

Occupational Therapy

Skills for the job of living

Includes sections on wheelchair maintenance and home modifications

A guide for you after spinal cord injury

Spinal Cord Injury Regional Rehabilitation Program

This booklet has been written by the health care providers who provide care to people who have a spinal cord injury or illness. At the time of this printing the information was accurate to the best of our knowledge. The information may change due to the rapid changes in health care. It is not intended to replace medical/health advice from your health care providers.

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Table of Contents

P	Page
Learning new skills for the job of living	1
Going home or discharge planning	4
Arm function and splints	9
Getting around - wheelchair and seating	12
Manual wheelchair and seating maintenance checklist	14
Power wheelchair and seating maintenance checklist	17
Changes to your home	20
Equipment recommendations	35

Learning new skills for the job of living

Occupational Therapists use the term "occupation" to mean all of your everyday activities including:

- washing, dressing, eating, managing finances self care
- working, studying, homemaking, yard work productivity
- enjoying life, hobbies, community involvement leisure

As Occupational Therapists or OTs, our job is to help you to be as independent as possible with your everyday activities. Your OT program will be set up based on what you need and what you feel is important. We will work with you to work on those activities that are important to you.

Learning how to live in your environment

Your OT will set up a program with you that works towards your goals while an Occupational Therapy Assistant or OTA, may help you practice new skills learned. We will also work with you to ensure you have the right equipment to be safe and independent at home. We will help you to plan any modifications you might need as well.

Equipment

We will help you identify your equipment needs. After we know your needs, we will help you choose the best equipment for you. Please go to pages 35 to 39 for equipment options that your OT will review with you.

Activities of Daily Living or ADLs

ADLs is the term used for all areas of self-care. The OT staff will work with you in these areas:

- communication using telephone, texting, computer, writing
- eating
- personal care brushing teeth, grooming, bathing
- dressing and undressing
- transfers getting to and from wheelchair, bed, toilet, tub, car
- homemaking
- environmental control accessing call bell, TV, radio, lights, doors
- mobility moving around including the use of a power or manual wheelchair, or rollator walker

You and your OT will set goals for treatment. Your OT will teach you new ways to do things, and prescribe aids or assistive devices to help you do things with everyday activities.

Communication and environmental control

If communication or controlling your environment is a problem, your OT will help. Environmental control is how you control your surroundings such as turning the lights on and off, opening doors, or calling for help.

Your OT will assess your needs and help you choose what you need.

You may need special equipment such as a computer or environmental control unit, or "ECU". If needed, your OT and social worker will help you find funding. Your OT may also refer you to the Technology Access Clinic at Hamilton Health Sciences or Independence Technologies.

Going home or discharge planning

As part of your rehabilitation team, your social worker and OT will help you set your goals to get home. To make sure things work well once you get home, we will work with you and your family on your goals.

These goals are discussed with you and the team every 2 weeks in a 15 minute patient conference meeting. There is also a 1 hour discharge planning meeting, which is set up shortly after you begin your rehabilitation program.

Areas to think about before going home include:

- help with personal care
- housing, home access
- equipment
- work and leisure
- transportation and driving
- health care services

We have provided some information about these areas. Please talk about them with your OT. The Rehabilitation Resource Centre on the first floor of the Regional Rehabilitation Building and the booklet on "Community resources" can provide you with an up-to-date list of current resources in these areas.

Housing

If the way you can get in or out of your home has changed, changing your home or choosing a new home is important. These changes are needed if you are going to be able to manage in the community. Deciding about your home takes a long time, so you should start thinking about it right away. Discuss any changes with your OT before any construction is started on your home, so you will not be cut off from any funding sources.

There may be funding available through your municipality or city, or other government/community programs. Ask your social worker to find out how you can apply. For eligibility and program details, see the following websites: www.marchofdimes.ca or www.cmhc-schl.gc.ca.

You may have to go home using temporary changes while permanent ones are being finished.

Equipment

Checking to see what type of equipment you need begins right away. Examples of equipment you may need are a long handled reacher to help you reach over your head or pick things up from the floor. A bath bench or wheeled shower chair may be recommended to help you take a shower safely. It is very important to choose the items best suited to you, as everyone's needs are different. Your level of injury, balance and strength will be considered when we help you decide which equipment to choose.

