

# ITF Coaches Education Programme



Coaching Beginner and Intermediate Players Course

## Coaching beginner and intermediate players with disability

# Introduction



- Tennis play for beginner and intermediate players with disability is increasingly growing worldwide.
- Able-bodied and disabled friends can share the same experiences makes of tennis a great sport.
- It is important that coaches have a go in coaching players with disabilities by:
  - Providing tennis coaching for them
  - Organising integrated tournaments
  - Attending education seminars on how to coach these players,
  - Having an understanding of the different disability groups
  - Promoting tennis for people with disabilities at every opportunity
  - Developing policies which provide opportunities for tennis players with disabilities,
  - Increasing members' knowledge on this issue by displaying information in prominent places,
  - Reducing possible physical barriers to tennis players with disabilities.

# Considerations when coaching players with disability

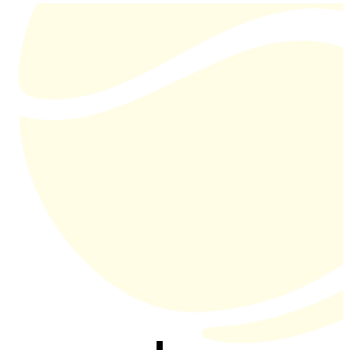
- **Treat the individual as a player with ability:**
  - Focus on the abilities of the individual rather than on their disabilities.
- **Assess the nature and degree of the player's ability:**
  - Ask the player what they can, and cannot do, or what does and does not cause discomfort or pain.
  - Consult the player's parents or carer for relevant information if appropriate.
- **Set challenges not limits:**
  - Focus on equipping a player with additional skills in the ongoing and dynamic process of matching a player's skills with achievable challenges.
- **Let the player experience a wide range of situations:**
  - Guide a player to develop a capacity to handle disappointment, frustration or failure when learning tennis.
  - Avoid difficult or unpleasant situations (e.g. loss of a match) is not the answer.
  - Show sympathy to a player with a disability in situations when the coach would do so with an able-bodied individual.

# The players with disability



- Tennis players with a disability play tennis for the same purposes as any other players
- They want an intelligent understanding of their condition and to be recognised for their ability to play tennis.

# Who can play?



- Any individual that has a medically diagnosed and permanent mobility-related physical disability is eligible to play competitive wheelchair tennis.
- The range of these disabilities is broad;
  - paraplegics,
  - quadriplegics,
  - single amputees,
  - double amputees
  - spina bifida sufferers

# Tennis players with amputation

- These are players that have at least one major joint in a limb missing or no functional movement remaining at a joint.
- Most of these players have problems with balance and compensate for total or partial limb absence by moving another limb or body part off centre in order to balance effectively.
- They tend to fatigue quicker than able body players.
- Due to the use of prosthesis, personal hygiene for the amputee is important to avoid infections

# Tennis players with cerebral palsy

- These players have a disorder of movement and posture due to damage to an area or areas, of the brain that can vary considerably between individuals.
- Characteristics associated with this condition include:
  - poor coordination and reaction time;
  - limb movement restrictions;
  - short term memory loss;
  - balance and perceptual problems;
  - learning disabilities among others.
- Some players with this condition compete in wheelchairs.
- Repetitive but varied drills help these players improve the skills they need
- Short training sessions per week are recommended as opposed to one long session

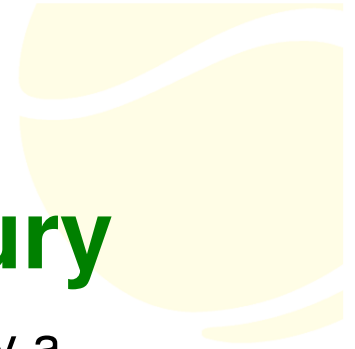
# Tennis players with intellectual disability



- These players have substantial limitations:
  - sub average intellectual functioning,
  - related limitations in communication, health, safety, academics, etc.
- Have a lower level of fitness than able-bodied players
- Need clear and precise explanations and demonstrations.
- Feedback has to be quick to praise and practices should be fun at all times.
- Maintain or develop a reasonable fitness level in players with an intellectual disability to help them increase the potential to enjoy tennis and develop their skills.



