

Wheelchair User Safety Guide.

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INTRODUCTION

This booklet aims to cover safety and user instructions that are common to all types of manual and powered wheelchairs supplied by the Posture and Mobility Service. For specific information on your wheelchair refer to the Owner's Manual supplied with your chair, or consult with your therapist who will help you with your individual needs.

MANUAL WHEELCHAIRS

By the time you read this you should already be familiar with the main features of your wheelchair. When you took delivery of the wheelchair certain routines and procedures will have been explained and demonstrated. These are necessary before and after regular wheelchair use. To make sure you understand each routine and procedure we will go through them again in the next section.

Unfolding the Wheelchair

(Refer to the Owner's Manual supplied with your specific chair)



CAUTION

When unfolding and folding your wheelchair take care to that hands or fingers are not positioned between moving parts where they may become trapped.

You can carry out the following steps either standing up or seated, whichever is more comfortable to you.

1. Manoeuvre the wheelchair into a position so that you are facing one side of it.
2. Check that both wheel locks are applied.
3. Tilt the wheelchair towards you. Make sure the rear wheel and castor on the side away from you are slightly lifted off the floor.
4. Press down on the seat side tube furthest from you and the wheelchair will smoothly unfold.

Folding the Wheelchair

1. If a stay bar is fitted across the backrest, detach its removable end and allow it to hang freely along the outer backrest tube.
2. Check that the footrests/leg rests are in the locked position towards the front of the chair and that the footplates are folded upward to vertical position. Alternatively, remove the footrests/leg rests from the wheelchair.
3. Position yourself, or the wheelchair, so that you are facing one side of the folded chair.
4. With both hands, grasp the middle of the seat upholstery at the front and rear edge and lift up. Alternatively, tilt the wheelchair slightly to one side and use the push handles to close it. If there are carrier straps on each side of the seat, pull these up to fold the wheelchair.

Note

Certain models of wheelchair have Velcro fastenings between the seat and backrest canvasses, always separate these before folding.

5. Where applicable, pull the backrest extension out of the backrest tubes to reduce the folded chair to a more compact size, or fold the backrest if your wheelchair has this feature.

Rear Wheels with Quick-release Axle



CAUTION

Quick release axles are adjustable to reduce the amount of 'play' (sideways movement). If both wheels are removed, the adjustment could vary slightly for each side of the chair. Always ensure that they are assembled correctly to the side from which they were originally detached.

If you are using a special rear wheel mounting bracket (camber bracket, amputee bracket etc) which is in the form of a multi-hole position adapter, ensure that the rear wheel axle is installed in the correct location on both sides of the chair.

In most cases wheels may have been removed for easier transport. It is advisable to install the rear wheels first, before the wheelchair is unfolded. If in doubt, or you encounter difficulties contact your supplier.

1. Place the wheelchair frame flat on the floor and hold the wheel, so that its axle is aligned with the axle bush in the rear vertical frame tube.
2. Press and hold the spring-loaded plunger in the axle head and push the wheel with its axle fully into the bush until you feel that it 'click' into place/it is secured.
3. Release the plunger, so that it snaps fully back into locking position. As a final test, rock the wheel gently up and down holding it by the tyre.

Turn the wheelchair over and repeat the same operation with the wheel on the other side. Then proceed with unfolding your wheelchair as previously described.

Note

Installing quick-release axle rear wheels can be made easier if assistance is at hand. While one person holds the folded wheelchair frame in its normal, upright, position and the other fits the rear wheels.

Footrests

The initial setting and adjustment would have been made by your wheelchair specialist. If re-adjustment is required refer to the instructions in the User Guide supplied with your model of wheelchair. The method of attaching and detaching footrests varies considerably between different wheelchair designs. For specific details on your model of wheelchair, refer to the User Guide supplied with the chair. General points to remember include:

- While sitting in your wheelchair check the footplate height. Thighs should be resting on cushion with feet resting on the footplates.
- There should be a clearance of approximately 10 cm (4") but no less than 5cm (2") between the footplate and the ground, so that there is unobstructed mobility and manoeuvrability of the wheelchair. This is especially important when it comes to negotiating uneven surfaces, kerbs and small steps.

