

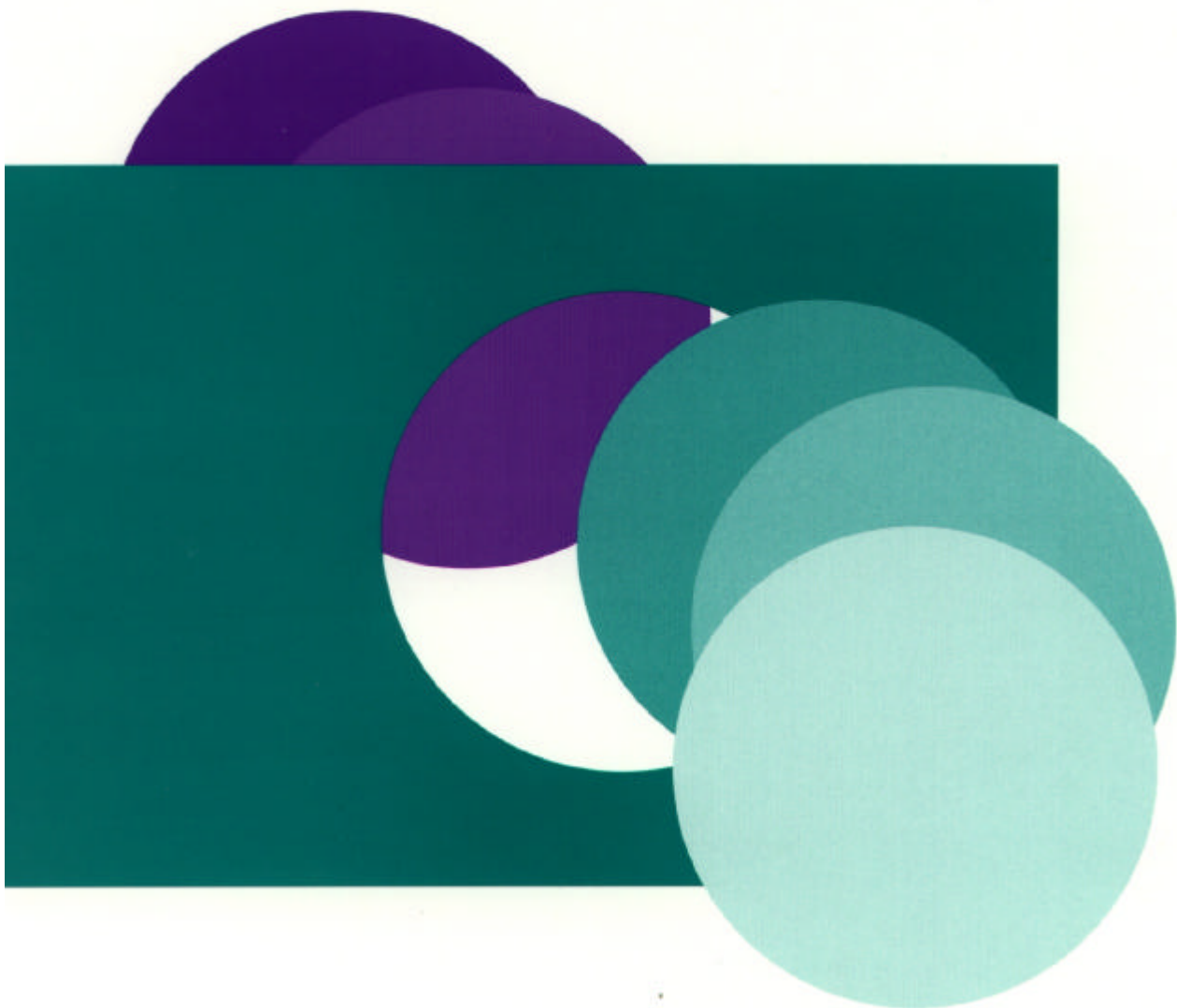


Government of  
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# Aids to Independent Living

Breaking through the barriers



Canada





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## **Foreword**

The Independent Living Series was first published in 1984 and due to its popularity, was reprinted a number of times. Ten years have passed, and there have been many advancements in aids and devices to facilitate independent living for persons with disabilities and older adults, which is why we have decided to update this valuable tool. Although we have added a number of new devices, the general objective of the publication has remained the same, that is, to provide information on aids and devices that can be made at home by the consumer, or those that are inexpensive. The name has also been changed to "Aids to Independent Living: Breaking Through the Barriers". Please let us know what you think. Also, let us know of any ideas that have helped you achieve independence in your daily living activities.

Write to us at:

**Canadian Clearinghouse on Disability Issues**  
Human Resources Development Canada  
Status of Disabled Persons Secretariat  
Suite 100, 25 Eddy Street  
Hull, Quebec  
K1A 0M5





## **General Information**

Independent living is a reality for an increasing number of Canadians with disabilities and older adults every day. While the goal of independence is the same, individuals needs vary considerably. This "Aids to Independent Living: Breaking Through the Barriers" booklet is made up of ideas and devices which can help you reach your own level of independence.

### **What is independent living...**

The term independent living refers to the ability of individuals, limited in their physical functioning to some degree by disability, age, weakness, or ill health, to live full and rewarding lives in the community.

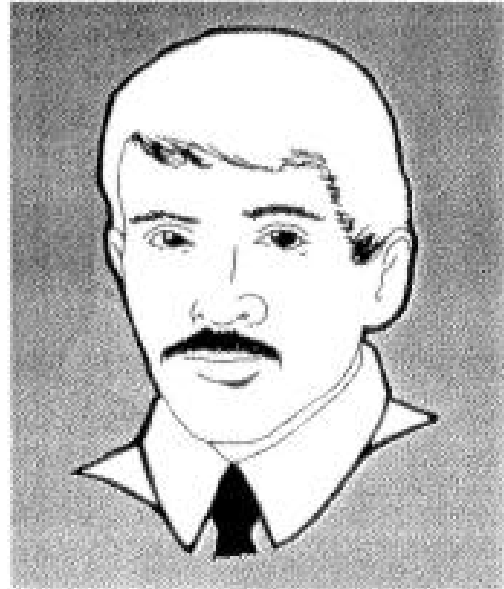
### **What you'll find throughout the booklet...**

A section on "Finding the Product" will help you locate a dealer and make your purchase. "Financial Assistance Programs" are mentioned briefly, as well as "Support Systems" and "Networking".

### **About this booklet...**

The "Aids to Independent Living: Breaking Through the Barriers" booklet was developed with several goals in mind:

- to encourage and facilitate independent living in the populations of older Canadians and Canadians with disabilities;
- to describe the non-medical devices, designs, techniques and helpful hints that make independent living possible;
- to help you analyse a problem, choose a suitable aid, and then buy, install, use and maintain it;
- to outline the support systems that exist (or can be developed) to help you live independently.





The chapters are grouped according to daily activities inside and outside the home: Kitchen Ideas, Bathroom Basics, General Household Tips, Personal Care, and Recreation.

You may find that only one of the ideas in a given chapter is useful to you, but your neighbour may be able to take three or four ideas and make a real improvement in a daily activity.

### **Do It Yourself...**

One of the keys to independent living is doing things for yourself, so you'll find many devices and designs that you can build or adapt in your home. Instead of buying, do it yourself or ask someone to help you - families, friends, neighbours, church or community groups.

### **Self-Prescription...**

Professionals who work with persons with disabilities and older adults - doctors, physiotherapists, occupational therapists, etc. - are justifiably sceptical of a booklet that tries to recommend, in a few words, devices which they prescribe in great detail as part of their work.

**This booklet is not meant to take the place of a professional assessment where one is warranted.**

**The "Aids to Independent Living: Breaking Through the Barriers" booklet is concerned mainly with non-medical devices which you can choose yourself and generally don't require a prescription. If there is a possibility that a device could cause harm if it were incorrectly chosen, a warning will tell you so and recommend that you consult a specialist for advice. Please heed this suggestion, for your own safety.**

## **Finding the Products...**

Aids and devices for independent living are generally produced by a small number of manufacturers and distributed through medical/surgical supply outlets. (Look through the yellow pages under hospital equipment or wheelchairs.) Because of what is perceived as a small market for these products, they can be expensive, hence the suggestions for homemade or adapted aids.

At a medical/surgical supply shop, you'll usually find qualified and experienced sales staff who will talk to you about your needs and help you choose the right product. Often, you can rent a product if you need it for a short time, or you can try it at home for a few days to make sure it is suitable. Some products can also be found in drug stores and department stores.

## **Talk, Talk, Talk...**

You're often your own best consultant when it comes to buying any product. But talk to others. Find someone who is already using a product like the one you're planning to buy and try it out. Talk with friends and salespeople. Shop around. Contact a local hospital or public health nurse to ask a professional for advice. Make sure you understand the return/refund policy of the store in the event that the product is not right for you. Ask about a warranty or guarantee, in case the product fails. If the device requires maintenance, ask if the dealer provides this service and how much it is likely to cost.

## **Financial Assistance...**

Through cost-sharing programs with the federal government, most provincial ministries of health and/or social services provide assistance for certain devices or home modifications. Find out about these by contacting one of the following:





- your local branch office of the ministry of health and/or social services or housing;
- a rehabilitation centre, hospital or clinic;
- a social worker or welfare caseworker; service agency or community self-help group;
- your municipal government or city hall; or
- friends who know the ropes.

Although these programs are administered differently, the basic procedure is usually the same. First, you establish that you match the eligibility criteria for assistance; then, a professional assessment is usually required to show that you need the device; and finally, the application is processed and the device is purchased and delivered. The amount of assistance is also variable. Some programs pay the full price of the device, others just a portion. In the case of a home accessibility renovation project, the assistance might be part grant/part loan, with a low interest rate on the loan portion.

A few other financial breaks: your share of the cost of some devices is tax-deductible as a medical expense if prescribed by a medical practitioner. Call the information service of Revenue Canada, Customs and Excise for more information. Finally, service agencies and groups of and for people with disabilities and older adults sometimes have an aids and devices program. Look into it.

### **Networking...**

If there's one common thread running through this booklet, it's people helping people help themselves. Don't be afraid to recruit friends and family as well as people who work in the helping professions.

## **Who Does What and Where...**

Family doctors are concerned with all aspects of your physical and emotional well-being. They will refer you to an occupational therapist for help with daily activities, or a physiotherapist to work on your physical well-being, such as walking or limited range of motion.

A social worker can help you solve many day-to-day problems and recommend financial assistance programs for which you might be eligible. These professionals work out of rehabilitation facilities in hospitals, clinics or in the home.



## **In the Kitchen**

### **Introduction**

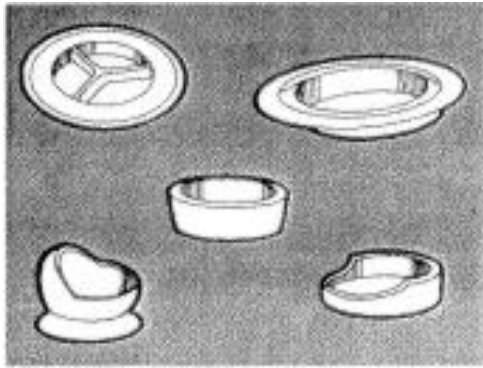
Often, difficulties at meal-time can lead to poor eating habits: routine, dull meals, insufficient food value in your diet or meal-skipping. This section will provide you with some ideas that may improve your routine in the kitchen and in the long run, you might start your own diet revolution!

You don't have to sacrifice a healthy, varied diet because of problems in the kitchen. They may be easier to solve than you think. When you share kitchen duties with others, the food preparation tasks that give you trouble can be traded; but when you live alone, you need to be able to pare, slice, chop and cook 'solo'. Many ingenious devices have been developed for the safety and convenience of people who may have difficulty with these activities. Many can be found at any hardware store or kitchen gadget counter. Specialty items are sold at medical/surgical supply outlets featuring aids to daily living.

A meal is an occasion: a time for socializing with friends and family, a time to share good food, conversation and the joy of living. It can also be a time to enjoy being alone. A pleasant atmosphere and a positive attitude to meals can improve your appetite, aid digestion, and widen your knowledge and appreciation of food and nutrition.

**For more information, check the following chapters ...**

- **Storage**
- **Mobility and Design**
- **Plumbing Fixtures**



**One of these specially designed plates may suit your needs.**

## Tableware and Cutlery

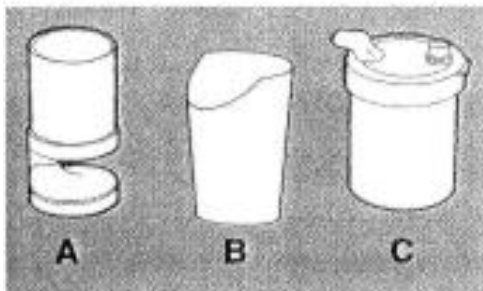
### Tableware...

You'll find specially designed plates and dishes, cups and glasses described here. If you don't want to invest in new tableware, there are also some adaptations you can make to your own dishes to make them easier to use.

Several manufacturers have designed plates with a curved inner wall and a slightly raised rim to help guide food onto your fork. A heavier plate will prevent slipping and ensure that heat is retained longer.

### Some other options:

- a non-slip scoop dish, which makes it even easier to push food onto your spoon:
- a partitioned plate; dishes with high sides around all or part of the circumference. Available in ceramic or melamine at medical supply stores.



To make drinking easier, a cup on a pedestal has been designed for people with weak grips (See illustration A).

A cup with an angled rim will make drinking easier for people who have limited neck movement (See illustration B).

The lidded flow cup shown here reduces spills and controls the flow of liquids (See illustration C).

Another solution is a commuter coffee cup which has a lid to prevent spills and wide base for stability when the cup is full. Your medical supply dealer will probably have a selection of different cups, mugs and glasses for you to choose from.



### Look for these features:

- easy-to-grip handle(s)
- good balance when full or empty
- insulation or large handles to prevent burns
- a wide base for good stability
- break resistance
- easily cleaned

Here are some products to adapt your own tableware:

A plate guard in plastic or metal will help put your food on your fork instead of on the table.

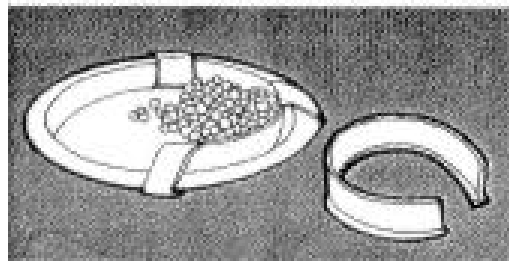
Non-slip matting (Dycem, available at medical supply shops) keeps plates from sliding around. A damp cloth or suction cups can also be used.

Handles and wide bases can be added to glasses or mugs for better stability. Buy them ready-made or improve your own.

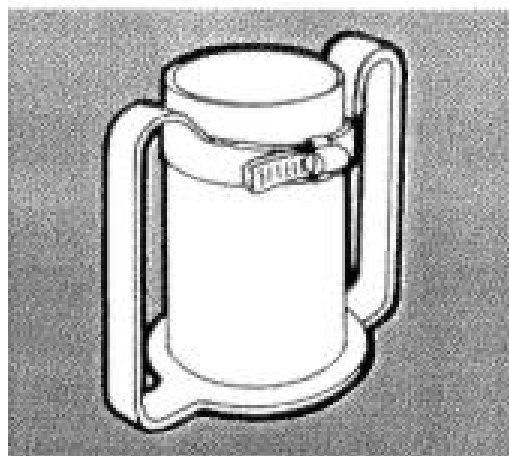
Use a straw to drink from a mug or glass to avoid lifting it altogether. Angled or bendable straws are useful for drinking in bed.

### Cutlery...

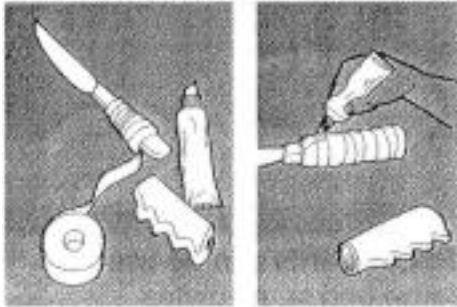
The specially designed knives, forks and spoons described here can be found at medical supply stores and at some "gourmet" kitchen shops.



**Plate guards can be used on large and small plates.**

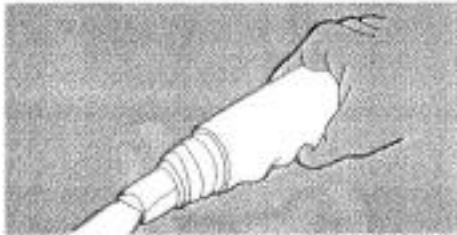


**This glass holder gives more stability and is easy to hold.**

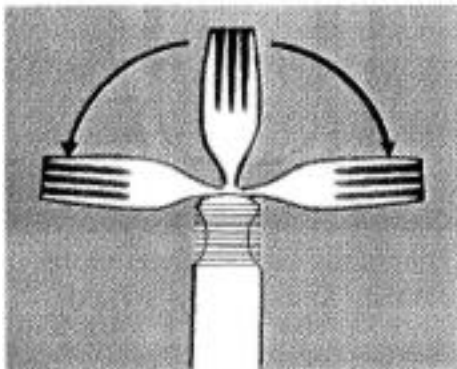


These items have been designed to help you overcome the problems of:

- weak grip
- lack of flexibility
- limited range of motion
- fine motor control difficulties



A built-up handle will make it easier to grasp eating utensils and similar items. The simplest way to do this is to buy a length of Rubazote at a medical supply store; this is a foam-rubber tubing with varying bore sizes to fit the handles of your own utensils. Or use a child's bicycle handle as illustrated.



- a) Build up handle with masking tape to fit snugly.
- b) Spread with waterproof glue.
- c) Insert handle and seal.

**A swivel utensil for extension cutlery is handy if you have limited range motion.**

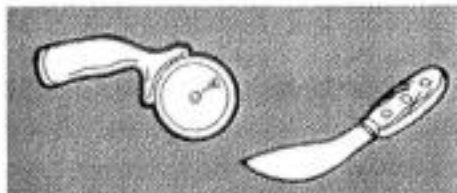
Several manufacturers make cutlery with square, round or oval built-up handles of varying lengths in light, standard or heavy weights. Shop around and try these out to see which is best for you.



If you have trouble moving your wrist, fingers or arm, try a spoon or fork with a swivel or self-levelling mechanism.

**Holders come with utensils or are sold separately.**

Extension spoons and forks for limited range of motion can be set at any angle by the wing nut.



**These knives are handy if you use only one hand to eat.**

These palm utensil holders can be adapted to fit your hand and angled to make eating easier.

Speaking of angles, you can buy bent or offset forks and spoons angled left and right in a variety of shapes. Knives come with straight or curved blades, either smooth or serrated, for easier cutting. The Nelson knife cuts easily with one hand rocking back and forth across the food. Another suggestion: an ordinary pizza cutter can be sharpened and used to cut food one-handed.

## Food Preparation Aids

### Cutting and Chopping...

Cutting boards can be bought or made with stainless steel nails pointing up to impale meat, fruits and vegetables, bread, etc. for one-handed cutting or peeling. Some feature a raised angle for buttering bread.

A peeler mounted on a clamp can be attached to a table top or cutting board; the apple, carrot or potato can be pushed or pulled across the blade with one hand.

A hardwood chopping bowl comes with a five blade chopper and features a non-tip plastic base. Available from some medical/surgical supply stores.

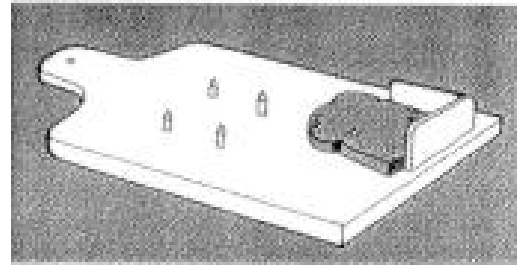
Small electric choppers are also available and can be found at hardware and department stores.