# Tennis players with an acquired head or brain injury



- These players suffer from an injury to the brain caused by a trauma which results in unconsciousness or altered state of consciousness which usually interfere with brain function.
- This condition may result in temporary or permanent:
  - Impairments of cognitive abilities (i.e. memory loss),
  - Behavioural (i.e. concentration) or emotional (i.e. arousal) functioning,
  - Partial or total disability (i.e. vision and hearing impairment).
- Players affected by this condition may be more prone to anxiety, depression and frustration than people with intellectual disability.
- Coaches working with these players should:
  - ensure rest breaks during training sessions,
  - try to avoid players' fatigue,
  - provide regular praise and support.

# Tennis players with a psychiatric disability



- These players suffer from mental illness which may include neurotic and psychotic illness
- Are characterised by:
  - depression,
  - poor concentration and motivation,
  - thought disorder
- Generally, the learning process may take longer, so it may be necessary to repeat the information several times

# Tennis players with a major organ transplantation



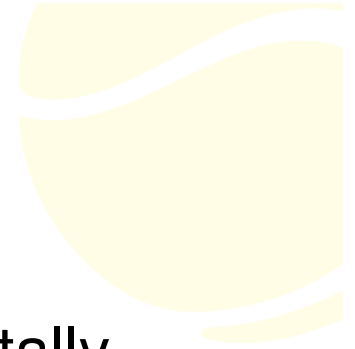
- The transplanted beginner and intermediate player can be coached in much the same way as an able-bodied person.
- Associated problems of transplantation may include but are not limited to the following:
  - side effects of medication,
  - poor sun tolerance,
  - medical and physical condition, etc.
- The tennis participation of these players should be carefully monitored.
- Coaches are recommended to seek the appropriate medical advice before coaching a player who is waiting for a transplant or has already been transplanted

# Tennis players with a vision impairment



- Tennis for the blind and partially sighted began in Japan through the ingenuity of Miyoshi Takei approximately 20 years ago.
- There is a players' classification for tennis determined by the degrees of vision impairment which range from impaired perception of colour, light, and shadow, with some peripheral vision to total blindness.
- Visually impaired athletes are normally classified according to the amount of vision that they have.
  - The totally blind athletes are in the B1 category. They play blindfolded and are permitted three bounces.
  - Athletes in the B2, B3, and B4 categories are partially sighted and are permitted two bounces.
  - Athletes in the B4 category are visually impaired and are permitted one bounce.

# Tennis players with a vision impairment



- Most people with a visual impairment are not totally blind.
- Playing tennis is a real possibility given the appropriate selection of ball size and colour:
  - While large bright balls against a dark background may be best,
  - Noisy balls (i.e. balls with bells inside) can also be effective in assisting the visually impaired learn new tennis skills.
- An introduction to the game through mini-tennis and/or two bounce rules may further aid graded learning progression.
- Manual guidance by the coach can be a very useful teaching method to help visual impaired players get an impression of the different tennis strokes.

# Tennis players who have a hearing impairment or are deaf

- Players who have hearing difficulties can play tennis at all levels without any major obstacles.
- Some deaf people may have balance related problems.
- The most important consideration in welcoming deaf players to tennis is the effectiveness of their communication.
- Coaches should understand that deaf players are likely to be more receptive to visual feedback.
- This impairment usually does not affect the ability of these players to improve their skill level and enjoy the game.

# Tennis players on a wheelchair

- Players eligible to play wheelchair tennis include those with:
  - quadriplegia/paraplegia,
  - spina bifida,
  - amputation,
  - cerebral palsy,
  - stroke,
  - acquired brain injury.

