

Fact Sheet 3

The Wheelchair

Basic Aim

- * Comfort * Safety * Maximum mobility, with minimum effort
- * Maximum personal function * Attractive image

MAJOR TYPES

Manual - self-propelled – attendant propelled

Electric - self-propelled – attendant propelled - indoor – indoor/outdoor – outdoor

SPECIAL WHEELCHAIRS

- Front wheel propelled
- Chair frame for user to stand up
- climber
- Car Chair with elevating seat
- Stair
- Specialist chair for specific sports
- Commode or shower chair [some wheelchairs have an optional adaptation for this usage]
- Transfer chair [for limited use only, by people who chiefly use a power chair]
- Hemiplegia chair [propelled by feet, or by one hand, or by lever]
- Children's chair with multi-adaptations for growth

OPTIONS AND EXTRAS

- Folding and/or detachable backrests, footrests, armrests
- Supportive extensions for backrest, legrest
- Positioning aids [e.g., headrest, neckrest, positioning pads, leg elevator extension]
- Positioning/safety straps or harness
- Cushions – Washable covers
- Seating systems [modular or system built]
- Daily living accessories [e.g. trays, carry-bags]
- Comfort or performance grip surface for self-propelled chairs
- Rainhood [for the user of the chair itself]
- Power pack [to turn a manual into a power chair]
- Dual controls – Kerb climber

- Special controls for power chairs [suck, blow, one-handed etc]
- Programme special controls [e.g. maximum speed, or reduced sensitivity, for user who has uncontrolled movements, or to gradually add function as a new user gets more proficient
- Anti-tip tubes [like training wheels on bikes] to help active users until they are proficient
- Special sizes for heavy people, long legs ect
- Custom-building for special needs or extra-high performance
- Spoke guards
- Wheelchair -friendly clothing
- Wheelchair gloves [for self-propelling users]
- Lights, reflectors, flashing stickers etc for road safety

TRADE – OFFS

The perfect wheelchair does not exist. The concept to grasp is “trade off”, so the user can decide between incompatible qualities, such as:

- weight distribution nearer front of chair for stability, or nearer back for manoeuverability
- cambered wheels for speed and better cornering or standard alignment to fit narrow spaces
- sophisticated functions or simplicity, reliability and easy maintenance
- small castors for manoeuverability or large castors for stability and a smoother ride

VARIATIONS

Lightweight

- higher performance for active user
- also easier for attendant to push
- easier to fit into car boot
- but is less stable
- but is less supportive/comfortable
- but gives less smooth ride

Higher performance or active

- essentially a lightweight, but the term conveys other action-friendly features such as low backrest, variable wheel positions, cambered wheels etc.

Large back wheels

- essential for self-propulsion
- more 'push' for the energy spent
- also easier for attendant to push
- the larger the wheels, the faster the chair will go

Compact

- easier for confined spaces
- easier storage and transportation

Pushing handles

- can be added to self-propelled models to give push operation

Tippiness

- weight distribution nearer the back, to help user balance on back wheels for kerbs, enhanced mobility and sports/stunts

Wheel Camber

- makes chair easier to propel
- improves speed and cornering
- often essential for sports
- but makes the wheelchair wider

Folding Frame

- easier storage and transportation
- but a rigid frame, if light enough, may be easier

Reclining [backrest angle] or tilt-in space [seat and backrest tilt as a unit]

- more comfort and pressure relief for dependent people
- allows rest periods without having to be removed from chair

Tyre

- pneumatic tyres give a smoother ride, but may puncture
- solid tyres give easier propulsion, but the ride will not be so smooth as with pneumatics
- high pressure 'sports' tyres give easier propulsion for weak arms or for high performance, but wear out quickly

Large front castors

- make wheelchair more manoeuvrable
- but harder to push

Quick-release wheels

- easier storage and transportation

WHILE EVERY EFFORT HAS BEEN MADE TO ENSURE THAT THE INFORMATION CONTAINED IN THIS FACT SHEET IS ACCURATE AND UP TO DATE, THE WHEELCHAIR USERS GROUP ACCEPT NO RESPONSIBILITY FOR ERRORS OR OMISSIONS. C/2006.