LET'S GET MOVING



CAUTION

A wheelchair should never be tipped forward when negotiating kerbs as the occupant may fall out.

Ensure removable and folding back posts are fully secured prior to lifting.

It is advisable to cross roads at controlled crossing points, pedestrian crossings and always use pavement ramps when available. Seek assistance if required, to negotiate kerbs and at unmarked busy crossing points.

Down a kerb / up a kerb

If the wheelchair is being attendant propelled, it is important that the person is able to safely control the wheelchair with its occupant especially whilst negotiating steps, slopes roads etc. Please refer to manufactures guidelines for you wheelchair.

Before we move on to unassisted wheelchair techniques please note the following:



IMPORTANT WARNING

*The day-to-day activities and the more advanced wheelchair techniques depend on your physical capabilities and your own specific circumstances. Our suggestions and recommendations may occasionally differ from those of your therapist or doctor, as they have a better understanding of your abilities. Where this is the case, you **MUST FOLLOW THEIR** advice as they are better placed to tell you what is suitable for you and what is not.*

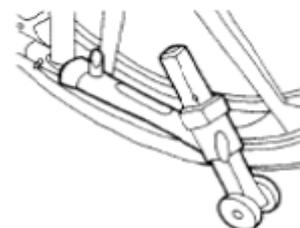
Now you are on your own ...



CAUTION

Avoid using your wheelchair on rough ground or in adverse weather conditions (snow or ice), always steer clear of obstacles where possible, ensure your clothing and hands are kept clear of all moving parts, ask for assistance when descending or ascending stairs or steep gradients.

If your wheelchair has anti-tipping levers make sure they are maintained with approximately 50mm (2") clearance between the bottom of the anti-tipper wheels and the ground.



Safety Indoors

When using your wheelchair indoors always consider the following potential hazards. Many of the premises where you are likely to use your wheelchair may not have been designed with this consideration in mind. You should therefore have an awareness for safety when encountering:

- Narrow doorways, steps, high surfaces, protruding wall fittings
- Every day household items such as children's toys, electrical appliances etc.
- Be sure to take extra care in kitchen environments.
- Always consider the fire evacuation procedures for buildings you may be entering.

Never put yourself at risk and ensure that you can be easily evacuated in the event of an emergency.

Moving on Level Ground (self propelled wheelchairs)

To propel your wheelchair forward take hold of both hand rims as far back as can comfortably be reached with the thumbs resting on the top, and push them forward with a firm stroke, release the grip and while the hand rims are sliding through your hands, move your arms back, so that you can repeat this action. The more forceful and the quicker your strokes, the faster you move as you generate increased momentum. To reverse, pull gently on the hand rims reaching as far forward as can comfortably be reached.

If there is a piece of level smooth-surface ground outside or near your home, you can make a simple training track by placing objects in a row at a distance of about 2.0m (6'-7') apart, practicing driving forwards and backwards in a zig-zag fashion. This is an important part of wheelchair riding, as it increases body-awareness and security. It will not take long until you get the feel of how large the wheelchair is and how much space you need for different manoeuvres.

Stability and Balance while sitting in your Wheelchair

To ensure stability and safe control of your wheelchair you must maintain proper balance at all times. Certain routines and movements that you may regularly carry out will affect the stability of the wheelchair, please consider the following:

Reaching and Bending Forward

Castor wheels should be positioned towards the front. If necessary, move the chair forward a little, then reverse, so that the castors swivel into the forward position. Apply both wheel brakes.



DO NOT lean forward with your body out of the wheelchair any further than the length of the armrests.

DO NOT attempt to reach objects by moving forward to the edge of the wheelchair seat.



DO NOT attempt to pick up objects from the floor by reaching down between your knees.



Reaching and Bending Backwards

Again, position the castors, so that they point forwards. Reverse the wheelchair as close as possible to the object in question. Leave the wheel locks released. It is better to roll back a little than risk tipping over. Reach back only as far as your arm will extend without moving about on the seat of the chair.