# Tennis players on a wheelchair

- Quadriplegia:
  - Complete or partial loss of function in the trunk, lower and upper limbs
- Paraplegia:
  - Complete or partial loss of function in the trunk, lower limbs.
- Spina bifida:
  - A damage on the spinal cord which is not formed properly.



# Tennis players on a wheelchair

## Assessing players' ability

- Have you played tennis previously?,
- What is the extent of the lesion?,
- How long have you been in a wheelchair?,
- Are there other medical considerations?,

# PHYSICAL ACCESS



- Tennis facilities can be made accessible for disabled players relatively easily.
- Accessibility is not as complicated or demanding as it may sound.
- The most important thing is for wheelchair players to be able to get from the parking lot to the tennis courts, with relative ease and without assistance.
- Other areas such as the clubhouse or amenities like toilets can often become more accessible with strategic ramp placement or the removal or reversal of a door

# PHYSICAL ACCESS



- Steps are an obvious barrier:
  - Ramps can be installed to allow players to access the facilities.
- Width of paths to courts, of gates/entrances to the courts, of doors to toilets changing facilities and clubhouse:
  - The average day chair widths range from 60-90 cm and playing chairs can be more than 100 cm in width.
- Surface of paths:
  - Smooth surfaces are preferable.
- Spacing between net posts.

# EQUIPMENT

## The tennis wheelchair



- Wheelchair tennis has improved dramatically in recent years due in large part to technological advancements.
- Wheels:
  - Wheels should be light and rigid.
  - Radial spoking wheels are best for wheelchair tennis.
  - Some of the top players are playing in wheelchairs with two small wheels at the front and an anti tip bar at the rear.
  - Camber, or the angling of the chairs wheels, has also been introduced to the tennis wheelchair.
  - Camber aids the wheelchair tennis player by enhancing side to side balance and stability, increasing security, and enhancing turn speed.

# EQUIPMENT

## The tennis wheelchair



- Frames:
  - Newer chairs frames are manufactured with lightweight and more durable materials such as aluminium, and titanium.
  - Today's tennis wheelchair can weigh anywhere between 8-15 kilograms.
  - Wheelchair tennis chairs can be either custom built or fully adjustable.
  - Adjustable chairs are recommended, especially for beginner players.
- Tyres:
  - Tyres are crucial for wheelchair tennis.
  - Black bicycle tyres should be avoided because they will leave marks on the court.
  - Weight in the tyres, especially the push rim, directly relates to the power required to set that wheel in motion.
  - Lighter materials are currently being tested in the push rim as well as the spokes.

# EQUIPMENT

## Strapping



- Strapping is another way of improving the ‘union’ between the player and the wheelchair.
- Players typically use velcro straps, weight belts, and elastic bands.
- They are placed around feet, knees, thighs, or stomach area, depending on the player’s needs.
- Players lacking abdominal use may find strapping around their stomach area very beneficial and help them in preventing their upper body from collapsing.
- Those who lack leg function often prefer to fasten them into place .

# EQUIPMENT

## The ball



- It is recommended that beginner and intermediate players with disability use the red, orange and green ball progression.
- In the case of players with vision impairment a sponge ball cut in half with a rattling table tennis ball in the middle has been shown to be very efficient
- Other players may prefer using highly visible fluorescent or larger balls

# EQUIPMENT

## The racquet



- Visually impaired tennis players use mini-tennis racquets that hit the sponge ball that rattles
- Other beginner and intermediate players will use regular racquets as recommended according to their level of play.