Work or vocation

If you can return to work, your OT and the team will help you with plans to go back to work. This may include:

- Planning to return to your old job, perhaps with some changes to the job site or to your duties.
- Planning for retraining for a new job with your same company, or returning to school, university or college.
- Planning to work out of your home.

We will help you set basic work or vocational goals before you go home. More detailed planning can be done in the Outpatient Department.

Agencies that may provide funding and counselling for people with special needs may include:

- No-fault insurance for motor vehicle injuries for those injured in a motor vehicle crash
- Workplace Safety and Insurance Board WSIB, for work-related injuries

Other agencies which may be involved are:

- Spinal Cord Injury Ontario SCIO
- Ontario March of Dimes OMD
- Ontario Renovates Program for Homeowners

Transportation

It is important to be able to travel to work, to go shopping and to get to entertainment. The two main kinds of transportation available to you are wheelchair-accessible public transit, and your own vehicle, perhaps with some changes made for entry and/or control. Wheelchair accessible vehicles are very complex and costly. Everyone's needs are different. Be sure to discuss any modification needs with your OT before you make any decisions.

Driving

Following a spinal cord injury, your doctor must inform the Ministry of Transportation of your change in physical status. This is the law! Before you can drive again, the Ministry may ask you to take a driver's test that is the same as your original driver's test: eye exam, written exam, and on-road test.

Your OT can give you information on special driver assessment centres for disabled drivers, where you can be tested and can have driving lessons if needed. They can also give you information on where you can get vans and cars set up with hand controls and electric lifts. Your OT can help you with referrals, measurements and vendors.

Health care support services when you go home

When you leave the Inpatient Rehabilitation Program you may need some help at home for a while. If so, the team may refer you to the Community Care Access Centre (CCAC) for one or more services such as: nursing care, personal care, OT, PT, social work or nutrition.

There are also attendant care programs to which you might be referred, such as Ontario March of Dimes Outreach or a supported independent living facility. This may allow you to book times with the attendant staff to help you manage self-care while you live independently in your own apartment or home.

There are many resources available to help you. Please see the **Community resource** booklet for more information on whom to call or how to access community resources.

Arm function and splints

Hand function

If you have problems with how your hand functions a hand assessment will be done. Exercises and activities to improve co-ordination, strength, and hand use may be set up to help you do activities for self-care, work and recreation. This may be one-on-one with your OT and/or OTA, or in a group.

Splints

 When a spinal cord injury has affected your arms and hands a splint may help. The splint helps to keep your hands and wrists in a good position while you do everyday activities. If needed, your OT will make a splint that helps you do the things you want to do.

Splints are used by people with spinal cord injury for 2 reasons:

- To rest and support an arm or leg in a comfortable and proper position. This helps prevent joints from getting stiff and from developing contractures or a tightening of the joints.
- 2. To support and protect an arm or leg while you are active.

Hand splint examples

Resting splint

A resting hand splint is made of lightweight plastic to support the fingers, hand and wrist. These splints hold the hand in a normal, comfortable position. They are worn at night since the hand cannot be used while they are on. The splints protect the hand and help to prevent soreness and stiffness.

Dorsal wrist splint

If you have weak or no wrist movement this splint supports your wrist and hand for everyday activities. It usually has a special part called a universal cuff (U-cuff) in the palm. The U-cuff can hold things like a pen, spoon or toothbrush.

Writing/typing splints

These splints are made of light weight plastic and help to hold a pen or to type on a keyboard.

Mobile arm supports - MAS or balanced forearm orthosis, - BFO

This device attaches to a wheelchair or table top and is used to support weak shoulders and arms. It can be used to help with eating and/or with driving a power wheelchair. If any of these splints will work for you, you will get plenty of time with the OT to make sure that:

- they will fit
- you understand any safety concerns
- you know how to use them!

Getting around – wheelchair and seating

Soon after you arrive in rehabilitation, you will explore new ways of getting around. You may need to use a wheelchair.

Currently, our program has a contract with Shoppers Home Health Care, where they supply a loaner wheelchair for you while you are in rehabilitation.

Your OT will help you get the right kind of wheelchair. The process of getting the right wheelchair may start before you come to rehabilitation.

To get a wheelchair that you will use for the longer term, you will need:

- To have an assessment of you and your needs: Body size, movement, sensation, and the kinds of places you plan to wheel to and within, will all be considered. You may need a power wheelchair which has a battery or a manual wheelchair which is wheeled by you, or you may need both.
- A Vendor List: Your OT will give you a list of vendors and help you decide on a vendor or supplier. The vendor will provide the equipment recommended by your OT for trial and purchase.