Another handy tool is a grater with suction feet and a bin to hold the grated food.

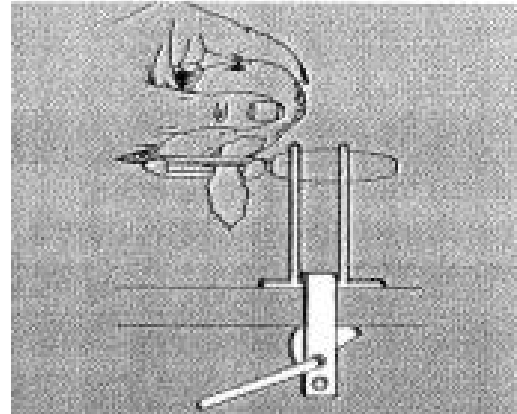
### Containers...

An electric can opener can save a lot of frustration. Make sure the one you buy has non-slip rubber feet and a mechanism you operate for any shape of can. Some electric can openers can be operated with one hand and some are rechargeable as well. Jar openers come in many designs and are widely available. Check the housewares counter and try them out. One is bound to suit your needs.

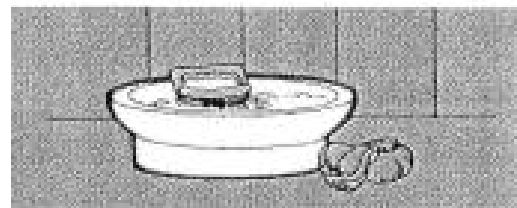
Boxes can be slit open with a knife and closed with a piece of masking tape or a rubber band. Plastic bags can also be resealed with an elastic band by twisting the bag shut and securing the twist under the band to keep the closure tight. Also handy for storing leftovers and freezing food are re-sealable freezer bags. These bags are fairly simple to use for someone who has limited hand function. The bag is closed by pushing both sides of the bag together and opens by simply pulling the two sides apart.



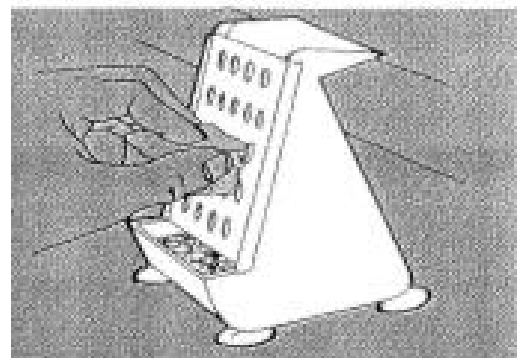
**Use rubber feet or suction cups to stabilize the cutting board.**



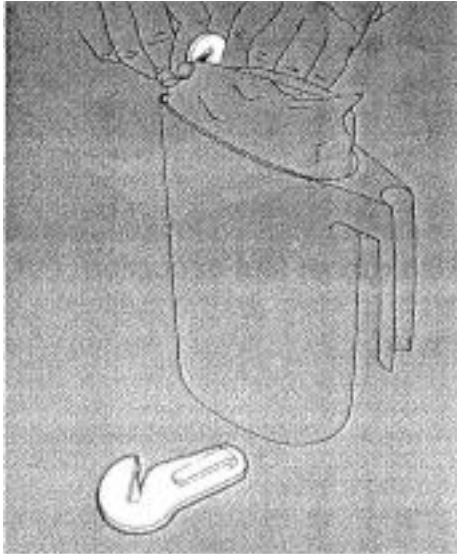
**Various clamps can be used to mount tools this way.**



**Use this bowl for chopping vegetables, eggs, etc.**



**This grater is handy if you use one hand to grate.**



**If you have trouble opening cardboard milk cartons here's an alternative.**



**A great way to stabilize a bowl for mixing.**



**A commercial or homemade pot stabilizer will steady a pot or pan while you stir.**



**A tipping kettle or teapot holder**

Milk bags can be opened with the illustrated snipping device, available at your supermarket, dairy or hardware store.

### **Mixing and Beating...**

Bowls should be heavy enough to prevent sliding; a rubber ring on the base, a Dycem mat (from a medical/surgical supplier) or a damp cloth can help too. Bowls with handles are widely available.

A hole cut to size in a piece of plywood or hardwood set over a drawer or sink will help steady a bowl while you use it, increasing your counter-space at the same time. If the bowl is set in flush with the board's surface, you can easily push ingredients into the bowl as they are prepared.

Blenders, electric mixers and food processors can be a big help; if you buy, make sure their features are useful for your cooking needs and that you can operate the controls.

### **Cooking...**

To hold a pot or pan steady while you stir, try this wire frame held on with suction cups, available from medical supply stores.

If you have trouble handling a kettle or teapot, a tipping platform can make this activity easier and safer. Make it yourself or buy it at a medical/surgical supply shop that carries homemaking aids.

A cool touch kettle is safe and easy to manage as well.

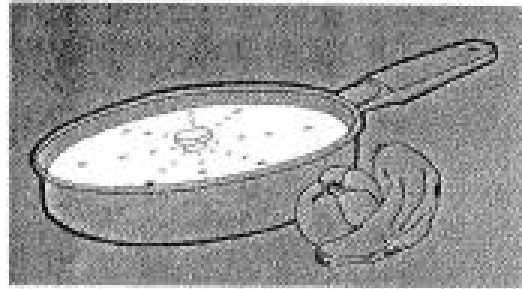
For frying bacon and other thinly sliced foods, a cast aluminum device sits on top of the food and reflects the rising heat. Foods cook through quickly and bacon crisps without turning. Available at Canadian National Institute for the Blind (CNIB) and some housewares counters. Also from CNIB, are magnifiers (handheld and on stands) and short range telescopes; meat thermometers and timers with raised markings.

Use a deep fry basket with a handle set into or over a pot of water for boiling or steaming vegetables.

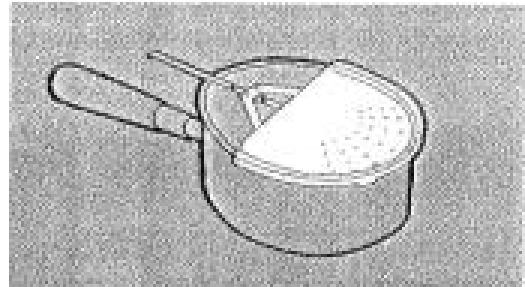
To drain or strain, the device illustrated here fits over the pot with a spring loaded handle to hold it in place. Available at CNIB and some housewares counters.

Heatproof pads are indispensable beside oven and burners. Place them around the kitchen and use them as stepping stones over long distances.

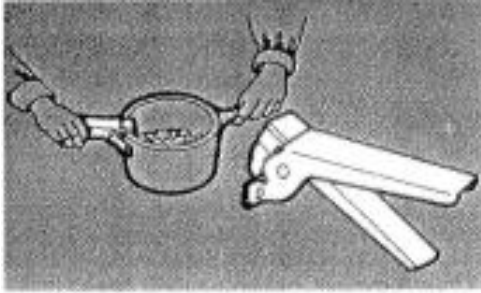
A good pair of oven mitts is essential when working with hot or cold items; or you can use a reaching aid for some jobs.



**This bacon crisper will help foods cook quickly.**



**Use this device to strain or drain a pot.**



**With this clip-on handle, you can combine the strength of both arms to lift a heavy pot.**

## **Cooking Utensils**

### **Weight...**

The lightest and easiest to manipulate utensils are those made of rolled aluminum, stainless steel and copper. Because these metals are good conductors of heat, the pot will heat and cool quickly, a useful feature for boiling and baking. On high heat, watch out for hot spots and burns; use a lower setting and stir frequently if you need to heat gently and evenly. A pot stabilizer will keep the handle steady while you stir. It's available at some medical supply shops or you could make your own. If you have the strength to handle heavy cast aluminum or cast iron cookware, you can take advantage of their slow, even heat for making sauces, sauteing and simmering. A small pot for sauces and a skillet will take care of many of your cooking needs. A dutch oven can be left simmering on the stove all day and taken right to the table for serving.

Casserole dishes and oven-to-table ware of ceramic, porcelain, Corningware and heat proof glass come in all sizes and weights. Some can be used on top of the stove over direct heat. They're designed to look good on your table, which means less transferring of food from one container to another.

### **Handles and Knobs...**

Make sure that the shape and size of the handle is suited to your grip strength. A long handle lets you brace it against your wrist and arm or use both hands for better leverage and also makes reaching the back burners easier. Handles on both sides of a pot distribute the weight evenly, but require two hands, good coordination and are sometimes too small to grasp easily.

This handle clips easily onto most baking tins, or it can function as a second handle for heavy or awkward pots. Look for it where camping supplies are sold.

Lids should have a knob that won't slip out of your grip. You'll find replacement knobs at hardware stores. If you use a reaching aid, choose a knob that will help you move the lid easily.

Any part of the pot you touch should be insulated from the heat. Plastic and wood are the safest materials; solid and hollow core metal handles will heat up eventually and could cause a burn.

Keep a pot holder handy for utensils with metal handles, and always assume they are hot.

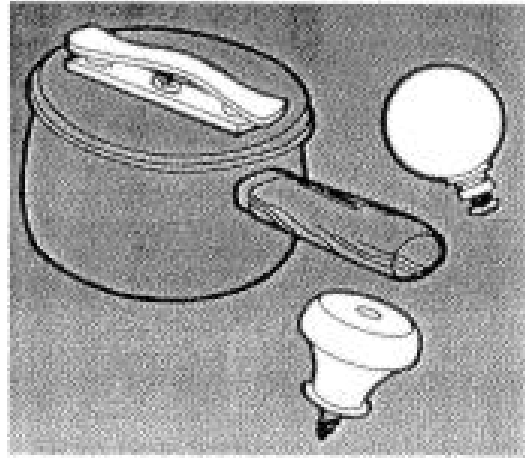
### Cooking Surfaces...

For people on low-fat diets, non-stick coatings on cooking utensils will reduce the amount of oil or butter needed for frying. They make baking easier - muffins pop right out - and clean-up is a snap. You can get almost any utensil with a non-stick coating (T-Fal, Teflon, Silverstone, etc.), but remember to use plastic, rubber or wooden tools only, since metal will scratch the coating, and do not use on high heat.

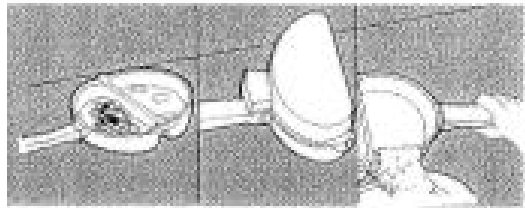
The omelette pan illustrated here makes good use of a non-stick coating. Divide the egg mixture between the two compartments, add the filling to the side with the handle, flip the top over and complete the cooking. The omelette slips out easily onto your serving platter.

Some cookware comes with a porcelain or enamel surface to prevent foods, especially acidic preparations, from coming into contact and reacting with the metal. Cleaning is also easier. Take care to avoid chipping and do not use metal tools.

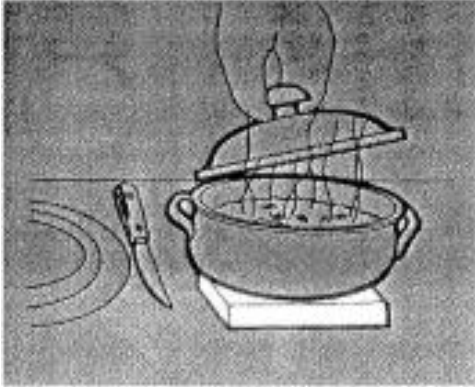
If you choose to cook with utensils that do not have non-stick surfaces, then you can use non-stick sprays which are low in fat and cholesterol content. You can find non-stick sprays at your local grocery store. If you are on a restricted diet, ask your doctor if you can use this kind of product before you go ahead and buy.



**If a standard replacement knob doesn't help, try a cabinet door knob; a drawer pull can be attached with a piece of plywood as shown.**



**Try this great omelette pan.**



**Protect your counter and table tops with strategically placed heatproof pads.**

### **Electrical Appliances...**

Some gadgets make cooking with pots and pans seem outmoded. A slow cooker or crock pot makes great soups, stews, casseroles and desserts with minimum preparation and attention. A model featuring a removable liner gives you an extra serving dish as well. An electric frying pan may also save you time and energy; some people use one as a minioven instead of a large, expensive appliance. A toaster oven on an accessible counter can also perform many of the tasks of a standard oven with less energy cost, work and bending over.

A microwave oven is handy for everyday cooking, heating and defrosting. Microwave ovens range in size from small apartment models to large household sizes. If you're interested in buying a microwave oven, be sure you have a spot for it in your kitchen with an idea of what size is best suited to your needs. Microwave ovens are available from housewares counters and furniture and appliance stores.



## Dishwashing Aids

Washing the dishes is one of those chores we just can't escape even though we would like to. Here are some ideas and products that might make this job a little easier to deal with.

### Develop a system...

Any task is harder to do if you approach it haphazardly. A system will help you get the job done faster and better, and will point out any specific parts of the task that give you trouble. We've broken down dishwashing into three activities: clearing, washing and drying.

### Clearing...

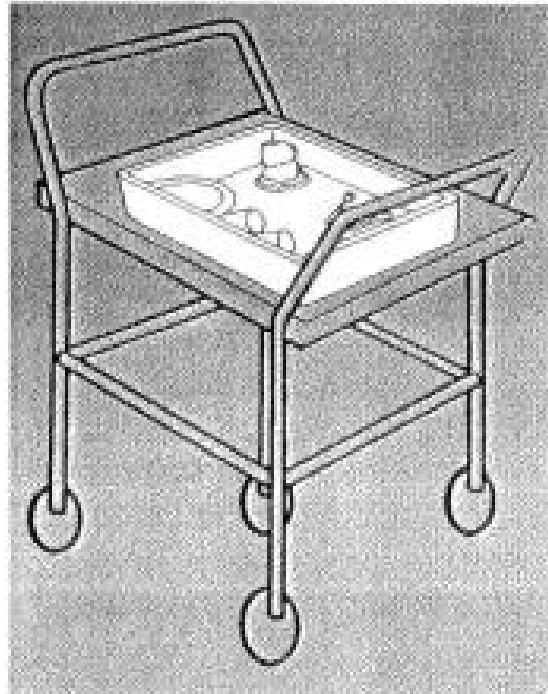
In order to make as few trips as possible, use a small plastic tub or restaurant bus pan, available at most housewares counters or restaurant supply outlets. Set on a wheeled cart or trolley, the tub eliminates the risks of carrying items separately and provides walking support.

If you don't wash the dishes right away, a quick rinse will keep food from drying into a hard-to-remove crust.

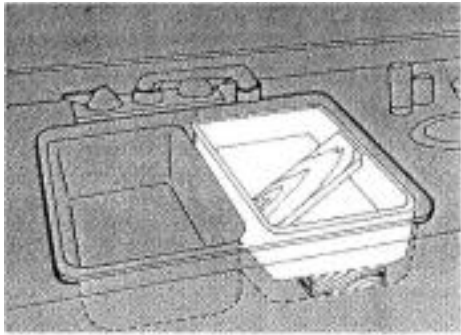
### Washing...

Is your sink accessible? If you can't reach all parts of the sink, wash your dishes in a plastic tub raised to the right height for you by a couple of wooden blocks.

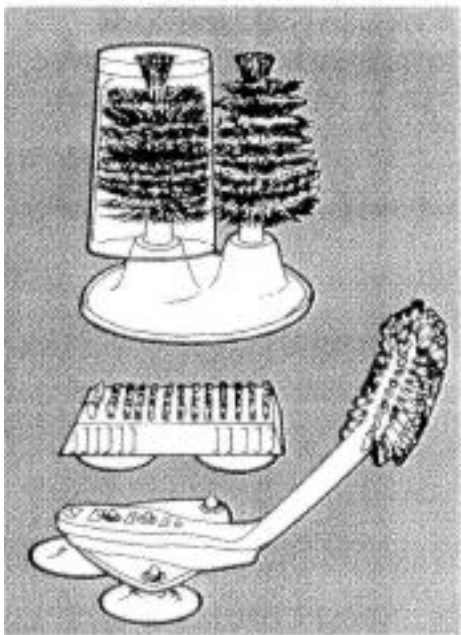
Shallow sinks are available if you want to replace what you have; you can also find lever-handled taps and single-arm control faucets at plumbing supply outlets.



**A wheeled cart and large restaurant bus pan can save trips to and from the kitchen when clearing.**



**Wooden blocks are used to raise the level of a plastic tub in the sink. Note the piece of plywood used to slide heavy items in and out of the water.**



**Attach a brush to the sink or counter and move the dish or glass against it.**

Use the hottest water you can stand for washing and rinsing. Rubber gloves will help shield your hands from the heat and the detergents found in dishwashing soap. A spray attachment on the sink is great for rinsing the dishes once they're clean; if you have a double sink, fill the second one with hot water for rinsing. A bit of bleach in the rinse water will ensure your dishes are disinfected.

The recommended order for handwashing dishes:

- glassware
- cups
- plates and bowls
- cutlery
- pots and pans

A dish brush can do most of the work for you when it comes to heavy cleaning. Dish and bottle brushes angled and mounted with suction cups are available at some medical supply shops.

Look for sturdy nylon bristles set at the appropriate angle and a handle with a good grip if you will be holding the brush.

#### **More pointers on washing...**

- Try using a mitt normally made for washing cars - fabric or sponge to wash your dishes.
- A useful item is the nylon mesh scrub pad, especially for easily scratched non-stick surfaces.
- For that really tough baked-on lasagna, use a metal scrub pad, or even better, soften it by soaking overnight in a solution of detergent, salt, vinegar or baking soda.

- Stains can also be removed by soaking: use a mild solution of bleach and water.
- Remember to clean the outside of a utensil - grease can build up and be harder to remove when baked on.
- Always dry the inside of a pot and store with the lid loose to prevent oxides and off-flavours from developing.
- Wipe cast iron, non-coated utensils with a light coating of vegetable oil after drying to prevent rust.

Dishwasher detergent can be hard on some surfaces. The abrasives can wear away non-stick coatings, and the chemicals may react with some metals. Follow the recommendations of the detergent and utensil manufacturers.

### **Drying...**

The easiest method of drying is to leave the dishes in the rack to air-dry. The hotter the wash and rinse water, the faster and cleaner the dishes will dry. This is also the most sanitary way of drying, since no bacteria will be transmitted by a towel. Your dishes can then be put away or stored right on the rack covered loosely by a clean cloth.

If you prefer to dry your dishes with a towel, use an absorbent, lint-free linen/cotton tea towel.

To dry dishes while seated, place a clean towel on your lap, set the item on this towel and dry with a second towel in your hands. Use the towel to protect your hands if very hot rinse water has been used and to prevent the wet item from slipping out of your hands.

### **Electric Dishwashers...**

If your household is large enough to warrant a dishwasher, chances are that there are people who can help you load and unload it. A front loading machine is more accessible if you use a wheelchair; if you have trouble bending over, a counter top machine might be better for you. A counter top machine is very small which means that you would not be able to load many dishes at once. If you are thinking about buying a dishwasher, go shopping and try some out and take these points into consideration:

#### **Visit a friend who has one...**

Go through the motions of loading and unloading and make sure the controls are within reach and easy to operate.

Look for lettering on controls with good colour contrast which makes them easier to read.

Look for simple operating features.

## Domestic Appliances

Domestic appliances such as refrigerators, stoves, washers and dryers are expensive items. Whether you are replacing an appliance that no longer meets your needs or buying for the first time, there are some factors you will need to consider when making your choice.