DO NOT lean over the top of the backrest because it will shift your centre of gravity and increase the risk of tipping over backwards.



Transferring to and from your wheelchair without assistance



CAUTION

When transferring to and from the wheelchair DO NOT stand on the footplates. DO NOT attempt transferring unaided until you are confident and proficient in the skills to do so, always remember during transfer to make sure the brakes are in the locked position.

Circumstances and your individual needs will vary from person to person, we strongly recommend you consult your therapist who will help to develop your skills and advise you for the appropriate transfer methods that suit your individual requirements. For general guidance for specific model of wheelchair, refer to the User Guide supplied with your wheelchair.



COPING WITH EVERYDAY OBSTACLES

Kerbs, Steps and Platforms

Until you are proficient in the control of your wheelchair, do not attempt to negotiate obstacles higher than 25mm (1"). Again, we **strongly** recommend having anti-tipper levers fitted to minimise the risk of tipping backwards.



Once you have learned the technique of controlling your wheelchair, you are in a different situation and can mount higher obstacles. Again, consult your therapist for advice on advanced manoeuvring techniques that will suit your particular requirements.

Slopes



CAUTION

DO NOT attempt to climb or descend a slope steeper than stated in your wheelchair User Guide. This is the limit beyond which there is a risk of the wheelchair tipping over sideways during turning or when placed sideways on a slope.



Note

It is advised that anti-tippers are used when climbing slopes.

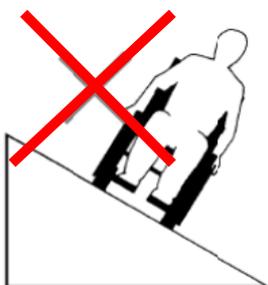
Uphill



Bend forward and propel the wheelchair with firm, but quick sweeping pushes on the hand rims in order to maintain momentum and control direction.

Downhill

Lean carefully backwards and allow the hand rims to slide gently through your hands, maintaining control over speed and direction.



When climbing or descending a gradient, avoid any abrupt steering manoeuvres. We **do not** recommend negotiating slopes sideways.



CAUTION

Never attempt to negotiate stairs unassisted.

Never use an escalator to move a wheelchair between floors.

Never attempt to lift wheelchair by its armrests or leg rests.

It is advisable to use a lift to move between floors if one is available. If not, two strong and experienced helpers will be required. They must position themselves either side of the wheelchair facing the occupant and grip the main frame of the wheelchair only. Lift the chair moving down the steps steadily.



Note

Attendants should always adopt correct posture for manual lifting (knees bent, back straight).



CAUTION

Ensure removable and folding back posts are fully secured prior to lifting.



If the stairway is too narrow proceed as follows:

We recommend two assistants are required with adequate preparation. The first assistant (positioned behind the wheelchair) should grip the handles firmly and tip the wheelchair back to equilibrium point, roll the wheels up against the first step and lift at the same time. The second assistant (in front) should grip a fixed part of the front frame firmly and lift the wheelchair over the first step and then hold it securely while the assistant at the rear of the wheelchair climbs to the second step and repeats

the first manoeuvre. The wheelchair should never be tipped down until it has cleared the last step and is away from the stairs.

Use of Wheel Brakes

The wheel brakes can be push or pull-to-lock depending on the model of the wheelchair. They are intended to be used purely as a parking brake to immobilise the wheelchair while it is stationary.

DO NOT attempt to slow down or to stop a rolling wheelchair with the wheel brakes. Before entering and leaving your wheelchair always check that the wheel locks are applied.

The wheel brakes have to be tested and, if necessary, adjusted at regular intervals. Refer to your specific User Guide for details or contact us.

CHILDREN AND WHEELCHAIRS

Children should be encouraged to gain as much independence as possible from an early age. This will help ensure that his or her independent mobility will develop in a positive manner.