- Is it the right one? Working with your OT and you, the vendor may provide you with trial equipment that best meets your needs. We work together with you on a wheelchair and seating system (backrest and cushion) that meets your needs. We want to make sure it's the right one!
- The Assistive Devices Program -- ADP: Your OT will explain funding resources to you. If you qualify, your OT will fill out application forms with you for ADP. You will need an ADP-authorized therapist, your spinal cord injury team OT, to help you complete the process. The ADP program, paid by the Ontario Government, may provide up to 75% of the purchase price. If you don't qualify, your OT and social worker can help you explore other sources of funding such as insurance benefits, fundraisers and service clubs.

Note: ADP funds only mobility equipment, not other items you may need.

Delivery and Adjustment: When your wheelchair arrives, we
may need to do some fine-tuning. We will work with you to make
sure that you are safe, comfortable, independent and that your
wheelchair meets your expectations.

Keep in mind that each step of the way takes time. You will be asked to start thinking about it right away, so that your new wheelchair is ready for you when you leave rehabilitation, or soon there after.

Key points to wheelchair maintenance

- Keep your chair clean.
- Perform regular checks on tires, wheels and casters.
- Listen to see if your wheelchair sounds right especially if it has a motor.
- Be familiar with your wheelchair if it somehow does not seem right - check it out!
- For power wheelchairs check your drive clutch levers and wiring.
 Are all the connections tight?

Manual wheelchair and seating maintenance checklist

Looking after your wheelchair and making necessary adjustments is important because this chair has been made for you so that you will be comfortable, safe, have the support that you need and get to where you want to go.

Get help if your chair is:

- making strange noises
- not rolling straight
- not comfortable
- feeling different

What you should do weekly:

Keep it clean	Wipe down chair and wash cushion covers when necessary (using a damp cloth, water, wax or non-abrasive cleaners)
Inspect for wear and tear	Tighten loose nuts and bolts Oil if needed
	Inspect cushions and backrests

Areas to check regularly:

Castors			
	Look for excessive wear on tires		
	Check for hair in the castor and remove		
	with tweezers		
	Check for missing screws or loose hardware		
	Check for over tightened fork stem unit or a		
	bent fork stem		
Rear Wheels			
	Check for tire wear patterns and monitor		
	tire pressure		
	Make sure that the quick release button on		
	the wheel is functioning		
	Check to see if there is any extra play in		
	the axles		
	Check to see if the bearings are missing		
	and/or spinning properly		
	Check to see if your spokes are loose		
	(chair is wobbly) or missing		
Frame Components			
Footrests	Check for loose angle adjustment and		
	footrest clamp		
Back canes	Check that screws are tight and the handles		
	don't wobble		
Upholstery	Check that screws are tight, seat isn't frayed		
	and sling isn't sagging		

Frame Accessories	
Clothing Guards	Check to see if they are rattling or rubbing
Wheel locks	Make sure that they are adjusted correctly
(Brakes)	
Armrests	Make sure that brackets are tight and that
	the armrests are not loose
Seating Accessories	
Solid Backrests	Check hardware, make sure the cover is
	in tact, listen for any rattling and check that
	the cushion padding is still good
Headrests	Make sure it's not loose and be sure that it
	is positioned properly for your head
Laterals	Make sure they are tight and giving you the
	support that you need
Belts	Make sure you wear your belt as it is
	important for safety and is also used for
	positioning purposes
Cushions	Some wear and tear is normal, try to keep
	it in good condition and check it daily to
	make sure that it is still working properly
	and put on correctly

Note: Your chair may need to be adjusted if your skills change, if you gain/lose weight, your body shape changes, you don't feel as stable in it or if the chair is no longer comfortable for you. If so, please make an appointment with the **Adult Wheelchair and Seating Clinic**, call 905-521-2100, ext. 77128.

Remember: In the first few months that you have your chair, things may come loose and have to be readjusted. This is a perfectly normal thing to happen so make sure you are aware of the different parts of your wheelchair and that they are not loose. Every year that you have your wheelchair, you should get maintenance done. Your wheelchair is like a car, if you do not look after it, it will begin to break down.

Power wheelchair and seating maintenance checklist

Looking after your wheelchair and making necessary adjustments is important because this chair has been made for you so that you will be comfortable, safe, have the support that you need and get to where you want to go.