### Dimensions...

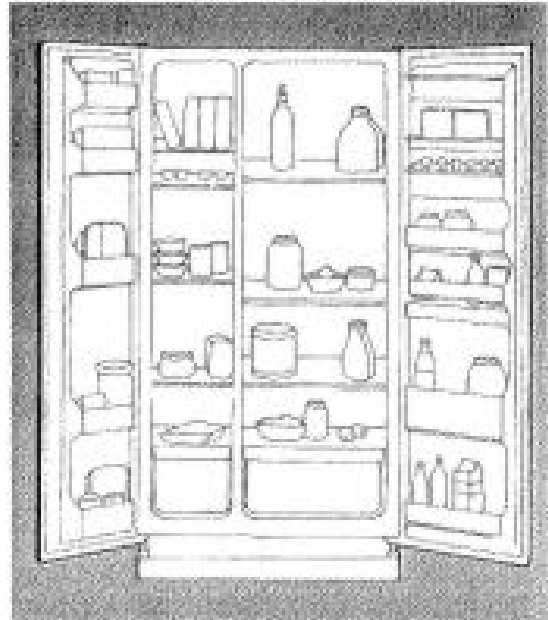
First, measure the space the new appliance will occupy, especially if the space is limited (for example, between the counter edge and a corner). Take into account the approach if you use a walker or a wheelchair. Is there room for you to open the door? Make a note of the measurement of this clearance.

If you use a wheelchair, measure your effective reach to make sure you can operate any rear-mounted controls. Check to see that you can reach all parts of a fridge, washer or dryer. If you have strength, balance or back problems, make sure you can use a standard oven; if not, a wall oven installed at an accessible height might be for you.

### Models and Features...

Naturally, you don't want to spend money on features you might never use; however, modern appliances have many labour and time-saving devices that can help you. Talk to sales people, friends and relatives. Read the product literature.

Know your needs and priorities: think in terms of volume and frequency of use, type of work and what you need to make the appliance easy to use.



**This refrigerator has narrow doors. Some models come with pull-out shelves for easier access.**

An appliance that will be used every day should be sturdy and well-designed, easy to clean and not likely to break down under normal to heavy use. (Make sure there is a warranty or service contract on the item. A reputable company will usually back its products for a least a year.) If you live alone or in small quarters, small scale appliances are available that might suit your needs. These items are generally less expensive than larger models and just as reliable.

The features you look for should relate to the type of work you expect from the appliance. For example, if you do a lot of roasting, broiling and baking, features such as a self-cleaning oven, meat probe and rotisserie would likely appeal to you. Similarly, the type of clothing you will be laundering will determine which cycles you need on your washer and dryer.

Your abilities will affect your choice in terms of size, shape and function. Make sure you can reach and manipulate the controls: you might have to use a reaching aid, change the knobs or buy a model with front controls. Go through the motions of using the appliance to see if you are able to use it comfortably. Take into consideration your strength, reach, coordination and balance.

**Remember, you are your own best consultant. Make a list of the functions you need, then the functions you'd like.**

If you are buying an appliance for the first time, visit a friend who has one and try cooking a meal, washing your clothes etc. Every time you come to a problem, write it down; if a design feature is particularly helpful, note that too. If you are replacing an appliance that is no longer accessible, make a list of the problems you have with it. Take this list with you when you shop. It will give the salesperson a good idea of what you really need. Shop around and see how different salespeople meet your needs - their input can be valuable when you make your decision.

## **Refrigerators...**

Manufacturers produce refrigerators in a wide range of dimensions, from bar fridge through apartment size to full deluxe models. One will fit your measurements.

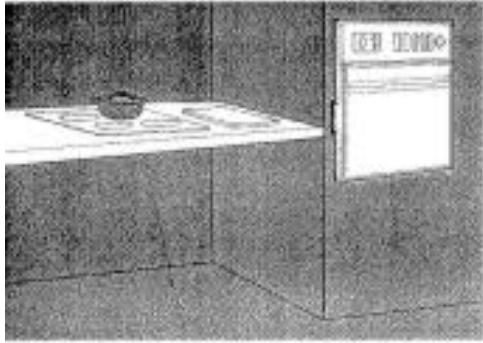
### **Things to look for...**

Make sure the door orientation suits your kitchen layout: a right-hand fridge is hinged to the right and opens on the left with your right hand, and vice versa. Side by side models have narrower doors, requiring less space when open and offering easy access to the freezer section; they are best approached straight on, since opening one side can be difficult if the unit is in a corner.

Models with frost-free freezers can save a lot of work, and are energy efficient. Other features, such as automatic ice makers and ice water dispensers will depend on your needs and your budget.

If you don't need a full-sized refrigerator, consider a bar fridge, which is about half the size of a regular unit with a small freezer section inside. Install it on a sturdy platform at the best height for you, and use the space underneath for storage. Small freezers are also available.

The storage efficiency of a refrigerator can be improved by using lazy susans, by resetting the shelf positions and by moving the drawers or taking them out altogether. Some refrigerators come with sliding shelves for easy access to the back part of the fridge. Other refrigerators come with adjustable door shelves that can be positioned for easier access. Open and covered plastic containers come in many shapes and sizes for better food storage. Keep frequently used items in the most accessible areas and long-stored items at the back of upper and lower shelves.



**A side opening wall oven and a cooktop with side controls make a kitchen more accessible to someone who uses a wheelchair.**

## **Stoves, Ovens and Cooktops...**

A conventional oven can present obstacles to many users. A good alternative is to break up the combination by installing a cooktop in an accessible counter and a wall oven at the best height for you.

### **Things to look for...**

Cooktops come with easy-to-reach side or front controls and are available from most Canadian appliance manufacturers. Wall ovens have all the options of regular ovens, can be installed at any height and have doors which open to the side or open down. A side opening oven is easier to load, unload and clean at any height; there should be a heatproof counter close by for hot dishes. Special features that will make your stove easier to use are a self-cleaning oven, an automatic timer and easy to clean burners. If you have trouble turning knobs, consider a model with push-button controls.

If you find stove controls hard to read, a hand magnifier or a small telescope (from the Canadian National Institute for the Blind, some department stores and camera and optical shops) can be helpful. Use brightly coloured or high contrast tape to mark commonly used settings. For users who are blind, a piece of toothpick or a bead can be inserted under adhesive tape to create a raised marking.

A large stove may not be necessary if you cook for a few people or just yourself: an apartment sized model can be just as efficient.

## **Washers and Dryers...**

Once you've decided on the cycles you need for the type of laundry you do, your next choice will be between front and top loading. A top loading machine will prevent back strain from bending over, but you may need a reaching aid to get all the laundry out.

Small articles like socks can be tied into a pillowcase or put in a nylon mesh bag for easy retrieval.

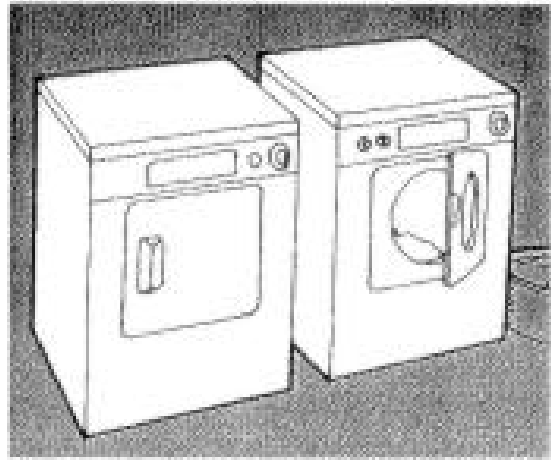


Front loading may be easier if you use a wheelchair, but you should try it out first. Make sure the machine is in an accessible location, and that shelving for soap and a surface for folding clothes are nearby. Automatic bleach and fabric softener dispensers can be helpful features.

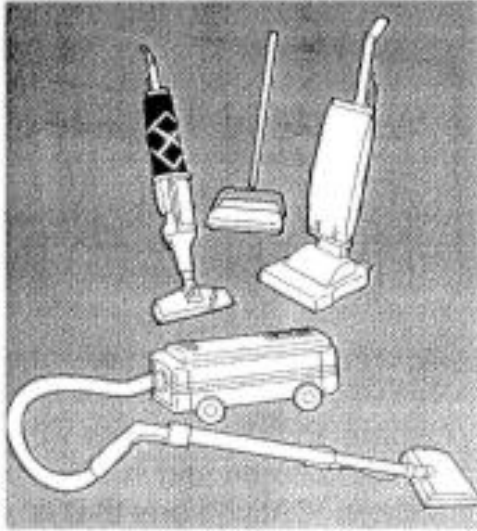
Dryers are typically front loading. Your choice as far as dryers are concerned is to choose between one whose door opens to the side or opens down. If you use a wheelchair, a side opening dryer would probably be more accessible to you. On the other hand, a door that opens down will allow you to use open door as a stepping stone to unloading the dryer. In other words, while you empty the dryer, clothes can be placed on the open door then moved to the place where you fold your clothes.

One option you should look for is a lint filter that is located at the front of the machine, rather than at the back. Some washers and dryers feature front controls.

If small is beautiful for you, an apartment-sized washer and dryer combination would be ideal. These take up little space and can be stacked or placed side by side.



**Washers and dryers come with different features and in different sizes. Choose one that is right for you.**



**Different floor and carpet cleaning appliances.**

## House-cleaning Aids

Many of the tasks you undertake to keep your living-space clean and tidy can be simplified if you use the right equipment.

### Floors...

If your floors are carpeted, you probably use some kind of vacuum cleaner. If you are choosing a new machine, your first step should be to think about how much strength you have, particularly in your arms and upper body. Don't buy a machine that will be too heavy for you. As a rule, canister types are lighter than upright vacuums because the two parts are separated, they are also more versatile in that their attachments clean furniture, curtains and awkward corners. On the other hand, an upright machine will give you more balance and support if you need to lean a bit on the machine while using it.

As a consumer you have the right to try things out in the store before buying. Take advantage of this opportunity. Ask the salesperson for a demonstration - and then take part in it yourself.

Vacuum cleaners with a rotating brush on a power head do a lot of the work for you by combing the pile of your carpet and getting at deep-down grit. They may seem more expensive at the time of purchase, but consider that the energy they can save you over the years might be worth it. The only drawback is that these heads move by themselves and can get away from you if you're not careful. This can cause a sudden loss of balance if you are using the machine for support.

An electric broom might be as useful to you as a full-sized vacuum cleaner.

### Some features...

- it is lighter than an upright vacuum and can adjust for carpeted or bare floors;
- the small head reaches under furniture and cupboards;
- available with power heads;
- they don't require vacuum cleaner bags; however, you might find this a drawback if the procedure to empty is it more difficult for you than replacing a bag.

A carpet sweeper requires no electricity - its energy is your energy as you push it back and forth, activating the rotating brushes. Because there is no vacuum, the carpet sweeper fails to clean deep-pile or shag carpets.

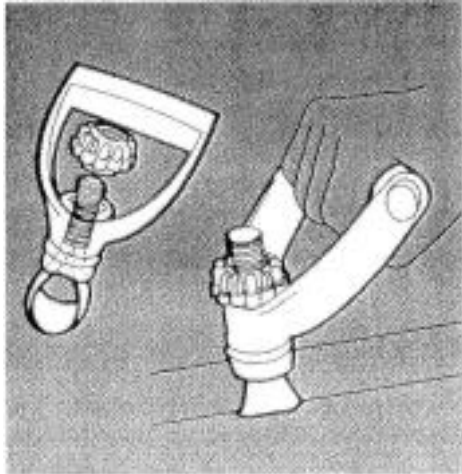
If you are not cleaning your bare floors with one of the vacuum devices described here, you'll probably choose a broom or a dust mop. Look for a broom with a slanted edge and feathered tips. A wide push-broom will give you more leaning support than a corn broom.

Long-handled dustpans are available. If you can't find one, most regular dustpans have a hollow handle that is large enough to be fitted with a standard broom handle. Insert a handle which is long enough for you to avoid bending over; then angle the pan so it lies flat on the floor.

Dust clings to the fibres of a dust mop as you push it around the floor. You can also lean on the dust mop for a little balance and support. The hard part comes when you shake the dust out of the mop - this takes considerable vigour. Try resting the handle on your porch or balcony railing or in the corner of a window frame, and then give it a series of quick push/pull movements.



**A dustpan with a long handle and special grip will save a lot of unnecessary bending.**



**A D-grip handle**

Attach a handle and forearm support to make your broom help you while you work.

Cut the handle of your broom or mop to size if it's too long. Hard to grip? Fit a bicycle-grip or D-grip handle to the end.

An attachable extra handle will adapt your broom or mop for two-handed use to reduce bending over. You'll find an attachment like this at a hardware store or a medical supply store.

You can buy a sponge mop with the squeezing device built into the handle rather than at the mop-end. Both require strength, coordination and two hands - try before you buy. Available at most houseware departments.



**This handy mop is available from most hardware stores.**

### **Pockets, pockets, pockets...**

Make or buy an apron with plenty of large pockets to carry your cleaning supplies, cloths, etc. Attach a pocketed pouch to your walker, wheelchair or trolley. Plan before you start to avoid unnecessary energy-consuming steps.

A small cart on casters will hold a lot of equipment. Small wire trolleys are available at hardware stores, or choose a sturdier model if you need a little support. Attach a handle to push it around without having to bend over. You could keep several carts, one for each activity, under counters or in closets.

An alternative: keep your activity tools in inexpensive plastic tubs and put one on your trolley when you're ready to roll.

## Dusting...

### Some helpful hints...

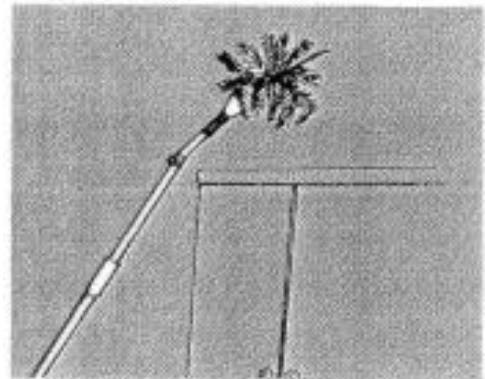
- A reaching aid holding a soft cloth makes a great impromptu duster; you can use it to wipe up spills or clean a foggy mirror.
- Make a dusting mitt or sock out of old, soft fabric, and dust as you travel around the house.
- Attach a light wooden dowel handle to a regular duster so you can reach awkward or high places.
- Collect knick-knacks that require special cleaning in a plastic tub (a folded dish towel in the bottom will cushion them), dust and polish them all in one go, then return them.
- Dust as often as you can.

### Windows...

A lightweight, car-sized squeegee fits onto a broom handle and does quick work on your windows and mirrors. It is available at most hardware stores. Use a solution of warm water and vinegar - no soap - and scrub with the sponge side; then wipe clean with the rubber blade.



**Sew elastic around the top of a bag shaped duster and add strips of cloth to catch dust.**



**Angle the duster at the wing nut to reach high shelves or awkward corners.**



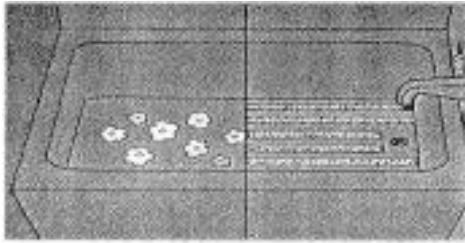
## **Bathroom Basics**

The bathroom is one of the places in your home where complete independence could be most important to you. If you are able to shower and bathe on your own, your bathroom should be an accessible and safe place where you would be able to move around easily without risk of slipping, falling or getting stuck. More accidents happen in the bathroom than in any other room in the house, so protect yourself against unnecessary accidents with some of the suggestions in this chapter.

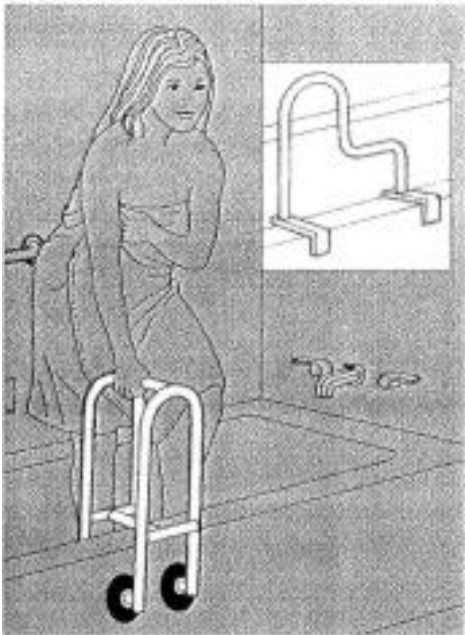
This section suggests changes you can make to your bathroom either yourself or with the help of professionals. The topics range from toilet seats to bath lifts. If an idea appeals to you, try it and see how it works. Make your own modifications to the suggestions. The best idea is to use whatever works for you.

**For more information, check the following chapters ...**

- **Grab Bars**
- **Plumbing Fixtures**
- **Lifting Devices**
- **Storage**
- **Reaching Aids**



**Bathtubs should have safety treads to help prevent falls.**



**Use a grab bar or tub rail for support, not the soap dish.**

## Bathing Aids

### Safety First...

Consider what you can do to eliminate some basic bathroom hazards.

Safety treads which stick onto the floor of your tub will help prevent slipping. You'll find them at most hardware and department stores, sold in strips or flower shapes. A rubber mat with little suction cups to hold it in place works well too, and can be removed for cleaning.

A chemical non-slip treatment that permanently etches the smooth surface of the tub is also available. This treatment is good for enamel or porcelain surfaces.

Grab bars and tub rails placed strategically provide balance and support when you need it - getting in and out of the tub or shower and raising and lowering yourself into the water.

Adjust the water temperature before you step in, to avoid scalds or reflex movements that could cause a loss of balance and a fall.

**Keep water and electricity away from each other. Dry your hands before plugging in a hair dryer or other electrical device. Don't put a radio on the edge of the tub where it might be knocked into the water.**

### Organizing...

Your bathing will be easier if everything you need is close at hand, preferably within arm's reach. If you have a reaching aid, put it beside the tub before you get in so you can use it when needed. If you bathe in a tub rather than showering, a shelf can be bought or made to sit firmly on the edges of the tub to hold soap, brushes, or a magazine.



## Make it yourself: Bath Shelf

- Cut a piece of 3/4" (2cm) plywood about a foot (30cm) wide and long enough to fit across the tub (usually 30" or 75 cm);
- Paint or varnish it with waterproof paint and attach suction cups or rubber strips to the ends for stability.
- You could mount a small nail brush on the board, attach a plastic soap dish, or add an easel to hold reading material.
- You'll find a wide variety of hooks that can be attached to walls and tile for hanging towels, wash-cloths, brushes; place them within reach. Use a grab bar as a towel rack.

Soap-on-a-rope is always handy, and the new squeeze bottles of soap and shampoo hang on a bar or the shower fixture to be accessible. A shower caddy attaches to the wall and will hold soap and bottles.