Always ensure that the wheelchair is the correct size and type for your child. Your therapist is qualified to advise you on this. An incorrectly sized wheelchair will hinder the child's mobility and subsequent development. A wheelchair with 'growing' capabilities could be selected, which would substantially reduce the frequency of renewal and facilitate maintenance of correct positioning for the child.

The use of spoke protectors is strongly advised to prevent damage to the spokes themselves and prevent injury to hands or fingers that may become trapped in the spokes.

Wheelchairs are not toys. The user must always consider bystanders, especially children, who will not be aware of the hidden dangers associated with moving parts such as wheels, and the effects of stability, balance strength when standing and climbing on the wheelchair. As a wheelchair user or a parent of a child wheelchair user, always make others aware and discourage misuse.

The scope and limitations of the wheelchair will be detailed in the specific User Guide supplied with the wheelchair. Always refer to this for guidance.

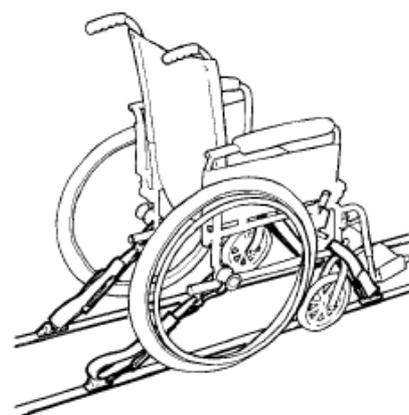
SAFETY IN TRANSPORT (Manual and Powered Wheelchairs)

We always advise that a wheelchair secured in a vehicle will not provide the equivalent safety level and security as a vehicle seat. We recommend transfer to the vehicle seating wherever possible, but we also recognise that it is not always practical to transfer to a vehicle seat.

In cases where transfer is not possible then the wheelchair should only be secured as follows:

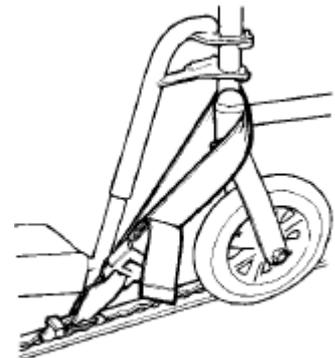
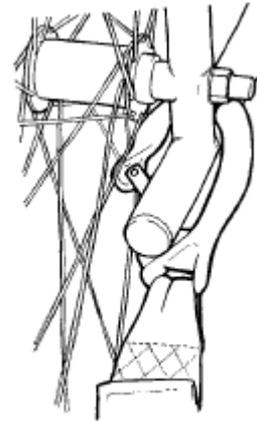
Note

Your safety during transportation largely depends upon the diligence of the person securing the tie-downs and passenger



restraints. It is their responsibility to ensure that your wheelchair has been secured safely, as stated in the User Guide for your wheelchair.

1. Ensure that your model of wheelchair is suitable for transportation with an occupant in a vehicle. If you are unsure, seek advice from your therapist.
2. Seek confirmation from the transporter that the vehicle is suitably designed and equipped to transport a passenger seated in a wheelchair.
3. Any part of the wheelchair (accessories etc) that can be easily detached should be removed and stored in the vehicle luggage hold during transportation.
4. The wheelchair should always be transported in a forward facing direction. Rearward facing is only acceptable if your head and back can be supported by a suitable bulkhead.
5. We recommend following the manufacturer's user manual guidelines to secure your wheelchair within the vehicle. Your vehicle supplier and therapist can also give you further advice. Advice can also be found at www.unwin-safety.com.
6. When attaching the tie-downs to the wheelchair please refer to the manufacturer's user manual. It is imperative that the tie-downs are fixed onto the frame of the wheelchair, and not onto any attachments or accessories (wheels, hand rims, castors, footrests, armrests, anti-tipping levers etc).
7. The tie-downs should be secured, as close as possible, at an angle of 45° to ensure maximum effectiveness of the restraint in all directions.
8. If your wheelchair has a headrest it should always be used during transportation, if not ask the transporter if a universal headrest is available that will fit onto your wheelchair.
9. During transportation it is **essential** that you are secured by a three point lap and diagonal occupant restraint system, which is anchored to the vehicles wall and floor rails. Wheelchair lap belts can be used in **addition** to the three point restraint system but must not be considered as an alternative to the occupant restraint system.