Get help if your chair is:

- making strange noises
- not steering straight
- not comfortable
- feeling different

What you should do weekly:

Keep it clean	Wipe down chair and wash cushion covers when necessary (using a damp cloth, water,
	wax or non-abrasive cleaners)
Inspect for wear	Tighten loose nuts and bolts
and tear	Oil if needed
	Inspect cushions and backrests

Areas to check regularly:

Seat and Back	
	Inspect for rips or sagging
	Check to make sure chair does not wobble too
	much and adjusts properly
	Arm rest is tight and joystick secure
	Seatbelt is secure, in good condition and does
	not drag
Wheels	
	Inspect for flat spots and wear
	If pneumatic tires, check for proper inflation
	Check that at least half the tread remains
	Check for cracks
	Wheel bearings are clean (free of hair and
	lubricated)
	Loosen/tighten wheel nuts if wheel wobbles or
	binds to a stop
Motor and Wheel L	ocks
	Freewheel kicks in and out
	Constant power is maintained
	Chair brakes to a stop in reasonable time and
	stays still
Batteries	
	Voltage test (12)
	Load test
	Check for corrosion or burn marks at connections
	Battery cables show same voltage readings as
	batteries
	Post screws are tight and cables are attached
	properly

Joystick and Throttle			
	Throttle pot and dial speed work correctly		
	Dial speed doesn't move beyond rabbit or turtle		
	Chair moves forward, backward and turns		
	smoothly and consistently		
Miscellaneous			
	All cables are attached securely		
	Onboard/offboard charger works		
	Horn works		
	Check lights		
	Shroud (hard plastic covering frame) is free of		
	cracks and peeling		

Note: Your chair may need to be adjusted if your skills change, if you gain/lose weight, your body shape changes, you don't feel as stable in it or if the chair is no longer comfortable for you. If so, please make an appointment with **Adult Wheelchair and Seating Clinic**, call 905-521-2100, ext. 77128.

If it's a mechanical issue, then contact your local wheelchair technician.

Remember: In the first few months that you have your chair, things may come loose and have to be readjusted. This is a perfectly normal thing to happen so make sure you are aware of the different parts of your wheelchair and that they are not loose. Every year that you have your wheelchair, you should get a maintenance check done. Your wheelchair is like a car, if you don't look after it, it will begin to break down.

Changes to your home

Home modification is a term we use for any changes to a home that make it more wheelchair or walker accessible. Our aim is to help you get your home to a point where you are safe, comfortable and as independent as possible. The first step of the process is an Occupational Therapy Home Access Assessment, or 'Home Visit'.

As soon as possible after you arrive at the rehabilitation program your OT will do a home visit.

Your OT will check out:

- whether you can get into your home
- look at exactly how you would get in
- look at what challenges you would have to deal with such as stairs, narrow doorways, small bathrooms

The OT will then help you and your family and friends to plan changes and renovations. The OT will also check out the need for assistive devices and safety equipment you may need in your home. Your OT and your social worker will also work with you to find funding for modifications.

Note: This is a very long process, so it is important to get started as soon as you can!

The following are guidelines to help get you started. Everyone's needs are different. Your OT will help you to find solutions that meet your own needs and finances.

Outdoors

Driveways

Driveways should be paved if possible and need to be wide enough for your vehicle and enough room to transfer in and out. Double width is ideal. If a driveway cannot be paved, a firm surface such as concrete, patio stones, or bricks right next to the vehicle can provide a firm transfer surface.

Protection from the elements

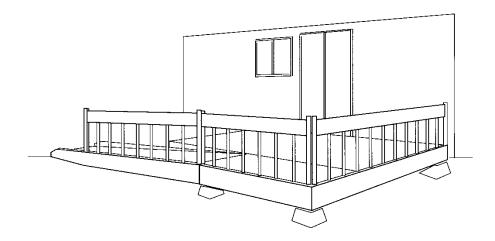
A roof over head to protect from rain and snow makes transfers much more pleasant. A double garage with a smooth concrete floor and a door directly into the home is ideal. The garage would be used for one vehicle, with the other space being used for transfer space. A carport or an awning can also provide some shelter. A roof is also a very good idea for porches, decks and entrances.

Stairs

Stairs are impossible to use independently for most wheelchair users, and can be very difficult and/or dangerous for those using canes, crutches and walkers.

