a responsibility to equip their players for the Tour. Many of the stresses placed on a player come from off court situations. The better prepared players are to cope with these potentially distracting scenarios the better they will perform on court.

More Information



NEW BOOK

Pierre Fusade has written a wheelchair tennis coaches manual in French. This excellent publication will prove a valuable resource in French-speaking countries and is definitely worth a read.

To order copies of this publication please contact Pierre Fusade on: Fusadeplm@aol.com

For a list of wheelchair tennis publications please refer to the first four editions of the *ITF Wheelchair Tennis Coaches Review*. They are available on the ITF website: www.itfwheelchairtennis.com.

More information

If you would like information on organising wheelchair tennis programmes or coaching wheelchair tennis do not hesitate to call the ITF Wheelchair Tennis Department on ++44 (0)20 8392 4788.

If you know of other coaches who would like to receive wheelchair tennis coaching information please ask them to send their name, address, email and an outline of their coaching experience to mark.bullock@itftennis.com or fax ++ 44 (0)20 8392 4741.

For coaches wanting more information on the NEC Tour, world rankings, player profiles, head to head results please visit the ITF website: www.itfwheelchairtennis.com.

If you want to visit an NEC Tour event please refer to the website, www.itfwheelchairtennis.com for the tournament schedule.

The articles in Wheelchair Tennis Coaches Review are written by a variety of contributors and the opinions expressed are not necessarily those of the ITF.