

Supporting Wheelchair Users during Physical Activity

Preparing for a session

Basic wheelchair awareness

Participants will often prefer to play sport using a sports wheelchair. A sports wheelchair is generally more lightweight and easier to manoeuvre. The following outlines some of the main differences between a sports and day wheelchair:

Wheels: Sports wheelchairs will have cambered (angled) wheels. These are designed to enable participants to turn quickly with less effort.

Tyres: Sports wheelchair tyres will be more durable and are available in different materials designed to suit different surfaces. Tyres should be inflated to around 100psi. Tyres with insufficient pressure will result in slower moving and turning.

Frame: Sports wheelchairs will have a reinforced, but lightweight, non-folding frame.

Backrest: Most sports wheelchairs will have adjustable backrests; participants with a higher impairment may prefer the backrest to be higher to offer greater support.

Seat gradient: Participants with higher impairment may feel more comfortable with a gradient sloping down towards the backrest (bucket seat).

Anti-tip wheel (caster): The anti-tip wheel prevents the participant falling backwards in the wheelchair. The height of the anti-tip wheel may need to be higher on a surface with more friction, such as AstroTurf, to prevent the main wheels spinning.

Day wheelchair



Sports wheelchair



Identifying different parts of the sports wheelchair



10	Axle	5	Wheel	8	Anti-tip caster
12	Frame	2	Cushion	1	Back rest
3	Side guard	4	Strapping	11	Axle pin
9	Spokes	6	Push rim	7	Footplate

Different designs of sports wheelchairs



Basketball: lightweight, front bumper, anti-tip casters, high positioned seat for forwards, lower for guards



Tennis: shin guards for balance and stability, front casters, anti-tip casters, foot plate for lower centre of gravity



Rugby (high impairment): rubber spoke guards for grip, reinforced chassis, bucketed seat, cattle catcher on front of chair



Rugby (low impairment): as per high impairment, minus smaller cattle catcher and larger front bumper



Fencing: day chair plus metal bar for balance and regaining stability and position



Racing: lightweight, carbon wheels, no casters, long front end, steering system, no foot plate, small push rims

Transferring from the day wheelchair into the sports wheelchair

- Ask the participants whether they require assistance
- The participant's day wheelchair should have brakes but the sports wheelchair will not. You may, therefore, need to hold the sports wheelchair to enable a safe transfer. Alternatively, participants may choose to position the sports wheelchair against a wall or fence to prevent it moving
- Some participants may use a transfer board to transfer between wheelchairs. This is a board that is positioned between wheelchairs for the player to slide across
- Hoists are another option but should only be used by parents or personal assistants who have undertaken manual handling training

Participants using their own wheelchair

- There is likely to be no anti-tip caster (wheel) which could potentially result in the wheelchair tipping backwards when performing fast movements
- Participants will find it slower to turn the day wheelchair because the wheels have no camber (are not angled)
- A day wheelchair will be heavier than a sports wheelchair resulting in less manoeuvrability
- When playing contact sports, it should be considered that there will be no protective front wing around participants' feet

Strapping

There are a number of options for helping participants to feel more secure in their wheelchair:

- Foot straps: to keep the feet on the footplate when turning
- Knee strap: to keep the participant central in the wheelchair
- Lap strap: to secure hips to be at one with the wheelchair
- Waist strap: to give core balance

Taping

Those with upper limb impairments may experience difficulties gripping rackets or other equipment, and therefore, may choose to strap or tape the racket or bat to their hand. They may also wear gloves with a tactile surface or use textured push rims to enable effective pushing. [Active Hands](#) produce a range of gripping aids that have been specifically designed to support those with impairments affecting the hand and arm. Products are suitable for a wide range of activities and can be made to measure.

Sports venue considerations

The Equality Act 2010 requires sports clubs and providers to make reasonable adjustments to services so that everyone has access. Sports clubs have an on-going duty to meet the reasonable needs of disabled people.

- Ensure accessible facilities are available such as parking, changing rooms and toilets – each with sufficient space for manoeuvring a wheelchair
- Consider local accessible transport links
- Ensure surfaces are free from clutter and litter, with room to freely manoeuvre a wheelchair
- Ramps and accessible lifts should be in place if required
- Consider where day wheelchairs will be stored if sports wheelchair are being used for activity