If using stairs, they should be in good repair and free of clutter. They should be well lit, and if possible, should have railings on both sides.

Ramps



Usually ramps need to be long and take up quite a bit of space. Ramps that are too short can be too difficult to push up and can be dangerous. You risk tipping your wheelchair!

The grade or slope of a ramp should be between:

1:12 and 1:20 (12" to 20" of length for every 1" of height).

Example	Size of each step	Length
3 steps	8 inches	288" to 480" of length or 24 to 40 feet
6 steps	7 inches	504" to 840" of length or 42 to 70 feet

Note: Before building a ramp, you may wish to contact your local Municipal Building Department to find out if a building permit is needed.

General Specs:

grade	1:12 to 1:20	can have a turn or a switch-back to save space	
width	minimum 30" wide	depending on the type of wheelchair and the number of turns	
surface		non-slip, non-skid surface	
railings	30" high	on both sides, for use by walkers or to pull up on in a wheelchair	
edges	4" high side edges	along the full length to prevent wheeling off the sides	
level spaces	should have a level space of at least 4' at the top and bottom of the ramp, and at any turns there should also be a level platform every 10 to 15 feet on a long ramp for resting		
door opening	should have a platform at the top of the ramp of at least 60" by 60" to allow for the door to swing past		

Porch lifts

If there is not enough room to build a ramp, a porch lift may be needed. This is an electrically operated platform that raises the wheelchair from the ground to the level of a porch or deck.

Some modification of the porch or deck, and the entrance doorway is usually needed to make them level with the interior floors. You will also need a concrete pad beneath the lift and electrical service to power it.

Entrance doors

We usually recommend that there are two wheelchair exits from a home for safety. Door thresholds should be flush with the interior, that is flat with the floor. Tracks for sliding doors should be recessed or built into the floor. Ideally, doors are 36" wide.

You may need a special way to open the door if your hands are weak such as an electric door opener, lever handles or adapted keys.

Indoors

Inside doors

Most wheelchairs are about 27" or wider. Inside doors should have a clearance of minimum 28" to 32" to go straight into a room. If you have to make a sharp turn from a narrow hallway, the door should have a bigger clearance of 30" to 36".

If a hallway is wide, at least 48" wide you can usually get through a door just wider than your wheelchair.

Ways to beat a narrow doorway

- Change it to a 'pocket' door, which slides into the wall.
- Use 'swing-free' hinges, so the door opens flush with the frame.
- Cut away the door jam from just above the height of the wheels to the floor.
- Remove the door, if privacy is not an issue.
- Reduce the angle (camber) of your manual wheelchair.

Small rooms

Doors should open out, or should have a pocket door.

Door handles

- Handles should be 36" to 38" from the floor.
- If grip is weak, use a rubber covered knob or a lever handle.
 A fabric loop or a grab bar mounted on the door can be used to pull a door shut more easily.

Stairs

If using stairs, they should be in good repair and free of clutter. They should be well lit, and if possible, have railings on both sides. If you are unable to access stairs, you may need to consider installing a stair glide or platform lift. Some other options may be elevator or a telecab. These can be accessed using your wheelchair.

Rooms/floors

You need about 60" or 5' radius of clear space to turn a wheelchair right around. Rooms should be open and uncluttered. Furniture placement should allow for complete turns. A firm surface is much easier to wheel on than a rug. Linoleum, hardwood, non-skid tiles or low pile carpet are recommended. Thick broadloom, loose area and scatter rugs, and runners should be removed.

Windows

If you are building a new wheelchair accessible home.

Windows should be lowered if possible, so that you can see out easily. Latches and openers should be within reach, about 36" to 38" from the floor. Power window, curtain and blind openers can be purchased.

Closets and storage

You may want to have a place to store clothes that can be reached from your bed so that clothes are ready to put on in the morning. Closets need to have doors wide enough so that you can wheel your feet into the closet to get close to the clothing rod. Wide sliding doors that slide easily usually give the most space. Clothing rods should be lowered to about 56" from the floor, and any shelves should be raised or lowered to be within easy reach.

Drawers should pull out easily, on rollers, and should have handles or knobs that you can manage. Drawer height should be about 24" to 36" depending on your height and abilities.

Electrical outlets and light switches

If you are renovating or building. In kitchens and bathrooms electrical outlets should be moved to or placed at the front edge of counters so you can reach them. If they cannot be easily reached or moved, an on/off switch can be wired into the cord of electrical appliances. If you are building a home, outlets should be raised and light switches should be lowered to a height you can reach. Rocker type switches or touch plates are usually the easiest to manage.