Further information on transport safety can be found at www.unwin-safety.com.

WHEELCHAIR CARE AND MAINTENANCE

Your wheelchair can give you years of service with some simple maintenance.

Cleaning

Upholstery and metal work can be maintained by a simple wipe-over with a soft cloth. If you have been out in wet, muddy conditions, sponge off all the dirt and wipe with a dry cloth. Should chromium parts develop dull areas during the course of time, especially if your wheelchair is frequently exposed to high humidity, rain etc, the finish can be restored with a proprietary brand auto wax or chromium polishing agent. Do not use any harsh abrasives. As a preventative treatment against the loss of high polish chromium, parts may be given a light petroleum jelly coating. Further cleaning instructions can be found within your User Guide that came with your wheelchair.

Maintenance and Adjustment

In order to ensure that your wheelchair performs reliably and safely throughout its life, follow the service and maintenance recommendations in the User Guide supplied with your model. Many of the routine checks and adjustments can be carried out by yourself (tyre pressure and condition, lubrication etc). However, servicing and repairs should always be undertaken by our Field Service Engineers. Please telephone **01443 661 799** Contact centre, ALAS for any requests for repairs. Any major changes and adjustments should be carried out by the Posture and Mobility Service only.

POWERED WHEELCHAIRS

If you use a powered wheelchair, please bear in mind that many basic rules for using a manual wheelchair also apply to the powered wheelchair. We would therefore recommend you read about manual wheelchairs.

There are two main types of powered wheelchair, those for indoor use only and those which can be used indoors and outdoors.

Outdoor powered wheelchairs are classified as class 2 vehicles, which mean that they are permissible for use on pavements, pedestrian zones and on highways when no pavement is available.

Note

It is important to remember that powered wheelchairs drive very quietly, generally travel faster than the average walking pace and are low to the ground. Always consider these factors when using your powered wheelchair in busy pedestrian areas.

GENERAL SAFETY PRECAUTIONS



CAUTION

Never attempt to use an indoor powered wheelchair out of doors – it is not designed to withstand the climate and environment that it will encounter.

Refer to the manual wheelchair section for general safety notes, but specific recommendations are:

- Always ensure that power is switched off before entering or leaving your wheelchair.
- Before switching on power, check that both motors are engaged, tyres are inflated to the correct pressure and are in good condition and that the wheelchair is correctly adjusted to suit you – refer to your User Guide for details.
- When on the move do not attempt turns at full speed. Before changing from forward to reverse, and vice versa, you must stop. Failure to do so will cause severe damage to the electronics.
- Do not use your wheelchair beyond the limitations set out in your User Guide. Due to both the weight of a powered wheelchair and its occupant it is not advisable to attempt to be assisted up and down stairs whilst seated in your wheelchair.

Get to know your Wheelchair

Obviously before you venture off on your first journey you must firstly ensure that everything is adjusted to your specific requirements and you should always read the User Guide supplied to fully familiarise yourself with the product and its functions. **DO NOT** attempt to drive without an attendant on hand until you are fully proficient in using and manoeuvring the wheelchair.

Driving on Level Ground

Try to get the 'feel' of the wheelchair controls in a safe, level environment. If you are not satisfied with the response of the joystick (or whatever control devices are fitted), contact us and we will be able to re-program the controller to your individual needs.

Negotiating Gradients / Slopes

Note

It is advised that anti-tippers are used when climbing slopes.



CAUTION

Never attempt to climb or descend an incline where the surface is rough, wet or slippery (gravel, loose chippings, grass, rain, black ice, snow etc). Always steer clear of obstacles where possible, ensuring that your clothing and hands are kept clear of all moving parts.

Always refer to the User Guide supplied with your wheelchair for the maximum safe slope that your wheelchair is suited for. Do not attempt to climb or descend slopes that are in excess of these figures and as a precautionary measure always fit anti-tipping levers for outdoor use.