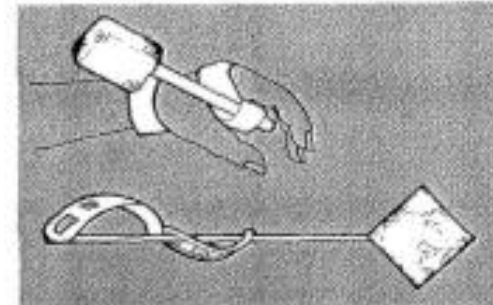
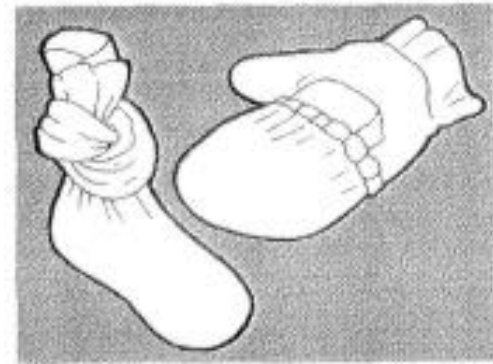
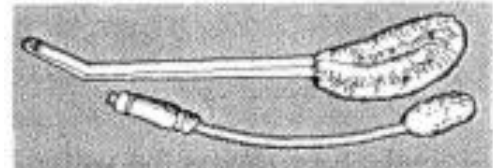
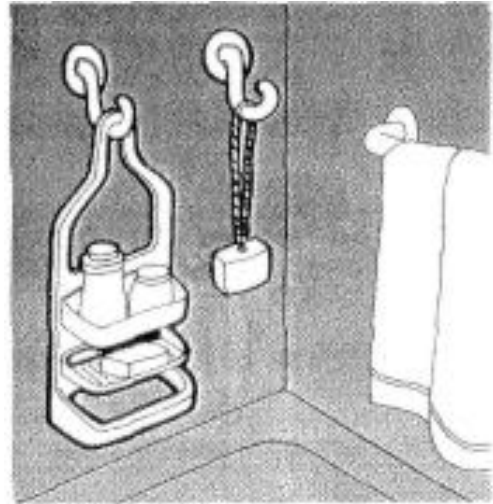
## Scrubbing...

Getting down to the business of cleaning...

Brushes are helpful when you bathe; choose bristles or a sponge tip, and a handle that's easy to hold. If you need a better grip, attach a bicycle handle to a regular bath brush, or buy a palm or wrist cuff at a medical supply store to hold your brush.

Long handles will let you reach more parts of your body without bending. You'll find special brushes with bent handles at some medical/surgical supply stores. These help you scrub your back and other hard to reach parts.

A nail brush mounted on suction cups (you could adapt this yourself) is available for one hand scrubbing. Attach it to the side of the tub, the basin, or even the wall beside the tub, wherever you get the best angle.



**These scrubbers and brushes are handy for scrubbing those hard to reach spots.**



**A plastic tube drains the water into a bucket beside the bed.**

To scrub your feet and around and between your toes, an ordinary bathroom brush can be used; or make a mini-brush with a piece of sponge glued to a handle to reach between your toes.

Make yourself a scrub mitt out of terry cloth. Sew a pocket in the palm to hold a bar of soap (or soap chips) and use Velcro or elastic on the cuff. Or use a sock: tie some soap and a few odd pieces of sponge into a sock to make a fist sized scrubber. A sponge mitt is available at some medical/surgical suppliers or the car washing section of a hardware store.

Another way to scrub your back (and other parts of your body) is to attach a piece of terry cloth, sponge or loofah to a strip of sturdy fabric or plastic to pull from side to side. (A loofah is a rough spongy material frequently used for scrubbing and very good for stimulating the circulation). These scrubbers are available for sale at medical/surgical supply stores, complete with velcro closures, but you could probably make your own.

### **Shampooing...**

A specialty item for people who have physical disabilities is an inflatable shampooing basin, illustrated here, which enables someone to shampoo your hair without moving you from the bed. This item can be found at most medical/surgical supply stores.

## Bath Lifts

### What is a bath lift...

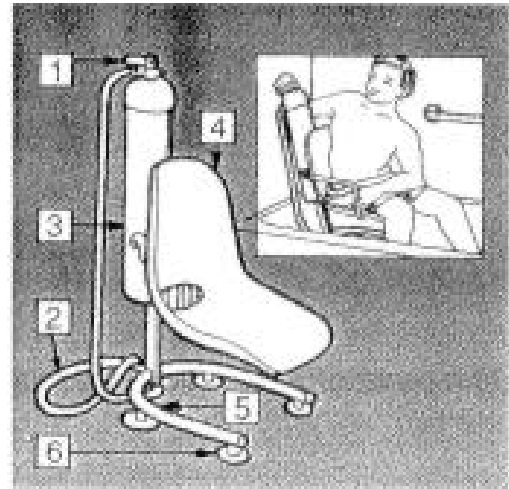
A bath lift is a small elevating device that clamps to the wall of your bathtub or sits inside the tub on suction cups. It is made up of a seat, usually with a back, or a sling, a supporting arm and a hydraulic or water powered mechanism housed in the mast. You sit in the seat and operate the controls to lift you above the edge of the tub, swing over to the water and lower the chair into the bath. To get out, use the controls to rise out of the water, swing out and lower to chair level again.

### Who uses a bath lift...

If you can normally do all your bathing activities alone except for climbing in and out of the tub, a bath lift can assist you in this part of your routine. You should have good balance to ensure stability on the chair with the coordination and range of motion necessary to operate the controls. If you use a wheel chair, you must be able to transfer to and from the seat of the bath lift (a grab bar or pole might help you with this).

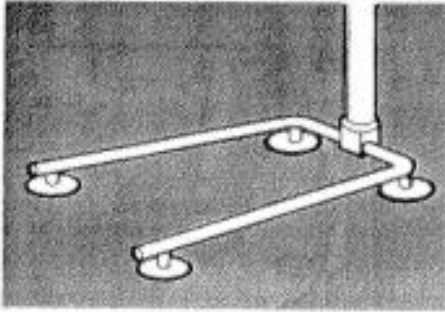
You'll find bath lifts at medical/surgical supply stores. Look in the yellow pages under hospital, medical or surgical supplies or wheelchairs.

A bath lift can be an expensive investment, so buy carefully. Make sure there is enough space for the device, that you can reach and operate the controls and that the mechanism can handle your weight (most are rated for 90 - 135 kg or 200 - 300 pounds maximum). Is there a guarantee? What happens if your lift breaks down? What are its weak points, and how long does it take to get replacement parts? Can you return the unit if you are unable to use it, or exchange it for another model? Ask your dealer these questions before you buy.



**Typical bath lift.**

- 1. controls**
- 2. water supply tube**
- 3. mast**
- 4. seat**
- 5. base**
- 6. suction feet**



**The base of a lift which sits in the tub.**

### **Features to Consider...**

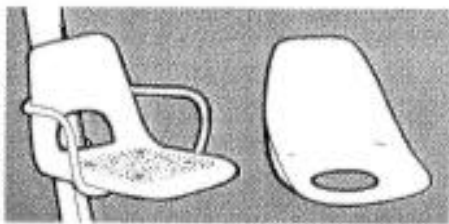
Following are descriptions of the features of models most commonly available in Canada.

#### **Base...**

Portable models are usually equipped with suction cups on a metal frame so that the unit can sit on the floor of the tub itself. Fixed bath lifts are mounted on a base bolted to the floor. Most of these models can be removed from the base when the lift is not needed, so buying several bases would allow you to use the lift in several locations.

#### **Controls...**

Most bath lifts are hydraulic or water powered. A hose with an adapter fits onto the water tap or attaches to the shower outlet, and when the water is turned on the pressure builds up to provide the power to raise and lower the seat. The controls are located at the top or side of the mast or on the chair arm, and consist of a lever or other handle to open and close the valve and one to move or lock the rotation. If you operate the lift yourself, check that you can reach the handle from the seated position and that it is not too stiff for you to turn.



**Two types of seats of a bath lift.**

#### **Seating...**

Whether the seating is moulded plastic or nylon, it should give you support at your thighs, seat and back. A model with arms should be chosen if you need more balance support; some arms are designed to swing up or back to allow side transfers.

Pictured here are some of the seat designs available for bath chairs.

## Showers

### Modifying a tub/shower...

**Getting in and out:** Your major concern in the shower is slipping. A rubber mat will help prevent this; so will rough-textured rubber treads. Both are available at hardware and department stores.

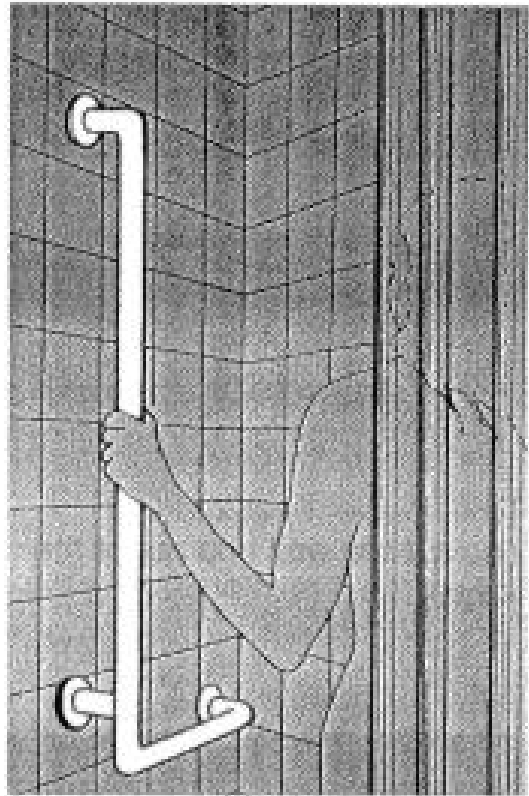
If you need balance and support, install a grab bar on the wall at the edge of the tub as illustrated, and hold on with one or both hands as you step in or out of the tub.

If you want to avoid buying equipment, try getting into the tub by sitting on a corner edge, leaning against the side wall for support, pivoting slightly, and placing your feet one by one into the tub until you are turned to the tub. Reverse the procedure to get out. A bench or chair placed beside the tub can be helpful, too (you might have to cut the legs so the seat matches the height of the edge of the tub).

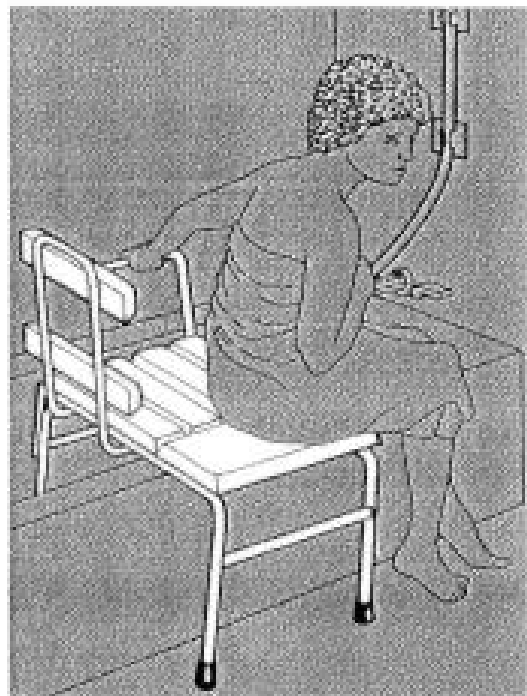
A bath seat, transfer seat or combination of both can also be helpful, particularly if you have difficulty with your balance or agility.

A bath seat, as described and illustrated here, will make showering safer if you don't feel very secure in a standing position. Cut a slit or two in the shower curtain to fit around the legs.

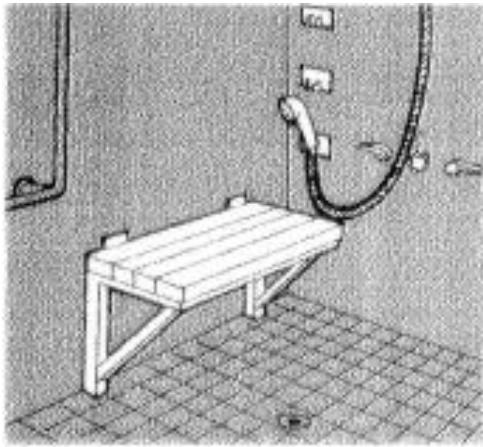
**In the shower:** If you have balance problems while showering, a horizontal grab bar installed just below elbow height will make all the difference, and when you're not in the shower it can be used as a towel rack.



**A grab bar will give you more support in the shower.**



**A combination bath and transfer seat features a padded back and side arm.**

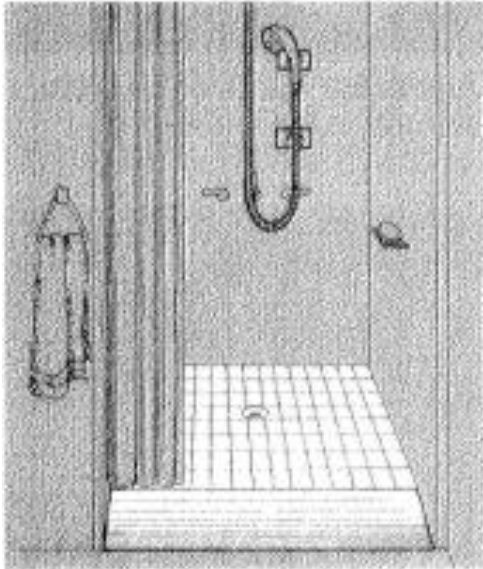


**This shower seat folds up against the wall and out of the way.**

If you are modifying a shower stall, try installing a seat on one wall, either solid or folding, about 45 cm (18") high. This idea is also useful for someone who uses a wheelchair and can transfer to the shower seat: a grab bar at the edge of the stall will help. If you do not like the idea of installing a shower seat, you can use a regular patio chair that is made of plastic and waterproof. Non-slip pads glued to the feet of the chair will help to stabilize it in the shower.

### **Showering on wheels...**

If you use a wheelchair or wheeled shower chair for bathing, you need an accessible shower stall. This means a space at least 3' (1 m) square with a flat or ramped entrance. One option is to tile most of the walls of your bathroom, install a drain, and slope the floor to it, and make it one big shower stall. An exhaust fan should be used to dissipate moisture, and all electrical outlets **must** be out of the range of the water. Add a shower curtain and a ledge to help contain the spray.



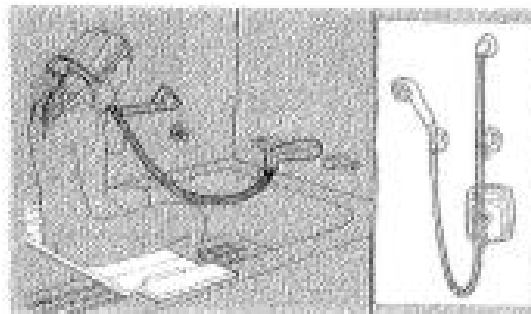
**An accessible shower stall with ramped access.**

If the bathroom is large enough, you can build a closed accessible shower stall. If there is a closet in another room backing onto the bathroom, you might be able to take out part of the connecting wall and incorporate the closet into the bathroom as a shower stall. (This is a fairly major renovation job and will likely require a plumber, an electrician and a building permit). Install the shower controls and mounting bracket at an accessible height, roughly eye level in a seated position.

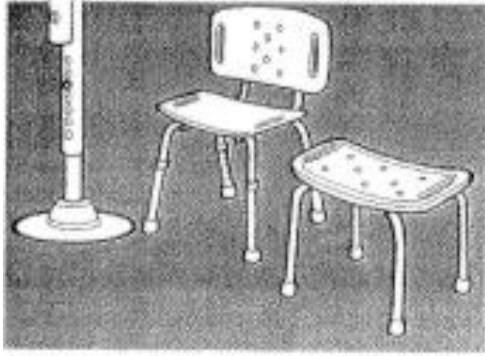
There are a number of shower stall bases with ramped entrance, drain and sloping floor available, but ask your plumbing supply dealer about cost and availability - you'll probably find it easier and less expensive to have your floor done by a tiling specialist or contractor.

You might want to try the of the many hand-held showers on the market, particularly if you shower in a seated position. Make sure you can reach the mounting bracket from your seat, and that the hose is long enough for you to manipulate the head easily to spray all parts of your body. The handle should be easy to grip, and check that any knobs or controls that need adjusting are large enough and not too stiff.

Scalding is another hazard of showering. Always adjust the water temperature before you get into the shower. It also helps to have a family policy about running water elsewhere in the house while the shower is being used to avoid sudden and possibly dangerous cold or hot surges. If you are still concerned, pressure balancers and thermostatic mixing valves are available from plumber suppliers to prevent surges and increase safety.



**Two kinds of hand-held shower units.**



**Bath seats can come with or without back support or adjustable legs.**

Bath, shower and transfer seats come in many shapes and sizes, and fulfil a number of functions. Your height, weight, strength and coordination will determine which seat is the best for you. If you are having trouble making your choice, you might wish to contact an occupational therapist through your local hospital or community centre for a professional assessment.

### **Some Definitions...**

**A bath seat** is a waterproof seat which fits inside your bathtub. It is designed to make it easier and safer to bathe and shower and get in and out of the tub.

**A transfer seat** is sometimes used by people who use a wheelchair to transfer between the wheelchair and the tub, bath seat, shower seat or toilet.

**A shower seat** is either a seat mounted in a shower stall or a wheeled commode chair (similar to a wheelchair) which can be rolled into an accessible shower stall.

### **Bath Seats...**

The most common type of bath seat consists of a seat on four legs, usually with rubber or plastic feet, with optional back and arms. Let's look at these features separately to see how they might affect your choice.

The seat should be made of a sturdy, waterproof, easily-cleaned material. Most seats are nylon, fibreglass, plastic - solid, perforated or mesh - or vinyl coated foam padding on wood or metal strips. The perforations and spaces between strips allow water to drip down into the tub. Plastic and vinyl coverings are easier to slide across; but if you need more friction to prevent slipping, the nylon covering might be better. Some seats are flat, while some curve up at the sides to fit your body's contours to add stability. The dimensions of the seat are important, too: a deeper seat gives more support if you need it. Most seats range from 28-50cm (11" - 19") deep by 43 - 66cm (17" - 26") wide.



The length of the legs is another factor to consider. Some seats feature adjustable legs; other models come in a range of fixed lengths. If you are certain of the height you need, fixed legs are usually less expensive. However, if you prefer to have the option of adjusting the seat height when you need to, choose adjustable legs.

### **How high should your seat be...**

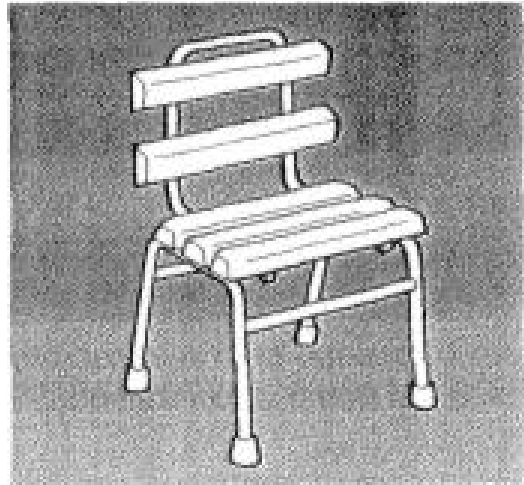
A seat at the level of the edge of the tub (the highest option) makes transferring easy; but you will have to bend to reach the water in the tub if you are having a bath, requiring a flexible spine and good balance. A hand-held shower eliminates this problem. A low seat is closer to the water and involves less bending during bathing, but you'll need enough strength to climb or transfer in and out of the tub.

You should feel confident about the ability of the bath seat to support your weight. Tubular legs are the strongest. They usually come in anodized aluminum, chrome plated or plastic coated, all of which are rust resistant.

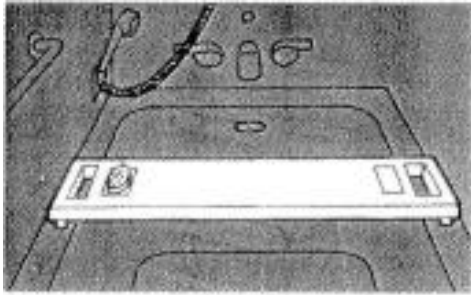
Have a look at the feet on a bath seat when you're buying. These prevent the seat from shifting or tilting while you use it. Most are rubber or plastic, with rubber providing a little more friction; suction cups are available on some models. Some bath seats are stabilized further by clamps, which secure the seat to one tub wall, or by braces pressing against the tub walls.

An optional back on a bath seat will provide support for your upper body for balance and resting. Make sure the height of the back and the angle are suitable for your needs.

An arm on the inner edge of the bath seat is another option for better stability. Use it as a grab bar for balance and support when transferring or bending.