Note: If you have small children in your home moving outlets and switches also make them easier for children to reach, so caution is advised.

Telephones

You should have telephones within easy reach in areas where you spend the most time. They should be in the bedroom, kitchen, living room, family room, and bathroom if you do not have assistance for personal care. A portable or cell phone is very useful, as long as you can manage it. Phones should be lightweight and easy to hold and operate. Speaker phones and headset phones are good options. Call response services such as: Life Line, First Call, Life Call, and Medical Alert are also available in most areas. A cell phone is strongly recommended for use in your car or van.

Bathrooms

Bathrooms need to be set up to meet your needs, but the same general rules apply to everybody. They have to be safe, and the more space the better.

If you have a cervical or high thoracic injury, a shower commode chair is probably the equipment you will use for toileting and showering. Your OT will help you select the best model for your needs.

Toilets

Most commodes fit over standard height toilets, 15", but may not fit over many raised or "comfort height" toilets, 19". If you are not using a commode chair, you want the toilet height to be as close to your wheelchair seat height as possible, about 18" to 20".

Height can come from installing a 19" high toilet, or adding a raised toilet seat to your existing toilet. As with a commode, a seat with an opening makes it easier for most people to reach for cleaning.

There should be a clear space of about 30" on one side of the toilet for transfers. Placing the toilet out from the wall about 6" also gives space for wheelchair positioning and for commode self-propel wheels to go when positioning over the toilet.

Bathroom tissue and any necessary supplies should be within easy reach.

Toilet grab bars

Horizontal or diagonal bars should be installed about 11" above the toilet seat extending from the rear wall to a point no less than 24" in front of the toilet.

Removable "Versa Frame" toilet safety bars can also be attached to the toilet temporarily or in situations where grab bars cannot be easily installed.

Bathtub

Getting down into and out of a tub is very hard for most people. To have a bath, rather than a shower, a tub lift or overhead lift may be needed. Most people sit over the tub on a bath transfer bench to shower. Space to transfer is needed at the side of the tub about 30".

Taps, shower and drain controls should be lever type if you have a cervical injuries. A thermostatic mixing valve control is very useful to keep water temperature in a safe range to prevent scalding.

A handheld shower with an extra long hose is usually needed. The handle can be adapted if holding it is a problem.

A shower curtain gives enough space for transfers. Sliding doors usually need to be removed.

A non-slip surface on the bottom of the tub is essential. A high quality bath mat or stick-on strips make transfers safer for seated or standing people.

Keep soap and other supplies within easy reach. Shampoo and liquid soap dispensers can be helpful if the push button mechanism is light enough and large enough for easy use.

Tub grab bars

Horizontal, diagonal, or L-shaped grab bars should be installed next to where you sit, about 4" above the tub rim. A horizontal grab bar should also be installed about 4" above the taps if you are managing the controls yourself. A vertical grab bar at the tub entrance should be installed for stand-stepping into the tub.

Roll-in shower

A roll-in shower can be used with a shower commode chair or with a shower chair or built-in bench. A padded seat surface helps to protect skin from pressure of prolonged sitting. Shower size should be minimum 3' by 5', with a clear door clearance width of 30".

A non-skid surface is essential for those not using a commode and is recommended for caregiver safety if you are assisted in the shower. Depending on which device you sit on, grab bars should be placed about 10" above the level of the seat.

Taps and controls, and hand-held shower, please see the information under bathtub.

Sink

If you are building or renovating, you will probably want to set the counter and the sink at a lower height than the usual, 28" to 30", rather than the usual 32". Sink vanities should be cut away underneath to provide leg room. Wall-hung sinks are also a good idea, although they usually cannot support weight if you like to lean on the sink. Pedestal sinks can also be used, but the pedestal may get in the way.

Taps should be lever style for those with cervical injuries, or you may consider motion sensor taps. All pipes and drains should either be recessed or off-set away from your legs, or should be insulated to reduce the risk of scalding.

Drawers should be placed on your stronger side, and should have the features mentioned above.

Mirrors should be mounted right at the counter height, and can be angled to provide a fuller body view.

Kitchens

How accessible your kitchen needs to be depends on whether you are the 'chief cook and bottle washer'. The more accessible the better, but the needs of other family members who use the kitchen must be taken into account.