# COURT



- Beginner and intermediate players with disability can play in the same type of courts as able-bodied players.
- Beginner and intermediate players with disability should use the red, orange and green court progression

# COURT



- Wheelchair:
  - It can be played on all court surfaces.
  - Wheelchairs do not cause any permanent damage to courts, not even clay courts.
  - Clay courts should be prepared with special attention to the perimeter areas, as wheelchair players tend to use more of the court are close to the fences
- Players with vision impairment:
  - play on a badminton court.
  - String is placed on the lines and stuck down with tape to allow the players to ‘feel the lines’ with their hands or feet
- Other players may prefer to play:
  - On indoor courts since they provide “even light” or
  - On courts in which there is a contrast of colour surface, type of ball and backdrop

# RULES



- Wheelchair tennis is the same as able-bodied tennis, with one exception – the two bounce rule:
  - Players are permitted a second bounce if required.
  - The first bounce should be within the court boundaries.
- As per the players with vision impairment, there are two major differences:
  - the number of the bounces
  - the server must say “Ready” before delivering the serve and the receiver replies by saying “Yes”

# TACTICS AND TECHNIQUE

## Specific wheelchair tennis strategies

- The fact that wheelchair tennis players are allowed two bounces determines the game of beginner and intermediate wheelchair tennis players.
- As players develop and improve, they will be able to play with just one bounce
- Beginner players are advised to:
  - Move laterally,
  - Hit deep,
  - Sit deep in the chair
  - Stay deep on the court to gain rhythm.
  - Return the ball directly to the opponent to make it very difficult for the other player to manoeuvre the chair,
  - play slow pace returns with no angles,
  - Play high topspin balls and well placed shots

# Wheelchair tennis mobility



- **Raw mobility:**
  - Refers to how to push the wheelchair and it is influenced by the strength, athleticism, hand speed and range of motion in the arms.
- **Technical mobility:**
  - On-court movements in wheelchair tennis are circular in nature.
  - Circular movement on court maximises the use of momentum.
  - Although a longer path to recovery it is a faster path to recovery.
- **Tactical mobility:**
  - The optimal position is on to two meters (sometime more) behind the baseline will optimise ball retrieval opportunities.
  - “The Hub” refers to an imaginary circle positioned one or two meters behind the baseline with a circumference of two or three meters.

# Wheelchair

## The sequence of the push



- The push is the start of the movement in wheelchair tennis.
- It is recommended that players push the chair with the racquet in their playing hand:
  - 1. Grab the wheel or rim as far back as possibly, typically just behind the backrest;
  - 2. Push hands in and down to ensure a firm grip on the rim and minimise slipping;
  - 3. Thrust forward with a full extension of the arms,
  - 4. Recoil arms to push again without bobbing head and shoulders up and down.

# Wheelchair The turns



- Fundamental in wheelchair tennis.
- Three basic types of turns:
  - Outer turn – A turn away from the net, often referred to as a “negative turn”;
  - Inner turn – Turn in towards the net, considered an attacking turn,
  - Reverse mobility – Turn away from the net when executed inside the court.
- Inner and outer turns are used for recovery and when attacking the ball

# Wheelchair Tennis Technique

- Wheelchair tennis players' groundstrokes do not differ too much from able-body techniques.
- Grips:
  - Very similar, with the exception of the “pronated” backhand grip (i.e. the player using a Western forehand grip to hit topspin backhands, thus hitting the forehands and backhands with the same face of the racquet)
- Backswing:
  - Wheelchair tennis players obviously place the racquet closer to the ground during the backswing of both strokes than able-bodied players.
- Impact:
  - Recommended to occur in front of the rear wheel and of the knees.
- Follow through:
  - Use their free hand to hold onto the rear wheel, the opposite side of the chair, or the left knee (i.e. in the forehand of right handers) to ensure balance.



# Wheelchair Tennis Technique

## Serve

- The serve is the stroke in which more differences can be found between wheelchair tennis players and their able-bodied counterparts.
- These are summarised as follows:
  - A shorter backswing is recommended since the racquet can not be taken down.
  - More spin needs to be applied to the ball to keep the ball in the service box.
  - All wheels should be behind the baseline.
  - While the ball is in the air, the ball tossing hand should grab the wheel.