**Soft padding helps to prevent skin irritation. Optional arm and transfer seat extensions are available.**

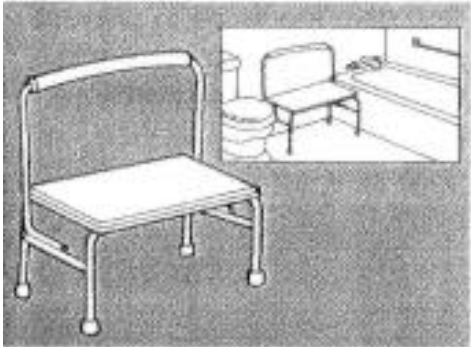


**An across-tub bath seat can be made at home or purchased.**

A bath seat can be removed from the tub to free it for other family members. Wipe it down after use and clean it occasionally with a mild detergent. A bleach solution can be used for disinfecting. Some models can be broken down for storage or shipping.

Other types of bath seats are available. The seat illustrated adjusts to the width of your tub and rests on the rim.

While it does not offer as much support or stability as other bath seats, it is light and portable.



**A transfer seat can bridge the gap between toilet and bathtub.**

### **Do it yourself...**

You can make your own 'bath board' from a plank or piece of plywood cut to size, well-sanded and painted with a waterproof plastic coating. Suction cups or rubber strips will add stability.

### **Transfer Seats...**

For someone who uses a wheelchair, a transfer seat is a convenience but not always a necessity. If you have good upper body strength and good transfer skills, you can probably do without one. On the other hand, if the layout of your bathroom prevents you from getting your wheelchair close to the tub or toilet, you might need a transfer seat to bridge the gap.

Designed much like a bath seat, a transfer seat is usually flat and smooth to allow you to slide along its length. The height should be as close as possible to that of your wheelchair seat and the toilet, tub or bath seat. The transfer seat should be light enough for you to move it into position while seated in your wheelchair and sturdy enough to support your weight. Design features to look for when you shop are the same as those described above for bath seats.

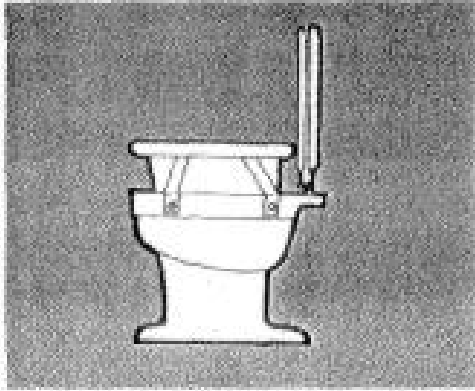
### **Do it yourself...**

You can make your own transfer seat much like the bath board described on page 44: cut a plank or piece of plywood to size and paint it with a waterproof plastic coating. Suction cups or rubber strips will add stability. Another option is to use a kitchen chair beside the tub.

A combination tub and transfer seat is also available. The transfer seat can also be used while drying off after bathing. A slot between the transfer and bath seats allows a shower curtain to be pulled through.

### **Where to get it...**

The seats described in this chapter are sold at most medical/surgical supply stores. Look in the Yellow Pages under Hospital, Medical or Surgical Supplies or Wheelchairs. The major manufacturers of these items will be known to your dealer.



**Raised Toilet Seat.**

## **Toilets and Toilet Seats**

### **Height...**

The critical factor in using a toilet is the height of the seat. Standard toilets are typically 35cm (14") high, which is 10cm (4") lower than the average chair. Therefore, if you have trouble getting out of a chair, it will probably be difficult to get on and especially, off the toilet. If you transfer from a wheelchair, a lower toilet may cause problems. Grab bars are one solution, provided you have the strength and coordination in your upper body to use them to pull your weight. Another solution is to raise the level of the toilet seat (usually by 5 - 15cm or 2" - 6").

### **Finding the right height...**

Close the lid of the toilet, and try stacking a phone book, a few newspapers or pieces of wood on the lid until you find a height that is comfortable for getting on and off the toilet; note the height.

If you have difficulty with your balance or strength, you may wish to consult an occupational therapist through your local hospital or home care office who can give you a professional assessment and recommend the best toilet height for you.

The following are suggestions for raising the level of your toilet seat.

### **Raised Toilet Seats...**

The easiest way to raise the level of your toilet is to use a raised toilet seat. They can easily be removed so others can use the toilet at the standard height. Some are portable enough to take with you when you travel. If your physical condition changes, an adjustable model can change too. If balance is a problem, try a seat with attached grab bars.

### **Moulded Seats...**

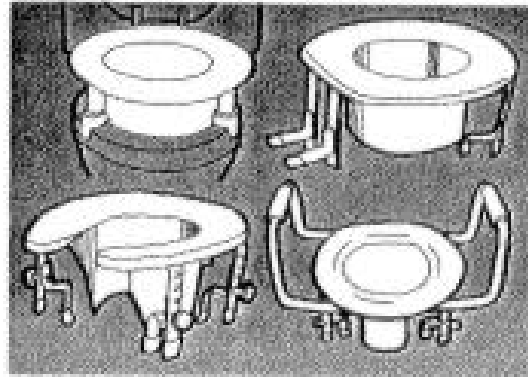
The simplest form of raised toilet seat is a one piece unit moulded of smooth, seamless, easily cleaned strong polyethylene, which can last indefinitely with normal use. Available in 10, 12.5, and 15cm (4", 5", and 6") heights, this toilet seat is lightweight and portable (some manufacturers include a cardboard carrying case).

Make sure the shape of the seat gives good support, especially if you have balance problems, and that the mounting is solid, stable and will fit your toilet bowl. Special contour designs illustrated below allow for use by persons with special spine or hip problems, a leg in a complete cast or an arthritic knee.

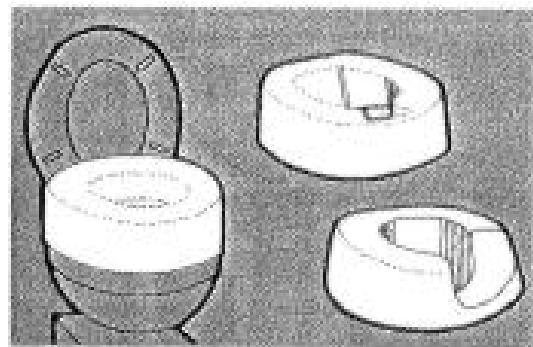
### **Fixed Raised Seats...**

Raised toilet seats come in a range of heights, usually from 5 - 15cm (2" - 6"). As mentioned above, be sure of the height you need before you buy. Clamps, screws or flanges are usually adjustable to secure the unit to the rim of your toilet; posts hold the seat at the designated height. Some seats are open at the front or sides, while some are enclosed with a splash shield; the former is a good choice if you have trouble reaching underneath. Look for solid and easily cleaned construction: avoid units with seams or cracks around the splash shield or with screws, staples or other fasteners in places where they could be hard to disinfect.

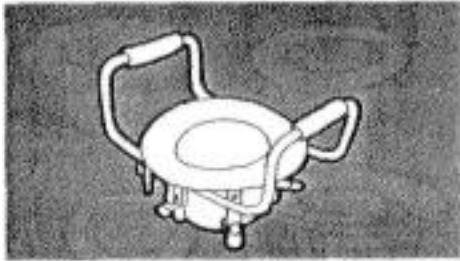
You'll find optional features such as padded seats, open and closed fronts, and assorted colours. Several manufacturers include internal grab bars as part of the design on some of their models. Shop around and see all the models you can before you make your decision.



**One-piece molded plastic seats.**



**Fixed raised toilet seats do not adjust in height.**



**Adjust to suit your needs.**



**An adjustable powered toilet seat can be helpful for getting on and off the toilet.**



**A wheeled commode chair facilitates toilet use and showering.**

### **Adjustable Raised Toilet Seats...**

While very similar to the seats just described, these models are designed to adjust to any height from 5 - 15cm (2" - 6"). This feature is particularly useful for people whose needs vary from day to day, or who are not sure of the best height and want to try out several heights over a few weeks. Make sure the adjusting screws or wingnuts are easy for you to manipulate, and that the unit is sturdy enough to support your weight. Options include grab bars and other features as listed above.

Another adjustable toilet seat is one that is power driven. There are models that use electricity and those that use water for power. These toilet seats allow a person who has difficulty standing or sitting independently to use the toilet with the simple flick of a switch. The unit fits over your existing toilet and bolts to the floor for stability. To use the seat, you raise the toilet seat to the level that is easiest for you to get on, then lower the seat to toilet bowl level. Reverse the procedure to get off. The powered adjustable toilet seat is available from most medical/surgical supply stores.

### **Commode Chairs...**

For individuals who have a physical disability and/or would rather not transfer from their wheelchair, a commode chair may be the best way to use the toilet.

A commode chair is similar to a wheelchair with a cut-out hole. Often the wheeled commode chair doubles as a shower chair to reduce transferring.

### **Where to get it...**

If you are interested in the types of toilet seats described above, you should contact your nearest medical/surgical supply store, where a variety of seats will be available and on display. Be sure you know what you want before you buy because, for hygienic reasons, toilet seats are not normally returnable.

### **Raise your own toilet on a platform...**

To raise your own toilet, build a platform as high as the difference between the standard height and the height you want. Have a plumber reinstall your toilet on this platform.

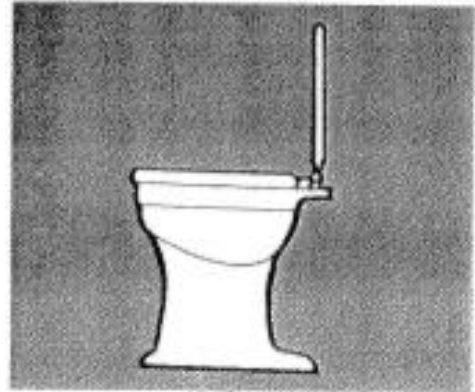
### **Buy a high toilet...**

Should you replace an existing toilet with a high toilet?

First, consider other users of the bathroom: will they be able to use the higher seat? This may not be a problem if you live alone or have your own bathroom. Second, is your strength stable enough so that 46cm (18") will remain the best height for you? Finally, give thought to the resale value of your home: although this is not a major renovation, it could be a factor at some point. Manufacturers of bathroom fixtures make high toilets that measure 46cm (18") instead of the standard 35cm (14"). Designed primarily for institutional use, they are available through most plumbing supply outlets and cost more than a standard toilet. They are also made with such optional features as an elongated bowl and slots to hold a bedpan for cleaning.

### **Toilet Rails...**

If you do not wish to use one of the suggestions listed above, you might consider installing toilet rails. If you side transfer from a wheelchair, a toilet rail with a moveable side arm would best suit you. If you transfer from the front or if you just need support while sitting or getting on and off the seat, a two-armed unit will help. Some models attach to the wall, others to the toilet itself, and some are available as integral parts of a raised toilet seat.



**Raised Toilet Seats**



**Toilet rails**





## **General Household Tips**

General household chores can be very difficult if you have a physical disability that limits your mobility. Having devices in your home can make independent daily living easier for you. In this section, you'll find ideas on everything ranging from physical accessibility (ramps, lifting devices, etc.) to practical day-to-day tips for household cleaning and so on.

As in other sections of this booklet, the ideas are simply suggestions. Take a critical look at these recommendations and make decisions or modifications to suit your needs.

**For more information, please check the following chapters ...**

- **In the Kitchen**
- **Bathroom Basics**

## **Grab Bars**

Grab bars make the most of your strength by giving you extra support when you need it, like climbing into and out of the bathtub or your bed, using the toilet, standing for long periods or negotiating a flight of stairs. A grab bar can help keep your balance and give you stability while moving, standing or sitting.

### **What is a Grab Bar?...**

A grab bar looks like a towel rack, but that's where the similarity ends. A grab bar is designed to be strong enough to support your weight and more. Flanges on the ends of the bar have sturdy screws for installation, preferably into wall studs. There is room between the bar and the wall for you to get a good grip and the diameter of the bar will feel solid in your hand. Made of plastic or rust-resistant metal, it often has a rough surface to prevent slipping. Many shapes and sizes are available for different uses: most are wall mounted, but some attach to the edge of your bathtub. There is also a "grab pole", with or without handles, which attaches to the floor and ceiling. Other grab bars attach to the bed.

### **Grab Bar Basics...**

**A vertical grab bar** is used to pull yourself up, usually from a seated or lying position.

**A horizontal grab bar** is used to push or pull yourself up, usually from a seated position.

**An angled grab bar** can be used in a combination of these movements.

Since the grab bar will be supporting your weight and taking the brunt of the force you exert, it must be securely mounted on the wall, preferably to at least one of the wall studs located inside.

## Installing a Grab Bar...

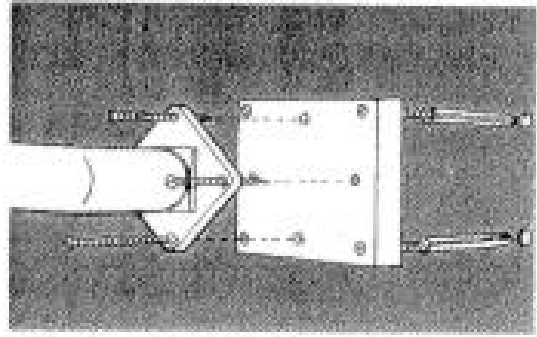
Wall studs are usually located 40.5cm (16") apart. To find them, use a stud sensor or start at a corner of the room and tap the wall 35 - 45cm (14" - 18") from the corner. A stud will sound solid, while the empty space will make a hollow sound. Mark the location of the studs. The mounting screws should be long enough to go through the wallboard (usually 1cm or 1/2") as well as any tile covering, and still leave a good 1 - 2cm (1/2") for support in the stud.

## Try the following method...

1. Cut a piece of 1cm (1/2") plywood for each mounting flange at least 5cm (2") larger than the flange. Sand and paint if desired.
2. Drill four holes in each piece of plywood, slightly smaller than the diameter of the screws you will be using, and four matching holes in the wallboard or plaster large enough to take plastic fillers for the screws. Insert plastic fillers into the holes in the plaster.
3. Glue and screw the plywood pieces to the wall with 2 - 4cm (1" - 1 1/2") screws and waterproof glue if the area is likely to get wet.
4. When the glue has set, mount the grab bar onto the plywood pieces.

## Where to put a Grab Bar...

A grab bar should make the most of your maximum strength: install it at the height where your body and arms are at the best angle for your first push or pull. It might take a few tries to find this height; usually it is between mid-thigh and chest level. If you have a strong side, take advantage of it. An occupational therapist can help with these decisions.



**A typical installation of a grab bar.**



**1. Strength required in biceps or front of upper arm.**

**2. strength required in triceps or back or upper arm.**

### **Using a Grab Bar...**

To raise and lower yourself with a grab bar, you should know something about your physical abilities. When you are seated, or in the process of sitting or rising, your leg muscles are at the weakest point of mechanical advantage. A grab bar lets you use your upper body to compensate for this weakness.

Which set of upper body muscles is your strongest? Try out various heights and angles by using someone's arm to simulate the grab bar until you find your point of maximum strength. You'll also need shoulder movement and some strength in your hands and wrists for a good grip. A grab bar should be long enough to carry the movement to its conclusion: if you run out of support before you're fully standing, you could lose the momentum and fall back, or fall forward from too much force.

**If you are uncertain about some of the grab bar basics, consult with an occupational therapist from your local hospital or home care office.**

Grab bars are used most often in the bathroom, for strength and stabilization when moving around the tub or shower, toilet, vanity or washbasin. They are also handy in the bedroom, by the bed, closet and dresser or your favorite chair. Install one in a hallway; where you take off your winter clothes; or along a staircase. In the kitchen, a grab bar or pole in a central location can help you move from one appliance to another, to the sink or to the table. If you conserve energy by working seated, a grab bar will make getting in and out of a chair easier.

### **Buying a Grab Bar...**

Grab bars can be purchased at plumbing supply outlets, hardware stores and at medical/surgical supply stores. This last source would be your best bet if you want informed help to decide which grab bar would be best for your needs.

Grab bars are typically made from metal or plastic tubing, from 2-4cm (1" to 1 1/2") in diameter. The surface of the bar can be smooth or textured (ridged, brushed or knurled). Some metal bars are coated with plastic or vinyl. If you need a non-slip surface (particularly near the tub), choose a grab bar that has a rough texture. Many grab bars now come in decorator colours to match your colour scheme.

Some of the shapes and sizes are illustrated here, with the larger and more specialized models costing the most. If you can't find the right one, some companies will make up a custom design, also for a higher price. Alternatively, see if you can mount one or more standard grab bars together as a component of pieces or in sequence to give you the support you need.

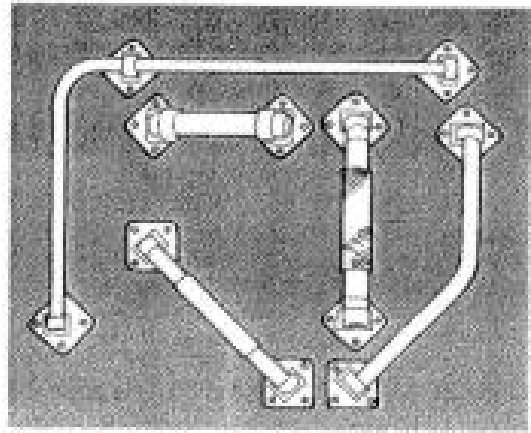
### **Poles...**

Instead of the standard grab bar, some people like to use a pole like the one illustrated here. It acts like a vertical grab bar for support and balance, but doesn't need to be installed on a wall.

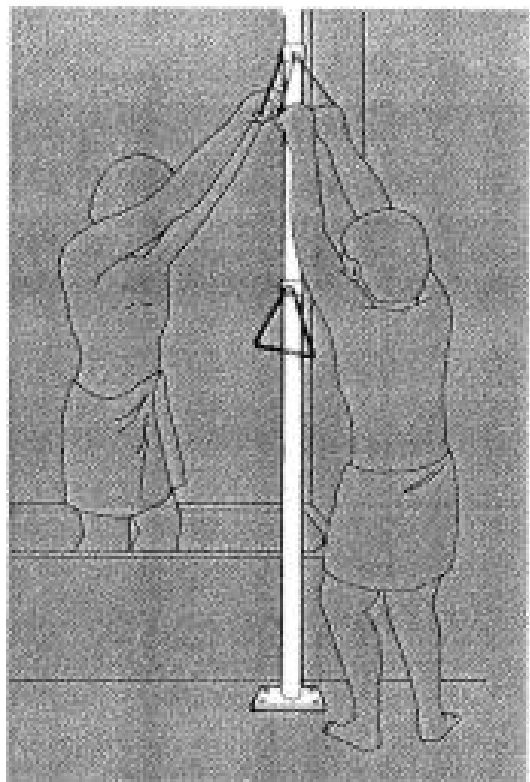
A pole in the bathroom can be used for tub, toilet, vanity and transfer to a wheelchair and would also be useful installed in the kitchen.

### **Bed Rails...**

A bed rail is a grab bar which attaches to a bed. It is useful for someone who may have difficulty pulling up to sitting in bed. It's also helpful for someone who finds it difficult to get in and out of bed.



**An assortment of shapes and sizes are available.**



**A grab pole features optional handles that can be installed at any height.**

## **Plumbing Fixtures**

If you have decided to renovate your home to make it more accessible or simply want a few changes to make everyday activities easier, consider what improvements can be made by installing well designed plumbing fixtures in the kitchen and bathroom, the most used parts of a house. For example, a faucet with a single arm control will solve many coordination and strength problems, or a shallow kitchen sink might make it easier for a person in a wheelchair to roll under the counter to wash dishes.

The price of plumbing fixtures varies, depending on the design, materials and whether the article is imported. If you know what you want, however, a little hunting in plumbing supply outlets will usually turn up a design that is easy to operate and will look attractive in your home at a reasonable cost. This pamphlet will outline what features you may wish to look for when choosing a new plumbing fixture.