Counters and lower cupboards

Counters should be lower than usual, instead of the usual 36". Counters should be continuous as much as possible so that items can be dragged along smoothly from place to place.

All essential work areas such as sinks, cook surface, and work space should be cut out underneath to allow for legs.

Knee clearance should be at least 26" high and 30" wide.

A drop-leaf or pull-out counter can also be used.

Also, most standard kitchen tables are a good working height. Watch out for fancy wood work edges under the table that can block your knees!

For below counter storage, pull-out drawers are a good idea instead of shelves that require reaching and bending.

Corner cupboards should have revolving shelves ('lazy susan'). Pantries should be roll-in size, or should have shelves on the door that open out.

All handles and knobs should be easy to use. A 'toe-kick' or foot space of 9" high and 7" deep at the base of the counters allows you to get close to the enclosed areas.

Overhead cupboards

These are difficult to reach for most people. A long-handled reacher may help. For most people, only the front of the lowest shelf is within reach. Cupboards can be mounted lower, but this can limit working space on counters. Any storage shelves and cabinets should be within easy reach.

Sink

The sink should have a cut-away underneath and insulated pipes as outlined in the "Bathroom Section" (page 28). A sink with less depth can be special ordered if reaching to the bottom is an issue. A rack can also be placed in the bottom of the sink to raise items.

Lever taps or single handle faucet is helpful. A pull-out hose is also useful to fill pots on the counter without having to lift them out of the sink.

Stove and oven

A counter-top cook surface with front controls and wall oven with a side opening door and a pull-out shelf right underneath are most accessible. Ranges with front controls are reasonably accessible for some people. Rear control can be reached with a long-handled turner (custom made) if needed.

Cook surfaces and ranges should be flush with the counter for sliding pots on and off.

Helpful ideas

- An adjustable mirror can be mounted over cook surfaces to better see into pots.
- Microwave and toaster ovens are also very useful if they are placed within easy reach and controls are manageable.
- A lap board or tray, or tea cart may be useful to transport items (especially hot ones!) around the kitchen.
- Dishwashers are useful and can be mounted raised for wheelchair access.

Refrigerator

A side-by-side refrigerator/freezer is most accessible. Models with pull-out shelves also help. Avoid models where the freezer door drops down. Look for door handles that are wide enough to get your whole hand through if grip is poor.

Bedrooms

A 60" turning radius is needed on at least one side of the bed for transfers. Clearance of minimum 36" is recommended between all furniture and walls for access.

- Telephones, light, and/or environmental controls must all be with reach from the bed.
- Bed should be the same height as your wheelchair, or should have a height adjustable feature. Your OT will help you decide if you need a 'hospital' style bed.

General

There are lots of good resources on home designs and renovations at the Rehabilitation Resource Centre, libraries and on the internet. Your OT can help you to sort through it all to make decisions for your specific needs.

Equipment recommendations

Picture of equipment	Name of equipment	Recommended (check off if yes)
	Porch lift for outdoors: Usually requires a concrete pad, electrical outlet, building of a deck that is flush with the door.	
	Stair glide: Recommend having a wheelchair or walker at both levels of the home. This device requires that you transfer onto the seat.	
	Tub rail	

Picture of equipment	Name of equipment	Recommended (check off if yes)
	Bath board	
	Bath stool (available with or without backrest).	
	Bath transfer bench Available padded or plastic.	
	Bath chair	

Picture of equipment	Name of equipment	Recommended (check off if yes)
	Hand held shower kit	
	Shower commode Available in self propelling (as shown with larger wheels) or as attendant propelled (smaller wheels).	
	Standard commode Available with or without wheels. Height adjustable. Can fit over toilet or next to bed.	
	Versa frame/toilet safety frame.	

Picture of equipment	Name of equipment	Recommended (check off if yes)
	Raised toilet seat. Available in different heights. Available with or without arms.	
	Sliding board 24" and/or 30" Longer board used for car transfers.	
	Furniture risers	
	Bed rail Fits between mattress and boxspring.	
Marin	Electric bed and mattress Speak with your Occupational Therapist.	

Picture of equipment	Name of equipment	Recommended (check off if yes)
FT V	Long handled reacher	
	Long handled shoe horn	
	Sock aide	
Safety alarms	Ensure your safety with use of Lifeline or the alarm systems.	

Your Occupational Therapist will work with you to determine what equipment you will need to return home safely and as independent as possible.