If you are faced with a situation where by the wheelchair fails to climb a ramp and stalls mid-way through the manoeuvre:



DO NOT attempt to turn the wheelchair to drive back down in a forward facing direction.

ALWAYS reverse slowly in a steady, flowing action and **DO NOT** brake harshly, as this can drastically upset balance in this situation. If possible, always seek the assistance of an attendant.

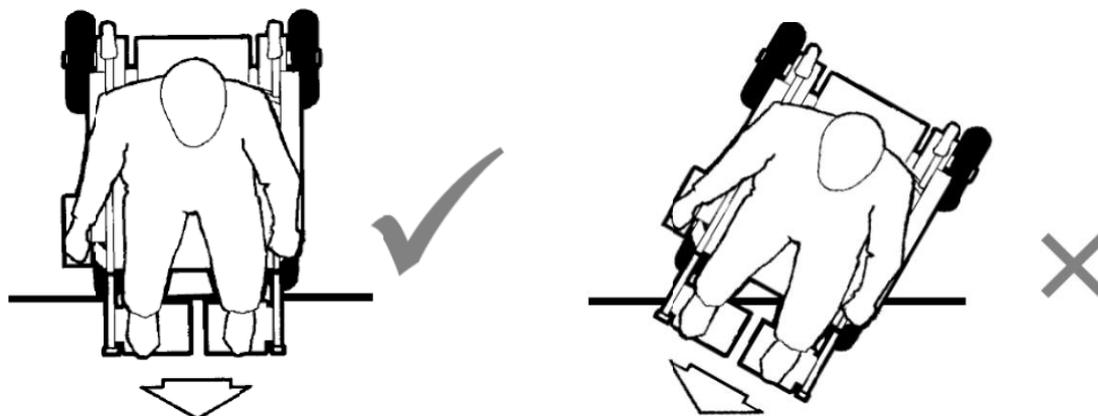
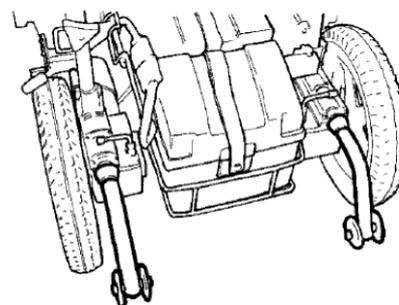
Kerbs

When approaching kerbs wherever possible mount and dismount pavements via ramps. Your wheelchair will overcome a 5cm (2") high kerb stone. Before negotiating a kerb ensure that the speed control is set to the maximum. Approach the kerb head on and as soon as the front wheels are about to make contact with the kerb push the joystick fully forward and hold it there until both rear and front wheels have climbed the kerb stone. If your wheelchair is fitted with a kerb climber it will enhance the kerb climbing power to 10cm (4").

Note

Before negotiating kerbs ensure the following:

1. Anti-tipping levers are fitted.
2. Always approach head on and not at an angle.
3. Do not allow wheelchair to come to a halt midway through manoeuvre.
4. Use gentle upper body movement, if possible, to assist motion.
5. Do not attempt to climb kerbs or gradients with the backrest reclined to any degree.



YOU, PEDESTRIANS AND OTHER ROAD USERS



CAUTION

Wheelchairs are strictly forbidden on motorways and their use is strongly discouraged on highways with fast moving traffic.

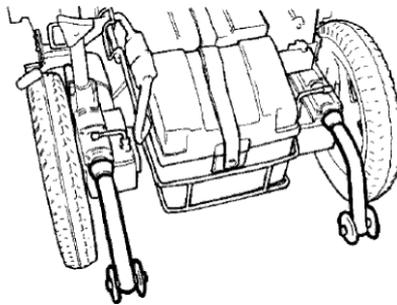
On the pavement, in pedestrian zones or in supermarkets try and show as much consideration and common sense to others as you expect from them. If the controller of your wheelchair enables you to use various preset 'drive programmes', where maximum speed and acceleration are automatically limited to a specific level, select the programme best suited for the environment in which you find yourself and in accordance with the given conditions.