### **Where to Find It...**

Check the Yellow Pages for a plumbers' supply outlet that has a showroom. It's always better if you can see and try out the article in a mock-up situation. Explore hardware stores, building supply outlets and department stores. Read the literature available at these locations, which describes products that might not be on display but can be ordered. Talk to your contractor or ask your friends where they found their fixtures.

### **Sinks...**

The height of the sink in both the kitchen and the bathroom should be low enough for you to be able to reach in and use it (can you reach the drain?) and also high enough for your knees to clear if you use a wheelchair and want to roll under it.

On the other hand, if you have trouble bending over from a standing position, you should install the sink at a higher level so you can work comfortably without stooping. In this case, the bottom of the sink should be a few centimetres (2 in.) higher than the distance from the floor to your wrist (when you are standing). Use the front edge of the counter to rest your elbows; a folded towel or a piece of foam rubber padding will make this comfortable when you're at the sink for long periods.

If your sink is too deep to use comfortably, try setting a plastic wash tub on two pieces of wood to raise the level of the working area. This could save you the cost of replacing your sink.

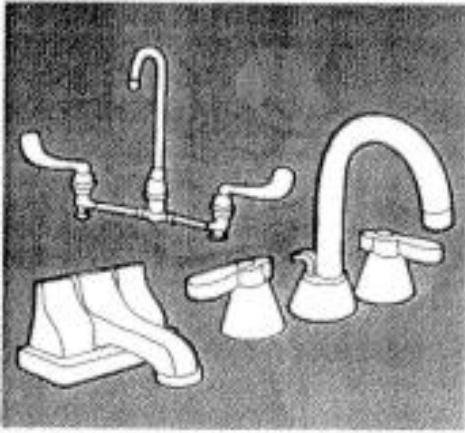
Shallow sinks (13 cm or 5 1/4 in. deep instead of the standard 18 cm or 7 in.) are available in single and double stainless steel kitchen models. The drain is at the back for better clearance underneath. You could install the single unit sideways for better access to the taps. The usual minimum height for wheelchair clearance is 69 cm (27 in.), but be sure this is adequate for your needs, and that the counter around the sink is at an accessible height.

Insulate the underside of the sink and hot water and drain pipes with styrofoam or wood to prevent burns to knees and thighs if you use a wheelchair.

Bathroom sinks (basins or lavatories) come in many shapes, sizes and colours, and can even be made to order where cultured marble products are manufactured. If you use a wheelchair, consider a shallow model with a rear drain (insulate that drain pipe!) which is either wall-mounted or installed in an open, accessible counter. An "institutional" model is available, as are small units which can be used from the side if the bathroom is too narrow to allow front access to the basin. Prices vary widely with the model chosen.



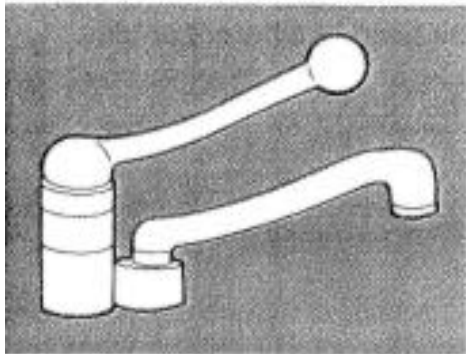
**Side access to a standard basin. Notice the mirror can be tilted to different angles.**



**Lever handles range from institutional to designer styles.**

### **Taps...**

Most round-headed taps are difficult to use if you have coordination or strength problems in your wrists and hands. An easy solution is to replace them with lever handles. The range of designs here is huge, from simple lever taps through institutional blade handles to ultra modern designer sets. Avoid taps that require a twisting motion. Lever handles are easier to operate by pushing and pulling motions and need no grip strength.



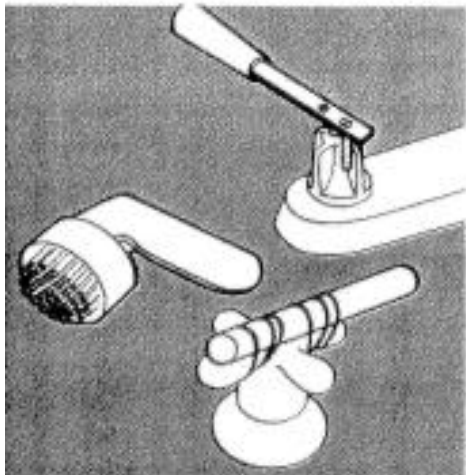
**A single arm control faucet is very easy to use.**

Easiest of all to operate are single arm control faucets, which combine hot and cold and flow pressure in one movement. They are also easy to install. You'll find designs for both kitchen and bathroom use.

A simple aid can make a twist tap into a lever tap. The tap turner illustrated here fits almost any tap: it's made by Maddak and can be found or ordered at a medical/surgical supply store.

You could also try making your own tap turner or lever handles to fit the fixtures you have: a small piece of wooden dowelling attached with wire is all that's needed.

### **Tubs...**



**Tap turners can be made at home or purchased from medical suppliers.**

It's unlikely that you'll want to replace a bathtub, but if you are having problems you might find it easier to bathe using a bath seat. Safety treads on the bottom of the tub can prevent slipping. Don't take unnecessary risks!

A hand-held shower can make your bathing routine much easier. Many models are available, some made of rubber to fit over the tub tap, and some requiring installation. Make sure the model you choose has a long enough hose and a handle that you can hold onto without too much strength, that you can manipulate it even with soapy, wet hands and that the controls are easy to operate.

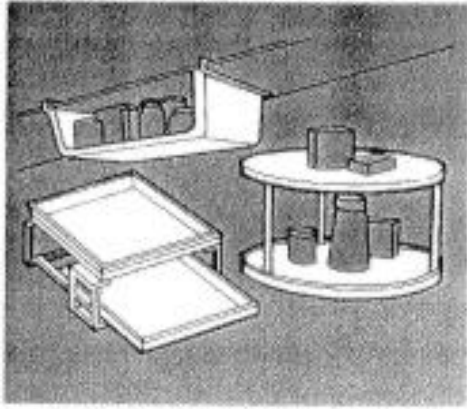


A portable shelf across your tub can hold your bathing articles and can be made in the home workshop to fit your tub.

A tub insert has the effect of raising the level of the tub and can be used for bathing a child or small adult with less bending over. Transfer in and out of the tub is also easier.

### **Showers...**

As with tub controls and faucets, you'll want shower controls that operate easily with push and pull movements rather than twisting. A hand-held shower is useful if you shower from your wheelchair or a shower chair, but install it and the controls at a height you can reach from a seated position. Sudden surges in the hot or cold water supply can cause wild fluctuations in your shower temperature. If you are concerned about this possibility, your plumber can provide a pressure balancing mechanism.



**These devices will make storage more efficient and accessible.**

## Storage

The key to efficient and accessible storage is organization. The ideas and products in this section will help you make better use of your existing storage space to avoid excessive reaching, bending, lifting and walking.

Most of the products described here are widely available in hardware or department stores. Be sure to take along the measurements of the space you are dealing with when you shop. Sometimes a research trip to a specialty store (some deal exclusively in products for improving storage) or to the appropriate section of a department store is a good way to get ideas on products and their uses; then visualize how you would use them in your own home.

It's possible to spend a lot of money on products to upgrade your storage facilities, but it's not necessary. Often a few simple shelves, a lazy susan or a shoe rack can make a big difference.

### Accessible storage...

- From waist height to just above eye level is the most accessible range.
- "Within reach" means 15cm(6") less than your arm's length, seated or standing, or with the range of your reaching aid.

### Some other ideas...

- Store heavy objects closer than "within reach" so you can handle them safely.
- Store items close to where they are most used to avoid extra steps.
- Space should be free from barriers such as furniture, steps, awkward or heavy doors.
- Some storage can be moved for easy access, such as rollout shelves, hanging organizers on closet or cupboard doors and storage carts on castors.

## **Kitchen...**

More usable storage is required in the kitchen than in any other room in the house. Although most kitchens seem to have a lot of storage space, much of it is too high or too awkward for many people to reach easily, especially for someone who uses a wheelchair or who has a physical disability. So make the most of the storage space that is already accessible.

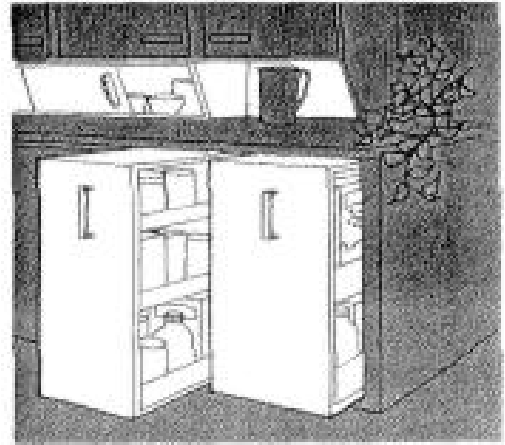
Stacking shelves or bins can stand alone against a wall, in a corner or under a counter; they are also useful in a cupboard. They come in plastic, wood, metal or sturdy wire (some are plastic coated). They range in size from a single plastic bin or shelf to a 5-tier shelving unit. Rollout shelves will make a lower shelf accessible, not just from the front portion.

If you have wasted space in your cupboards, try installing plastic or wire containers under the shelves. A lazy susan or turntable will give you access to the back of a shelf without reaching. They come in large and small sizes, single or two-tiered and are good for bottles, jars and other small containers.

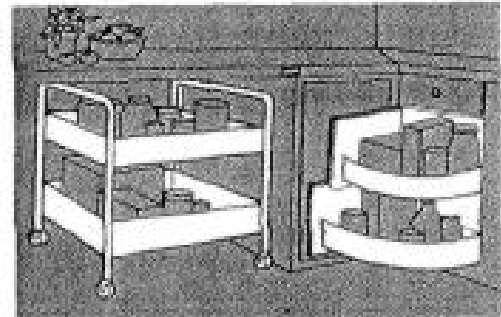
Use plastic organizers to take advantage of the wasted space inside cupboard or pantry doors for storing cartons, bottles, brushes and brooms.

Turn a blank wall into a storage space by installing a peg board and hooks at an accessible height. Small wire shelves can also be attached. You can do this yourself with masonite and hardware hooks.

If you are prepared to renovate your kitchen to provide more accessible storage space, here are some ideas: if you use a wheelchair, a kitchen counter should be high enough to allow your knees to roll under, but low enough that elbows can rest while working; use the space under counters for temporary storage in wheeled carts. Pull them out of the way when the counter is needed; pull-out shelving allows access from both sides; corner cupboards can be used better by installing revolving or swing-out shelves.



**The slanted cupboards give you storage without sacrificing counter space; pull out shelving is accessible from both sides.**



**Pull out the storage cart to make a wheelchair-accessible work counter.**

Storage of food in your refrigerator or freezer can be improved by using plastic containers (for leftovers, meat & fish, fruits & vegetables) that are square or rectangular and can be stacked. Use "see-through" plastic or label clearly to prevent spoilage. Many of these products are dishwasher and microwave oven safe and feature good seals with easy to remove lids. They are widely available at hardware, department and grocery stores. Another simple solution for storage of leftovers is a freezer storage bag. Found at any grocery store, a freezer storage bag has a "zipper" closure that is very simple to close and open for someone who may have difficulty with fine motor movement in their hands. The bag is also clear and has a spot for you to label what is inside.

### **Bathroom...**

The average bathroom has enough storage space for most people, but if you need more, or if you have removed the vanity to make the sink wheelchair accessible, here are some ideas:

- Use the wall above the toilet to install shelving, a cupboard unit, or towel racks or hooks.
- Make sure you can reach objects at this height, or use a reaching aid.
- If you use the tub and not the shower, take advantage of the wall space around the tub for shelves or bars.
- A vertical towel bar takes up little room in a small bathroom.

Hanging racks can be useful in the shower for soap and shampoo. They attach to the wall, shower fixture or soap dish. Another idea is a shelf that fits across the tub to hold soaps, scrub brushes or a magazine while you bathe. Make one yourself, or buy it at a bath specialty shop or some medical/surgical supply stores.

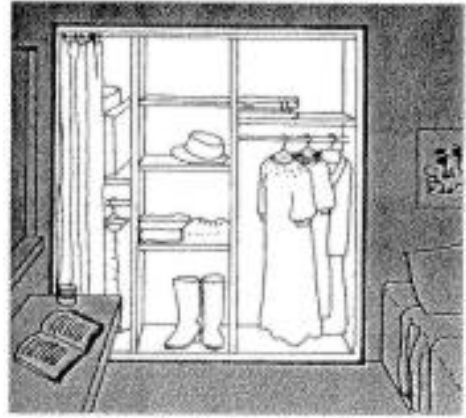
## Bedroom...

Several manufacturers have come out with organizers which fit into standard closets to increase their efficiency. They are available at most department and hardware stores and come in a wide range of sizes.

Look around for modular units - sets of shelves or cupboards which can be pieced together - to modify just part of your closet. Stacking shelves and bins can be used for clothing and linen storage. Closet adaptation like this could be a good project for the home hobbyist.

## More ideas...

- Lower the clothes bar in your closet to an accessible height if you use a wheelchair.
- Wider or bi-fold doors will give you access to more closet space.
- Use large, flat blanket boxes to store rarely used items under the bed.
- An extra wardrobe, dresser or trunk will hold a lot. Interesting pieces are available at flea markets and auctions.
- Install a shelving unit on a wall or use one as a room divider.
- Hangers which hold several skirts or pairs of slacks save space on your clothes rack.
- Shoe racks or hanging pockets will help organize your footwear and use less space.
- Stackable containers on top shelves can hold lightweight objects.
- Adjustable shelves in a linen closet can be moved so you can use every bit of valuable space.



**A closet organizer will provide you with space you never thought you had.**

## **Utility Rooms...**

Adapt the ideas already mentioned to organize and use the accessible storage space in your basement, laundry area, or garage.

Utility shelving - not always beautiful but inexpensive and very functional - is widely available in wood or metal and can be used for many storage needs.

If flooding or dampness is a problem, keep everything off the floor (most shelving units have a 4" - 6" ledge). A dehumidifier might be a good investment if it means being able to turn wasted space in the basement into usable storage.

Many hand-held tools lend themselves to storage on a peg board, and shovels, rakes, etc. can be hung on wall hooks. Wheeled carts can be useful for storing and moving heavy objects.

Store laundry detergents, etc., on shelves close to the washer and dryer, and have an accessible surface nearby to sort and fold clothes.

Keep fertilizers dry and stored safely away from children's reach, along with other gardening chemicals. If the storage space is low enough to be wheelchair accessible, it may mean using a lock and key. Store garden tools out of traffic areas during winter.

## Lifting Devices

### What is a lifting device..

A lifting device is a metal framework incorporating a hydraulic, gear or power-operated, elevating mechanism, a base, mast and boom, and a sling to hold the patient. Also available are motorized lifting devices which can move you from room to room by using a tracking system attached to the ceiling of your house.

### Who uses a lifting device

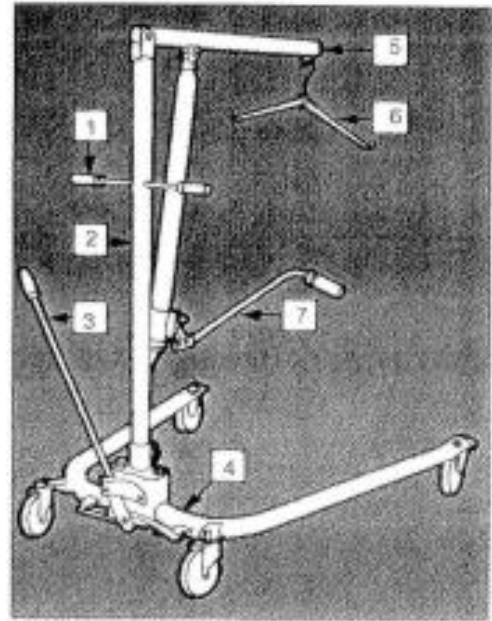
For years, lifting devices have been used in hospitals and nursing homes to transport patients from bed to wheelchair to bath to toilet, etc. With the growing trend towards independent living, however, many people are using these devices in their homes to ease the strain of lifting.

A lifting device is used by an individual who has difficulty making a lift alone. An attendant or family member may be required to operate the controls and to move the lifter. Most lifting devices are mounted on casters so they can be rolled from room to room, some are mounted on a ceiling tracking system which permits mobility from room to room and eliminates the problem of storage.

### Operating the lifting device...

Most lifting devices are portable and so can be disassembled and folded for transport. Following is a description of a hydraulic jack lift which is just one kind of lifting device. When operating this lifter, the first step is to make sure it has been properly assembled and that the base has been opened to its widest point for maximum stability.

1. Apply the sling to the person and attach the chain to the holes in the sling.
2. Hook the link of the chain to the swivel bar of the lift. (Some devices have the attachment chain/strap incorporated within the sling design.)

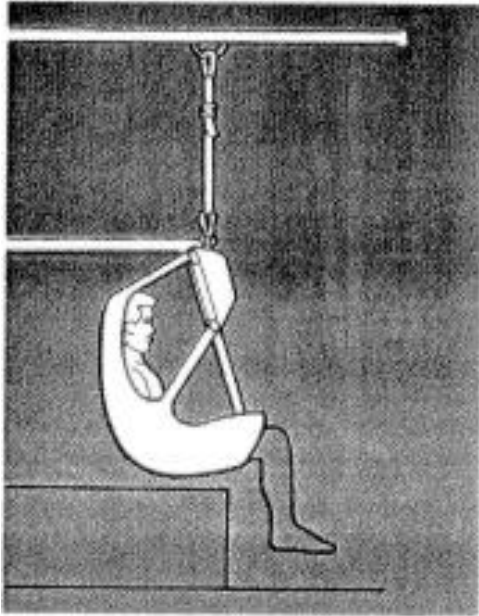


**A typical lifting device.**

- 1. Steering bars.**
- 2. Mast.**
- 3. Brake.**
- 4. Wheeled base.**
- 5. Boom.**
- 6. Swivel bar.**
- 7. Pump handle.**



**A lifting device makes lifting easier and safer for everyone involved.**



**This lifting device uses a ceiling tracking system.**

3. Be sure the person who is to be lifted is in the correct position.
4. Pump the hydraulic handle and, as the person is lifted, guide the legs and head to prevent swinging the wrong way.
5. Using the steering bars, move the lifter to the new location.
6. Lower by releasing the release mechanism (knob, handle, etc) towards the jack, guiding the descent and pressing on the knees, if necessary, to attain correct seating position.
7. Detach the chains and remove the sling (the sling may be left in place if it is to be used again).

### **Features...**

A portable model can be more useful than a fixed lifting device, since it can be moved from room to room. However, the portable model requires clearance for its base of 20-25 cm (8" to 10") high, 60-100 cm (23" to 40" wide and up to 100 cm (40") deep. This could cause problems in a small bathroom, particularly where the tub has no clearance. Most manufacturers can supply an adjustable base, available as an option, with smaller front casters (7.5 cm or 3") to reduce the base height to 15 cm (6").

Another model is a travelling lifting device. There are a number of models available, but the basic function is the same, that is, to get you from point to point in your home by using a ceiling tracking system. It can be used to take you out of bed, place you into your wheelchair, to the bathroom and so on. Once you are in the lift's seat, you can operate the controls yourself, or have an attendant operate the controls, and move from room to room easily. Most travelling lifts are portable and can be taken with you to other locations that have a ceiling tracking system. These lifts are available from most medical/surgical supply shops.



### **Consider your weight...**

Lifting devices are rated as to how much weight they can safely carry. Check this rating carefully when you buy to make sure the model you select will be strong enough to carry you.