# Wheelchair Tennis Technique



- Return of serve:
  - Beginner players should stay deep to take the ball on the second bounce and have more time to make a better return.
- Volley:
  - The best position is around the service line.
  - This will allow the player to cover balls directed to either side.
- It is important to mention the different supports held by the free hand (for right handers) onto:
  - The rear wheel (people with good mobility and stroke technique).
  - The left knee (for easy balls).
  - The right knee (for balls further from the body).
  - Both knees with the free arm (for lower balls).

# Quads



- Most wheelchair tennis techniques also apply to quad tennis.
- The biggest difference comes from the fact that most quads have limited hand function or limited power in their shoulders and some players secure their racket to their hand using specially designed orthotics devices or medical tape.
- Once the racquet is secured into the player's hand, the grip cannot be changed.
- A forehand grip, either semi-Western or Western, is recommended.

# Wheelchair Tennis FITNESS



- The physical fitness and basic motor skills of people with acquired disabilities generally varies in accordance with a number of factors specific to each individual, such as:
  - Tennis experience prior to disability,
  - tennis skills developed since disability,
  - period of hospitalisation,
  - severity of condition.
- Wheelchair beginner and intermediate tennis players can perform many of the same types of fitness drills that able-bodied players perform, ie:
  - Court sprints with appropriate work:rest ratios
  - extra resistance can be applied to chair-pushing
  - stops and starts in short interval or sprint work
  - ‘pulling’ or pushing backwards should also be incorporated

# Wheelchair Tennis PSYCHOLOGY



- The psychological implications of tennis for beginner and intermediate players with a disability are very important.
- Researchers have shown tennis participation to significantly improve disabled players' perceptions of their physical competence as well as positively affect their mood states
- It has been emphasised the profound effect a player's family can have on disabled players, especially when those players present certain cognitive traits.
- Coaches should educate families as to the need to appreciate the disabled players' efforts over and above any result.

# Programmes for tennis players with a disability



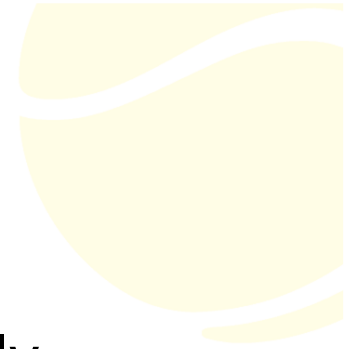
- **Make it fun:**
  - Learning tennis and getting fit should be fun activities.
  - Implement a range of entertaining and varied activities to teach the skills of the game.
  - Involve ‘make-up’ games.
  - Set time set aside for a chat, drink and lunch.
- **Be flexible:**
  - Since some individuals may be undergoing a course of medication that affects their ability to participate for a full session.
- **Involve the carers:**
  - Invite the players’ carers to participate in some of the tennis, fitness or social activities
  - This will strengthen a willingness on their part to transport a player to the sessions and to encourage the players to be active and enthusiastic participants

# Competition for wheelchair tennis players



- Beginner and intermediate wheelchair tennis players can compete against one another in a wide range of competitions.
- The beauty of the sport is also that wheelchair players can play against able-bodied players
- In 'one up -one down' doubles or in singles matches, where wheelchair players are allowed two bounces and the able-bodied players one.

# Integration



- One of the strengths of tennis is that both visually challenged and sighted people can play together, either as opponents or in a mixed-doubles format with visually impaired player partnering someone with normal eyesight.
- Singles and doubles matches can be played with doubles pairings usually consisting of a visually impaired and a sighted player.
- The visually impaired player has the appropriate number of bounces for the level of their vision and the sighted person is allowed one bounce



# Disabled tennis initiatives



- Disabled tennis leagues
- Mixed leagues
- Integrated tournaments
- “One Up, One Down” tournaments
- Disabled tennis rating system using the International Tennis Number (ITN).
- Camps and clinics
- Disabled tennis exhibitions
- Finding players
- Wheelchair tennis doubles