Help choosing the right powered wheelchair for you

Components

• **Frame** - type (page 2)

• **Seat** - general information (page 2)

• **Backrests** - dimensions, folding, non-folding, semi or fully reclining (page 2)

• **Wheels and Tyres** - type and size (page 2)

• **Controls** - general information (page 3)

• **Brakes** - general info (page 3)

• **Footrests** - detachable, swing-away, one-piece, elevating, height-adjustable, angle-adjustable, footplates (page 3)

• **Armrests** - full-length, desk-style, adjustable height, detachable, fold-up-fold-down/swing-away (page 4)

• **Special features** - general information (page 5)

Frame

If you have a rigid frame it will be stronger but harder to transport, whereas a folding frame is easier to transport but the batteries will quite often need to be removed before the folding the chair.

Seat

The seat size and shape need to be determined for each individual user. A slung seat and backrest are standard on powered chairs. You can also a padded seat to increase user comfort. Generally a slung seat does not provide enough comfortable support.

Is very important to have the seat designed following an accurate assessment of needs.

Backrests

- **Folding backrests** make the wheelchair smaller which helps with storage and transportation. It can also make transfers using slings easier.

- **Non-folding backrests** give better support for the back and for any special backrest systems that are required.

- **Semi/fully reclining backrests** are either adjusted by the carer manually, or electrically by the user.

Wheels

- Smaller wheels are more practical for manoeuvring around small spaces but are not as good as larger wheels on uneven ground.

- Depending on the particular model of chair, the wheels can all be the same size or smaller at the front. Some models have large front drive wheels which are good for negotiating kerbs and outdoor terrain.

- Rear wheel drive has better grip than front wheel drive, but it is not as easy to manoeuvre as the latter. Another design is a six wheel-base with the drive wheels in the middle which allows for a smaller turning circle.

- All powered chairs can have their motors overridden so as to be pushed but they are very heavy.

Tyres

• **Pneumatic tyres** are smoother and more comfortable for the user but need to be checked to maintain pressure and for punctures. Repairing punctures is done the same way as bicycle tyres. However, if this is a problem then a local cycle shop or specialist retailer can carry out the repair. You can have deeper treads to increase stability and grip on rough surfaces.

• **Solid tyres** do not need inflating and don't puncture. They are also good for manoeuvring on certain surfaces.

• **Puncture-proof tyres** are made of a special rubber compound which provides a compromise between pneumatic and solid tyres - they absorb shocks but don't puncture.

Controls

A joystick is the default control. This can be designed to compensate for a hand tremor. A joystick can also be mounted on the back of the chair to enable a carer to contol the wheelchair.

If the user cannot use a joystick then the wheelchair can be controlled by a tray-mounted joystick, switches controlled by other parts of the body (chin, head, foot etc…), or touch sensitive switchs such as a suck/blow switch.

Brakes

When the user stops directing the chair forward, the brakes automatically come on.

It is possible to also have hand brakes which lock on the tyres and provide extra security.

Footrests

• **Detachable footrests** can be taken off the chair to make it lighter for transportation, and can also make transfer to and from the chair easier.

• **Swing-away footrests** are also a good way of easing transfers to and from the chair.

• **One-piece footrests** give more support by being in contact with a larger surface

of the foot. This means that the user can move their feet around.

• **Elevating footrests** are important if you need to have your legs raised or if you suffer from stiff knees.

• **Height adjustable footrests** accommodate different leg lengths but if they are too low they can hit the ground when going up hill. It is therefore a good idea if you have long legs to enquire about footrests that are also angled outwards.

• **Angle adjustable footrests** can be adjusted so as to compensate for users whose legs kick out in a spasm. This alteration can help lessen spasm. The footplates can be hinged upwards to stop the user's legs slipping off.

Armrests

• **Full-length armrests** provide good support for standing up and while sitting down as they run the full length of the seat. They often can have a tray attached. The downside is that they stop user from being able to approach a table.

• **Desk-style armrests** let the user access a work surface but don't provide much support, particularly if the user needs help standing up.

• **Adjustable height armrests** are great for maximum comfort and support for the user.

• **Detachable armrests** can be mislaid but help to reduce size and weight during transportation of the chair. They also facilitate sideways transferral of the user to and from the chair.

• **Fold-up/fold-down/swing-away** also help sideways transferral of the user.

Extra functions

• **Stand-up function** - an occupant-controlled mechanism flattens the seat and backrest vertically, helping the user towards a standing position.

There are several advantages: greater independence is achieved through being able to reach high objects, for example, and the psychological advantages of interacting with others at the same level can be considerable. At the same time, circulation and digestion may be improved by the ability to change position, and pressure points can be eased.
Negative factors - a long-term wheelchair user may find that their legs aren't strong enough to support their body weight.

• **Elevating seat function** - an alternative means of achieving an increase in height. The powerchair's seat is elevated, to bring the user to the right level to reach high objects, or talk to people who are standing.

• **Stair climbing** - some power chairs are able to climb over kerbs and even up flights of stairs, by continually adjusting the centre of gravity to keep the user stable, while the front and back wheels move vertically over each other.

• **Four wheel drive function** - provided on power chairs that have been designed to cope with rough terrain. These chairs have independent suspension to all four wheels, enabling them to maintain stability and greater comfort for the user as they cover bumpy ground.