A fixed lifting device makes sense if you plan to use the device for only one major lift, such as to and from bed and wheelchair or in and out of the bathtub. These lifters attach to a base that is either bolted to the floor or clamped to the side of the tub, providing a larger measure of stability than the portable lifter. The mast of the lifter is inserted into the socket and can be rotated around this point. Install a base in each location to get more use out of your equipment.

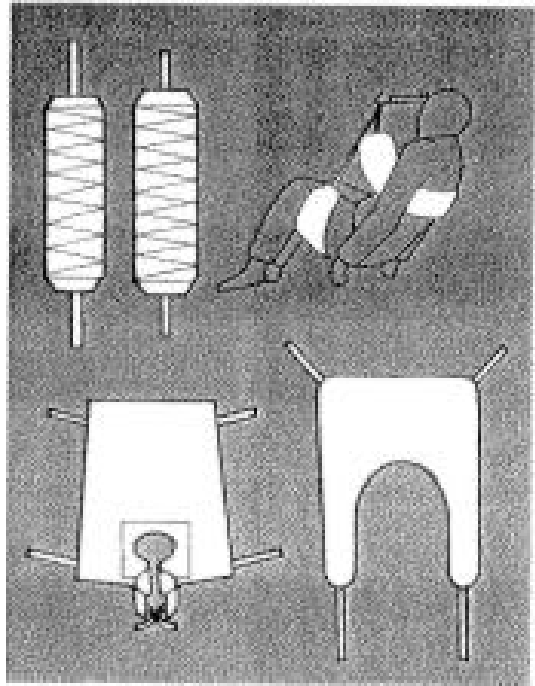
A wide variety of slings are available for various needs. In general, the less muscular control you have the more support you should look for in the sling. The standard shape has a base and back for complete support and comes in washable nylon (fabric or mesh) or canvas. If you will be sitting on the sling for long periods, nylon mesh will minimize buildup of body heat. A commode sling has an opening to allow you to use the toilet while in the sling. Some devices come with slings that allow you to slide in and out easily.

### **Suggestions for using a lifting device...**

The main function of a lifting device is to make lifts easier and safer. If you have a physical disability or you are someone with poor muscular control, a lifting device is useful for taking you out of bed and either into a wheelchair or, using the portable model, to the bathroom for bathing or toileting. If you are using a travelling lifter, movement from room to room can be very simple.

### **Where to get it...**

Lifting devices are sold through medical/surgical supply outlets, where you will find someone who can help you choose the right model for your needs. Ask about guarantees, replacement parts and repairs before you buy.



**There are a number of slings available for you to choose from.**

## Lifts

If steps and stairs are preventing you from reaching parts of your house, an elevator or stair lift might be the solution to your problems. If you have a physical disability, a respiratory problem or a heart condition, you might want to consider one of these options.

### Consider this...

**These products are expensive, require professional installation and some routine maintenance. Your choice will have to be carefully thought out. Weigh the options and consult with others before you decide. A reputable dealer will likely be able to supply you with a few names of satisfied customers who will be willing to share their experiences with you. Get In touch with a professional rehabilitation consultant through your local hospital, rehabilitation centre or Canadian Paraplegic Association.**

### Take these factors into account...

**Your physical condition.** To determine what kind of elevating device you need, analyze your physical disability and the type of architectural problem you are trying to overcome. If you use a wheelchair, you may have to look at a device that will be able to lift you and your wheelchair, with enough space for loading and unloading at each stop. If you can transfer easily or don't use a wheelchair, you might be able to use a stair glide.

**Is your condition stable?** Make sure the product you choose will be adequate if your health deteriorates further.

**Your alternatives.** Do you really need an elevating device? It might be possible to alter the use of some of the rooms in your house to provide one-floor living, particularly if there is already a bathroom on the ground floor. Consider the option of building an addition to your house to provide a bedroom/bath

room on the ground floor. Given the cost of a lift, this idea is not as far-fetched as it may seem. Another possibility is installing a ramp, provided there is enough space for the length required.

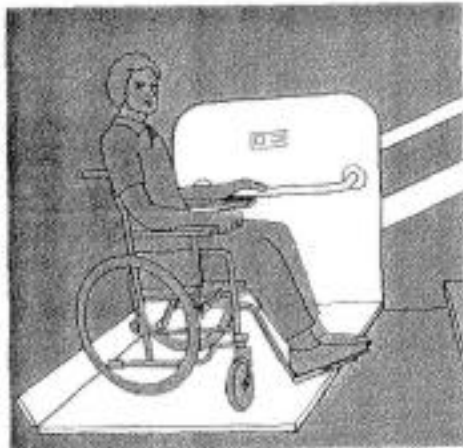
**Your dealer.** Some medical/surgical supply stores carry elevating devices; however, you should make sure that they have a qualified technician to install and maintain the product. Check the yellow pages for an elevator company that also specializes in lifts for people with disabilities - these people are licensed to install and maintain commercial elevators and will carry this expertise into your home. Consult with both and make your own decision as to which can provide you with the best product and service. Often a medical/surgical supply dealer will have an agreement with an elevator company to join forces to provide the best service.

**Your location.** Does the design of your house lend itself to the installation of the lift you choose? A stair glide will fit a fairly narrow staircase, whereas the base of a wheelchair stair lift takes up more space (1 m/ 1 yd square). A winding staircase - angled or curved - will require more expensive treatment. You will need sound structural support for a vertical lift, so plan to install it on a supporting wall or corner. If you are installing a porch lift outside the house, consider building an enclosure to shelter it from harsh weather and vandalism.

**Your price.** The final price should include the cost of the product and installation; consultations are usually free. These devices are exempt from federal and provincial sales tax, can be imported duty-free and may qualify as a medical deduction on your income tax return (check with Revenue Canada/Taxation about your particular case).



**This stair glide can be used by both someone who uses a wheelchair or who uses a cane.**



**Wheelchair stair lift.**

## Product Descriptions...

Home elevating devices fall into four categories: stair glides, wheelchair stair lifts, porch or platform lifts and shaft elevators.

A stair glide consists of a seat (with or without supporting arms) attached to a rail which is in turn secured to the wall beside the staircase. A cable runs to a motor which pulls or lowers the seat along the rail as the controls are operated. A straight staircase is the simplest installation, but special designs are available for winding or angled runs, at a higher cost.

A stair glide is recommended for someone who can't climb stairs due to a respiratory problem, a heart condition or a physical disability. If you use a wheelchair and you can transfer to and from a stair glide's seat, this device would allow you to reach a second wheelchair at the top of the stairs.

To carry you and your wheelchair up a staircase, a wheelchair stair lift can be installed. Similar to a stair glide, this device requires a stronger motor and a sturdier rail and cable system.

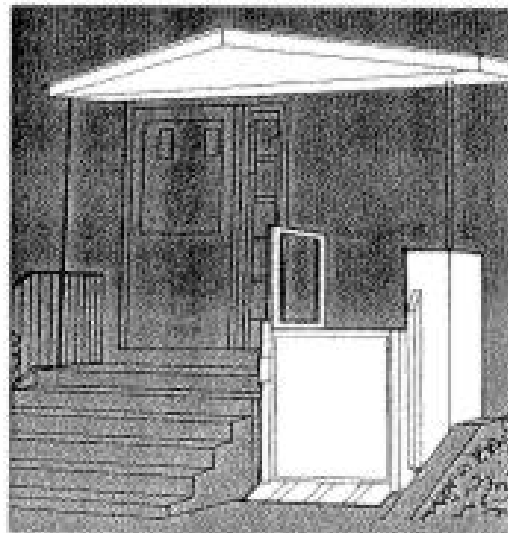
A metal platform about 70 cm x 90 cm (27 x 36 in.) carries you; when not in use, it remains flat on the floor or can be folded against the wall out of the way. Control buttons at the top and bottom of the trajectory call the elevator when you need it.

For curved staircases or to access several landings, a more sophisticated and expensive model is available. Tubular rails run along the stair railing with the cables inside, and the controls allow you to stop at any point.

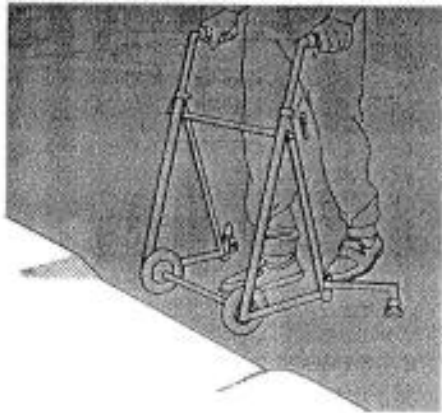
A self-levelling mechanism is a device which ensures that the base of the lift stops exactly even with the floor level. If your lift controls are automatic, look for this feature; if you control the start and stop point of the lift yourself, it is not necessary.

A vertical platform lift is a logical choice if your access problem is in a split-level house or a location requiring a short vertical lift, such as a porch or garage entrance. A walled platform, usually ramped, lifts or lowers you to the new level (from 1-3 m or 3 - 10 ft). Control buttons are on the side of the platform walls and must be keyed for security on exterior installations. As mentioned on page 69, enclose a porch lift to protect it from the Canadian climate.

Shaft lifts come in a range of sizes to accommodate a single person (standing), a person seated in a wheelchair with or without an attendant. Call buttons are installed at all levels and controls are located inside the cab; all can be keyed for security if necessary. You can locate the shaft in a set of closets above each other if they are in a supporting wall; otherwise, choose an exterior wall or corner.



**A covered porch lift can protect you from the Canadian climate.**



**A simple curbcut can make sidewalks accessible to everyone.**



**Portable ramps can make a small set of stairs accessible to you if you use a wheelchair.**

## **Ramps**

Steps, stairs and curbs form such a common part of our architectural environment that designers frequently overlook the barrier they present to anyone who has trouble walking or uses a cane, crutches or a wheelchair. They also make life difficult for people with shopping carts or baby strollers.

Many municipalities in Canada have a sidewalk retrofitting program to incorporate a small ramp or curbcut at intersections to make them accessible. In addition, businesses and governments are responding to groups who demand the right of equal physical access to services by making their buildings more accessible. This often entails installing a ramp to bypass steps or stairs to the main entrance of office buildings, hotels, churches, shopping centres and the like.

If you are encountering access problems because of sudden changes of level, a ramp might be a practical solution. We will describe ramps you can buy or build and the kinds of obstacles they can help to overcome, at home or away.

### **Portable Ramps...**

You can alter the architecture of your own home to suit your needs, but what about the rest of the world? If you use a wheelchair, you might find that a portable ramp solves some of your access problems.

A person with good upper body strength who uses a wheelchair can sometimes manipulate a portable ramp without assistance, but this product is usually handled by a person pushing the wheelchair.

You can buy a portable ramp at some medical/surgical supply stores that carry wheelchairs or aids for independent living. They are made of lightweight metal sheeting or mesh and come in varying lengths of 1-2 m (1-2 yd.), one-piece or folding.

Another typical model is actually two pieces; each is a metal channel for the wheel to ride along. This ramp is made of lightweight aluminum, folds in half and has a carrying handle.

### **Fixed Ramps...**

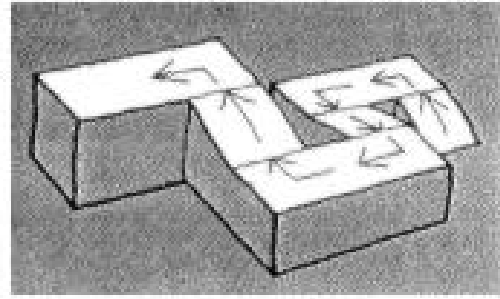
When you're faced with a change of level in your home that requires some kind of permanent accessibility modification, consider your options.

It might be possible to install some type of elevating device - this is often the better solution for an indoor location. Refer to the section on lifts for some detailed information on choosing and installing small elevators, stair glides, porch lifts, and interior wheelchair elevators.

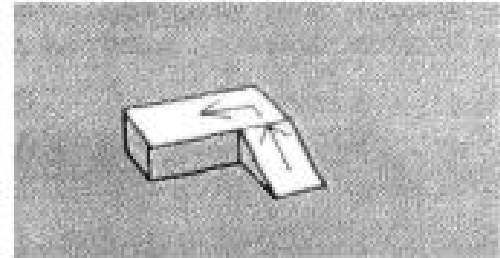
An entrance to your home that is closer to the ground might be accessible with only slight modification. Sometimes a door can be ramped without changing the appearance of your house. Another solution is to reshape the contours of your landscaping to provide a gentle, sloping pathway to the entrance.

Remember that the gentler the slope of the ramp, the longer it will be. You may have to base your decision on whether or not you have the space to fit the ramp.

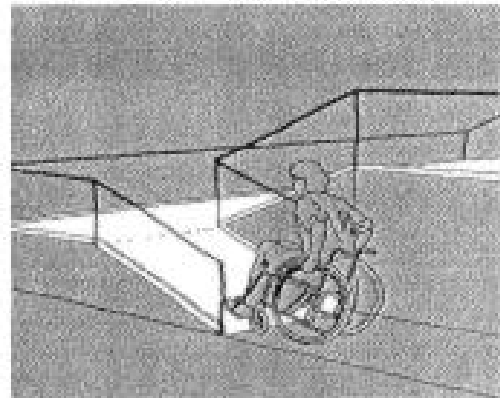
If you have a garage with a connecting door to the house, consider the benefits of a ramp here: sheltered access to the car in all seasons; lighting; a clean surface. Make sure there is adequate space for opening the car or van doors, getting in and out, turning your wheelchair and opening the door to your house. Once inside, you should have enough room to manoeuvre and not be faced with a flight of stairs or a narrow doorway.



**Switchback.**



**"L" Shape.**



**Note the landing, handrail and curbs.**

## **Ramp Gradients...**

The slope of a ramp is the ratio of rise to length; for example, one inch of rise for every twelve inches of length, or 1:12. This is accepted as the minimum gradient and should be based on your own physical needs. If you feel that 1:12 is too difficult, then increase the gradient.

Once you have chosen the location for your ramp, consider the design and materials. The structure should blend with the architecture of your house; if the amount of rise requires a long ramp, plan a rest spot on a landing or switchback, as illustrated. Handrails will provide balance and support for those who have trouble walking, as well as pushpoints for a person who uses a wheelchair. A curb will prevent wheels from going over the edge. The ramp can be constructed of pressure treated wood, poured concrete or industrial metal mesh on solid footings. Choose a rough surface or add rubber strips for traction. It is also important to be certain that the construction is solid and dependable.

Accessibility modifications are often eligible for grants or reduced-rate loans. Enquire at the local offices of Canada Mortgage and Housing Corporation, your provincial Ministry of Housing, and municipal government. Labour and material costs for this purpose may also be tax deductible: call the Information Service of Revenue Canada/Taxation.



## **Mobility and Design**

Most of us have encountered an environmental barrier at one time or another. It is estimated that, due to some degree of physical impairment, one person in seven will regularly experience difficulty with architectural obstacles such as changes of level (steps or stairs), doors, entrances and defined spaces (too large or too small), poor lighting, small writing, low volume instructions and communication barriers. When you include people with strollers or baby carriages, people carrying children or parcels, those who are temporarily disabled, and people who are much smaller or larger than the average, this ratio grows to something like one in five.

Your home should be as accessible as you can make it. This section will outline some options for improving the design of your built environment, based on your physical characteristics and abilities and the present design of your dwelling.

### **Barrier-Free Design...**

This term refers to an approach to architectural design which reflects an awareness of mobility problems in the design stage. Barriers such as stairs, narrow hallways, and unnecessary doors are avoided. The resulting design is attractive because of the spacious feel, and is accessible to everyone.

### **First Thoughts...**

Your first consideration should be the amount of money you can put towards accessibility modifications, and this will be tied directly to whether you own your residence or rent it. If you rent, your landlord should be involved in your plans from the onset, either as an active participant or by agreeing to the work. As a homeowner, your financial decisions should take into account the total cost of the work, possible financial assistance from government or other sources, and the long-term effect on the value and resale of your house.

## **Financial Assistance Programs...**

Federal aid is available for eligible homeowners under the Residential Rehabilitation Assistance Program (RRAP) through the Canada Housing & Mortgage Corporation. Many provincial Ministries of Housing provide a similar type of plan, and sometimes you can receive aid from both. Call your city hall and ask about municipal programs. If you qualify for Vocational Rehabilitation Services in your area, you may be eligible for financial assistance for renovations which are necessary for you to be employed.

Another important factor to take into account in the pre-planning stage is the nature of your disability. If it is a stable condition, you know exactly what your mobility level is and your corresponding needs. If you have a disability that is progressive or degenerative, you will have to give serious thought to the changing degrees of mobility and what this means in design terms. It is best to face these possibilities now to save money and complications later.

If you are buying a new house, choose one that is as accessible as possible: a bungalow over a multi-storey model, for example. Avoid unnecessary changes of level, such as a sunken living room. Frequently, a builder can make design modifications as the house is constructed that will make a considerable difference in accessibility at a much lower cost than a later renovation. Have lever door handles, single-arm faucet controls and easy-to-grip drawer hardware installed as an option or upgrade. While the bulldozer is around, have the grading contour of your lot designed to eliminate the need for steps particularly between the driveway and the front door.

## House Designs...

There are three basic housing design categories that most dwellings fall into:

**Single-floor.** The most accessible model, including bungalows, most apartments and some townhouses. All living areas, kitchen, bathroom and bedrooms are on the same level. A basement may be included in this design.

**Split-level.** A combination of one- and two-storey design, usually featuring common living areas on one floor and steps leading up and down to two floors of bedrooms, bathrooms, rec rooms, etc.

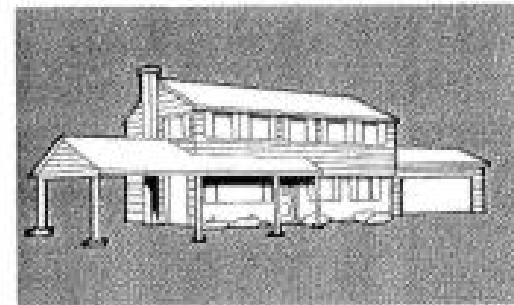
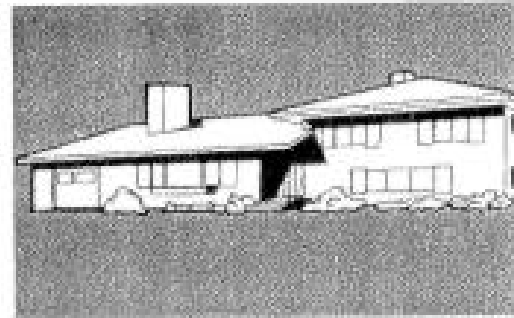
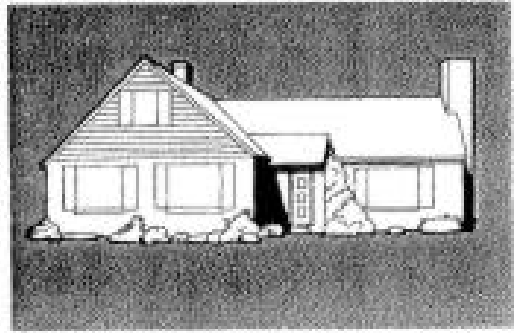
**Multi-storey.** Several levels stacked vertically, the typical townhouse or single-family house. Standard layout has common living areas on the ground floor, bedrooms and bathroom upstairs, basement downstairs.

## Design problems and solutions...

Changes of level are the most difficult and expensive mobility/design problems to overcome, particularly when your main entrance and common living areas are on the ground floor and the bedrooms and bathroom are upstairs.

## There are several options...

An elevating device (stair glide, porch lift, wheelchair stairlift or vertical shaft lift) is probably the simplest and most effective solution to the interior change of level problem. The Canadian winter makes their performance in exterior locations unreliable. The chapter entitled "Lifts" provides the technical information you'll need to consider this option.