When using your wheelchair outside, the maximum speed that you will be able to achieve with your powered wheelchair is 4mph. If your wheelchair breaks down while you are outside, it is important to ensure that you do not present a traffic hazard.

Note

The Posture and Mobility Service does not provide a response service to take you home if your wheelchair breaks down whilst out and about. It is highly recommended that you make an emergency plan of action of you ever do break down whilst out of the home.

The most common cause of loss of power is often flat batteries. Your User Guide stresses how important it is to keep the batteries in a fully charged condition. If you do suffer a breakdown for whatever reason seek the assistance of a passer-by, and explain where to find the motor disengagement/declutching lever. Ask him/her to switch to freewheel, so that the powered wheelchair can be pushed by hand and moved. When located in a safe place always ensure the motor gear boxes are re-engaged.



What about Insurance?

As a wheelchair user on the road you must be aware of the risks involved to both yourself and other road users. However, what is the position if you are involved in an accident and damage the property of a third party, or worse, run into somebody and cause injuries? Many wheelchair users do not realise that they may be held liable in such cases. **We strongly recommend** that you take out **'Third-Party Liability' insurance** to cover you against any possible claims from that direction. If you already have some other insurance policy, ask these insurers what they can offer you for such cover. Alternatively, ask your supplier who may be able to advise you. In this way you buy yourself not only protection against possible costs, but also peace of mind.

The Forum of Mobility Centres, a website covering independent mobility organisations in England, Scotland, Wales and Northern Island feature a useful link on possible insurers and can be accessed from <http://www.mobility-centres.org.uk/usefulcontacts1/insurance.htm>

The Posture and Mobility Service do not recommend a particular wheelchair insurance provider, however below are a small selection of providers:

Chartwell Insurance <https://www.chartwellinsurance.co.uk/electric-wheelchair.php>

Fish Insurance <https://www.fishinsurance.co.uk/electric-wheelchair-insurance.php>

Premier Care Specialist Provider <http://premiercare.info/wheel-chair-insurance/>

THE POWERED WHEELCHAIR INDOORS

Although a powered wheelchair, due to its weight, is more stable than a manual type, the basic rules of balance and movement while you are seated in it, apply as in the case of the manual wheelchair. It is important to bear this in mind especially when you reach for objects higher up, on the floor or behind you. Please read the section '*Stability and Balance while sitting in your Wheelchair*'.

Transferring to and from your Wheelchair without Assistance

Circumstances and individual needs will vary from person to person. We strongly recommend that you consult your therapist who will help to develop your skills and advise you of the appropriate transfer methods that suit your individual requirements.

DO NOT attempt transferring unaided until you are confident and proficient in the skills to do so.

LOOKING AFTER YOUR POWERED WHEELCHAIR

Most of what has been said under the heading '*Wheelchair Care and Maintenance*' also applies to powered wheelchair maintenance. Please take the time to read this section.

Your powered wheelchair is perhaps the one piece of equipment which gives you freedom and mobility, therefore it is important to look after it. Your powered wheelchair comprises of sophisticated electronic control systems and electrically operated parts, which should be checked and adjusted at regular intervals. Some of these checks you can, and should carry out yourself, such as effective functioning of wheel locks or parking brake, correctly inflated tyres etc. There are procedures which demand more expertise, we therefore strongly advise you inform the Posture and Mobility Service in these cases so that a Field Service Engineer can inspect and service your powered wheelchair.

If there are children in your family or household, keep the wheelchair away from them. It is not intended to be used as a toy. It is not just about safeguarding the wheelchair; it is also about protecting others and yourself from injury.

Finally, we want you to get the most out of your wheelchair, ensuring that the safety of yourself and others is never in jeopardy. If you are in any doubt about safe techniques, handling or care of the wheelchair, contact us before putting yourself and others at risk.

Adapted by the Artificial Limb and Appliance Service by kind permission of ***INVACARE.***