Another option is to alter the use of space on the ground floor so you have all the facilities you need without having to go upstairs. This is easiest if there is already a bathroom on this level; otherwise, you could consider installing a bathroom or building an addition to your house to provide the extra living space. This can be an expensive venture, therefore, consider it very carefully.

A ramp should only be considered if there is enough space to provide adequate ramp length for the amount of height. For this reason, ramps are frequently installed outside, but not indoors.

## Door Openers & Closers

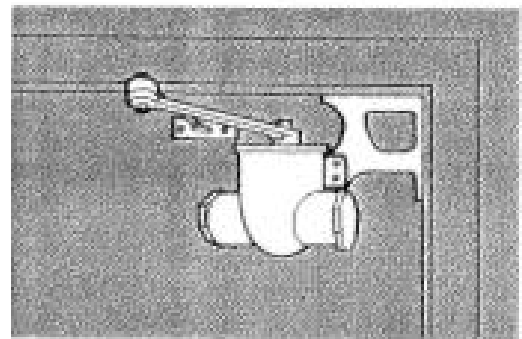
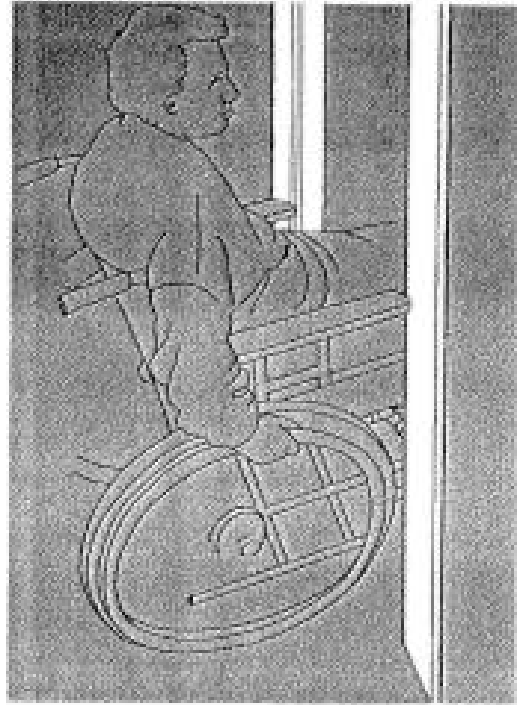
A heavy door, a high threshold, an awkward knob or lock - these are obstacles that can prevent easy passage into or out of public buildings, shops and your own residence. While you might not be able to change the world, you can at least alter your home to make it accessible.

### Why a door opener or closer...

You might consider installing one of these devices if you use a wheelchair, walker, crutches or a cane. All of these mobility aids complicate the normal process of opening a door by taking up door clearance space or preventing the use of your hands to turn the knob. Another reason would be the design of the door area, such as a narrow hall or an awkward corner, and the direction in which the door opens: if there is not enough room for you to stand to the side of the door while it opens toward you, you will need to back up. A door which opens automatically from a remote switch will solve this.

### The easiest solution...

Remove the door! If you don't really need it, take the door out and enjoy the open space. Naturally, security and privacy needs make this idea suitable for only certain doors in your dwelling, such as closets and main living areas. Try installing bi-fold or accordion doors, fabric or beaded curtains.



**As you open the door, the hydraulic mechanism stores energy to push the door closed.**

## **Automatic Door Openers/Closers**

We are all familiar with hydraulic door closers that pull the door closed as we release it.

They are widely available at hardware stores and can be installed easily on any exterior door of your residence. The one drawback is that they will increase the amount of energy you expend to open the door: it is this energy that provides the force to close the door. You should be sure you have the extra strength to open the door and activate the closer. A simpler door closer is a spring, however, it lacks the control of a hydraulic closer and the door can slam shut.

An automatic door opener/closer is available from some hardware and building supply stores and medical/surgical suppliers who deal in aids for independent living. This unit requires an electrical power source and wiring to the controls, so it should be professionally installed. To operate it, you simply press a button located on a nearby wall (at an accessible height) or use a radio transmitter that you can carry with you, and the door swings open, stays open for length of time, and then swings shut. The door can still be opened manually.

You'll find automatic garage door openers in most hardware stores. They are quite simple to install and require little or no maintenance. If you have access from the garage to the inside of your house, this might be a solution to an exterior door opening problem.

## **Home Made Door Openers/Closers...**

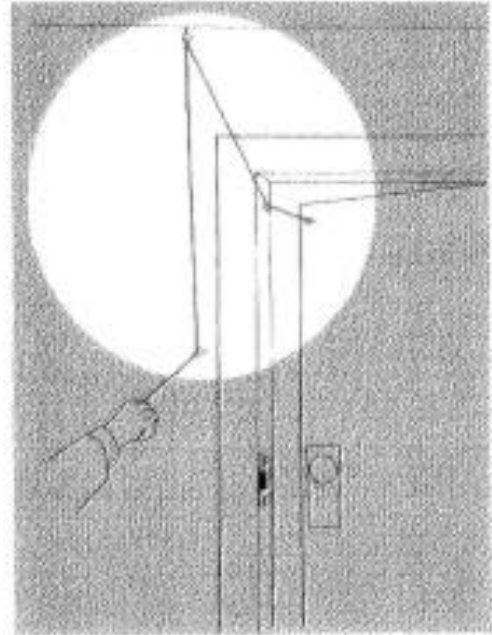
You can construct several types of home-made door closers with a few hooks and a length of cord. Screw hooks into the door, the frame, the ceiling and the wall; thread the cord through and attach a handle as illustrated. A tug on the handle will pull the door shut behind you.

Another do-it-yourself idea. run a cord from the door-knob to a hook on the hinge side of the door or leave the cord hanging from the knob; pull on the cord as you pass through the door to close it.

By using a counterweight such as a bag of sand, you can get quite fancy with a home-made opening and closing system. Attach a cleat near the control cord and wrap the cord around it to hold the door open as needed; release the cord and the counterweight will slowly pull the door shut.

### **Some do-it-yourself hints...**

- A pulley will prevent the cord from wearing too much. Install it where the cord changes direction and use screw-eyes to guide the cord along the wall.
- Keep the cord high to avoid strangling visitors or children.
- Install a doorstop to prevent the door from banging into the wall. or opening the door too far.
- Allow a good length of cord at the operating end so you can open or close the door completely.
- These designs are suitable for doors without latches. If your door has a latch, tape it or remove it.



**Do it yourself door closer.**

## **Telephone Adaptations**

In these high-tech days of speed and complexity, the telephone has become a central part of our lives. We depend on this device for our daily business and home activities, security in case of emergencies, and for maintaining social contacts.

Because of this importance, we must be able to use the telephone effectively - recognizing the ring, manipulating the receiver and the dial, hearing and speaking. Fortunately, under Canadian law, telephone companies are required to recognize and respond to these expectations, and so they have set up programs for clients with disabilities to provide adaptive equipment and lower rates for long distance and directory information services.

### **Look in the book...**

The first few pages of your telephone book will list services provided by the company. Look under Special Needs for the number to call for information on services and equipment. Costs are usually reasonable.

Telephone needs vary widely with disabilities. People who are deaf, for example, usually rely on a Telecommunication Device for the Deaf (TTY) which is like a mini-computer hooked up to the telephone, allowing the parties to communicate with each other by typing messages.

People who are blind sometimes need special devices; people who have physical disabilities may have trouble holding the receiver or dialling. These problems and solutions are described in this section, along with some other communication ideas.



## **Dialling...**

Telephone companies offer many varieties of the touch tone number pad telephone. There are also many other models available in telephone boutiques or high tech stores. One of these places is bound to have the telephone you're looking for. The touch tone number pad is great if you have difficulty using your fingers. Most telephones are programmable which is handy for frequently called numbers: after you've entered the number for the first time, it takes only one key press to dial.

If your vision is poor, there are many telephones with large number pads to make dialling easier for you.

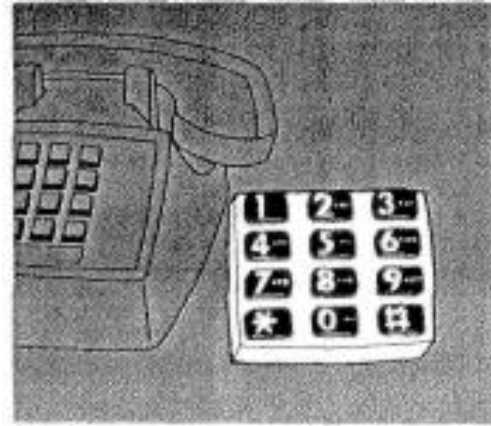
A telephone hooked up to a computer can usually be dialled from the computer keyboard: more on this later.

## **The ring...**

If you are hard of hearing, you might have difficulty hearing the ring of the telephone. Extra-loud ringers available from telephone companies may solve this problem. If not, you can connect your telephone to a light or a specially mounted flasher, to let you know the phone is ringing. A device that makes this connection work is available from telephone companies. The Canadian Hearing Society sells a warning system that translates sounds such as telephone rings, a knock on the door or an alarm clock, into a flashing light or a vibration from a device under your pillow or mattress.

## **Telephone amplification...**

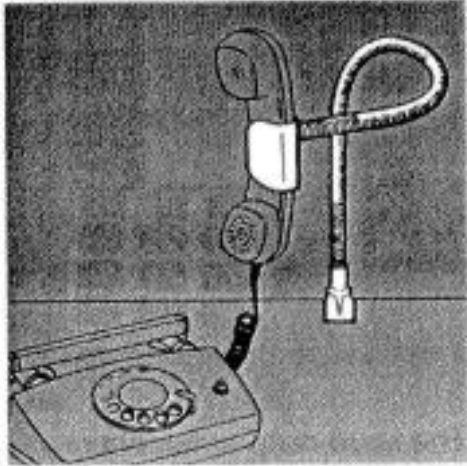
If you are hard of hearing, your ability to hear your caller may be improved by using an amplified handset. A similar device can amplify your side of the conversation if you have weak speech. Both are available from the telephone company. Users of hearing aids can use any telephone with a flux coil receiver simply by flipping the T-switch on their aid.



**The large number telephone is available at telephone boutiques or department stores.**



**A handy telephone amplification device.**



**You can adjust the gooseneck to just the right height for you.**

### **The receiver....**

There are a wide range of shapes and sizes of telephone receivers available to the consumer these days. If you're having trouble manipulating the handset, try out a few of these models at your local phone centre. Look for a thicker handle that is light weight if your grip is weak. Some people wrap fabric tape around the receiver so it doesn't slip. The one-piece models which sit flat on the table don't require much co-ordination to answer or hang up.

If you have trouble holding the receiver to your ear, here are a few simple solutions:

- attach a shoulder rest to the receiver for hands-free use;
- a goose-neck stand can be angled to hold the receiver at the right position;
- lay the receiver on a table or other surface and put your ear to it;
- change hands and ears frequently while you talk to prevent muscle fatigue;
- buy a hands-free telephone with an amplifier. This will allow you to speak and listen to your caller from anywhere in the room without touching the receiver at all, flip a switch for private phone calls;
- if you use a telephone at work, you might want to buy a headset with an ear piece and microphone to allow hands-free use.

## Getting to the phone...

If you have a physical disability that sometimes causes you pain or slows you down, then getting to the phone before the caller hangs up can be a problem. A cordless telephone might be the answer for you. It can travel with you if you like and you're still in touch if someone calls. Cordless telephones are available in telephone boutiques or high tech stores in many shapes and sizes, and vary in price. A few warnings, though: they're subject to interference, and most must be recharged regularly.

Another solution is to have telephones and jacks in more rooms in your house. Have the telephone company install the outlets in the rooms you use most: with lower price telephones available, you could have one in every room.

## Common courtesy...

Tell your callers that it takes you a little time to get to the telephone. If you can specify the number of rings it takes you to travel to the phone from the farthest point in your residence (say, 10 rings), your friends will be happy to extend this courtesy to you. Don't risk your safety by rushing to answer that demanding ring.

Answering machines are also useful, and are now available in two forms, internal and external. The internal answering machine is a special feature that may be offered by your telephone company. The service is charged to your telephone bill. If you are unable to get to the telephone in time to answer a call, the internal answering machine will take the call for you. The external answering machine is available in a number of models with a number of features, depending on what you need and what you would like. It will take messages for you when you are unavailable to answer the telephone immediately.



**A headset is available from your telephone company.**

Another feature now available from your telephone company is "call display". It displays the telephone number that your call is originating from and it also saves the last number that called you. It is useful if you do not have an answering machine and if you missed your call. It will tell you who called by providing you with the number so that you can return the call when you're able to. Another feature of "call display" is one that lists the last 15 numbers that called you. These features are useful if you have difficulty reaching the telephone before your caller hangs up.

A long telephone cord is another way of saving steps. You can buy several lengths at electrical shops and telephone boutiques and use them to move your phone around the room.

### **Voiceless communication**

Individuals who are deaf or hard of hearing have been using the telecommunication device for the deaf (TTY) for several years now.

Another form of voiceless communication is the modem. It is a device that is used with a computer and works on the same rationale as the TTY. That is, it uses electronic signals to communicate.

TTY's and modems work the same way: you dial a telephone number where another TTY or modem answers with a carrier - a high pitched tone - which indicates that the receiving machine is ready. You switch your device to DATA and the two machines begin to read each other's signals; you now proceed to type your conversation. You can even keep a record of the call if your machine is equipped with a printer.

## Computers

Advancing technology has firmly established the computer in the business world and for the home user. A computer may be either a frill or an indispensable part of your daily routine. It all depends on your needs and the kind of equipment you choose.

### Some computer jargon...

**Hardware:** The various pieces of equipment that make up a computer system.

**Peripherals:** The extra equipment that attaches to the computer, such as a printer.

**Software:** Programs that tell the computer what to do.

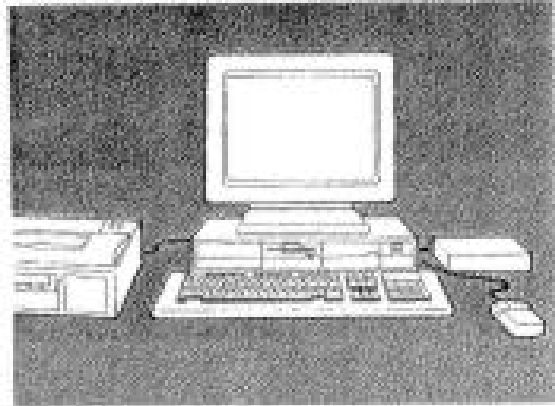
**Interface:** Communication between the computer and its peripherals or the computer user.

**Cursor:** That insistent flashing square or line that waits for you to enter something.

**Menu:** A list of program choices available to you. Often a series of menus will lead you to where you want to go in the program.

### What a computer can do...

Even the most expensive computer is useless without a program to run it. If you are a programmer, you can write your own, but most often you will be purchasing software. Because of this, it is recommended that, before you buy a personal computer, you look at the software you want use and buy a machine that will run it.



**A computer with some of its peripherals: a printer, a modem and a monitor.**

You'll find software for most personal computers that do the following:

**Word Processing:** Turns your computer into a very flexible writing tool that streamlines the tasks of typing, editing and printing your work.

**Database Management:** Lists and files of names, recipes, car repairs, invoices, even your library, can be catalogued and then updated, sorted, extracted or combined in a report.

**Spreadsheets:** Use the computer to perform complex mathematical calculations on rows and columns of figures - accounts, budgets, mortgage payments, etc.

**Education:** Programs are available that can teach you or your children to read, multiply, type or draw, perfect your chess or bridge game or write a musical score.

**Games:** Shoot monsters, fly a helicopter, explore and rescue a deserted space station, relive the Battle of Britain, solve a murder mystery or play trivia with your friends.

**Communication:** With a modem hooking your computer to the telephone line, you can access the world of data transfer: search libraries and download information into your computer or make new friends on Bulletin Board Systems.

## **Your needs...**

If some of these programs appeal to you, start making a list of the tasks you expect a computer to perform. Rank them in order of importance. Take the list with you when you shop for a computer and ask to have a look at the manuals that come with the programs so you can get an idea of how the computer and the program interact.

Some computers adapt particularly well to special needs, so it is important to consider what you want. A computer with a speech synthesizer can read commands or text to someone who is blind or visually impaired, or speak for someone who has a communication disorder. A large-print computer produces large enough letters on the screen so that someone who has low vision can read it. Someone who is deaf or hard of hearing may find the communication capability of the computer very useful. If you have a physical disability that limits your range of motion, a computer can be used as the core of an Environmental Control System to turn on lights, answer the telephone, open the front door or lower the thermostat.

## **Special Interfaces...**

If you can't use a computer keyboard, you will need an interface device to help you communicate your commands to the computer. Here are some examples of interfaces developed for this purpose:

## **Voice recognition...**

The interface translates your spoken command, letter or number into the digital information required by the computer. The number of commands may be limited.

### **Touch Operated Switch Control (TOSC)...**

A number of switches have been developed that respond to a very slight touch, such as the sip'n'puff straw, the mouth stick and the muscle twitch sensor. These switches are usually combined with a scanning program where the alphabet, cursor or menu move across the screen; when you want to make a choice, you activate the switch.

**Touch Screen and Pads:** You actually touch the screen to indicate your choice, or touch the equivalent section of a pressure sensitive pad.

**Joy Stick:** You direct an arrow or cursor around the screen with a stick that moves in all directions; pressing the 'fire' button makes the choice.

**The Mouse:** Similar to a joy stick, you control the arrow or cursor on the screen by moving a little box around a flat surface, pressing the mouse activates your selection.

### **Buying a computer...**

If you require one of the interfaces listed above, you will probably have to consult with an occupational therapist or a specialist in a rehabilitation centre. Along with the interface, this person will be able to help you choose the appropriate computer and software for your needs.



In the marketplace, not many sales people are aware of this special side of personal computers. The industry is still too young to offer the knowledge and customer support that you expect when buying a TV or stereo. So shop around; read through the computer magazines; and talk to as many people as you can until you start to get a feel for the kind of equipment you need. Join a home computer users' group. Talk to a computer teacher in high school or college. You might make some new friends and this network could provide valuable support once you've made your decision and begin to work with the machine.

### **The bottom line..**

How much should you spend on a personal computer? Computers can cost anywhere from \$1,000 to \$5,000, depending on what you are looking for. Look around at as many computer stores as possible before you make your final decision. It is also important for you to know what you will be using a computer for. It is necessary to be able to tell a sales clerk exactly what you are looking for and want without ending up with more than you actually need.



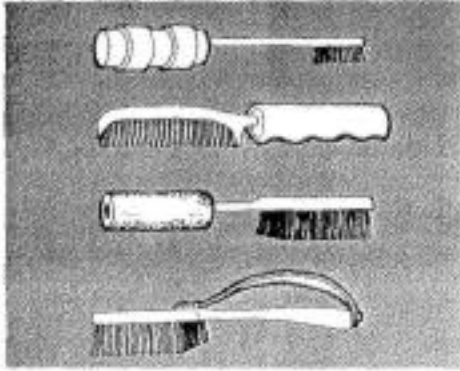
## **Personal Care**

Getting dressed in the morning, shaving, brushing your hair, brushing your teeth: these are activities that many of us take for granted, but there are people with disabilities who find these tasks very difficult. With a little bit of ingenuity and a few independent living aids, most people with disabilities can perform these tasks independently.

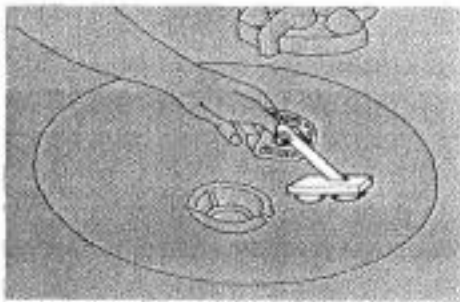
This section covers activities that are important for people to do independently. Dressing aids, grooming aids, clothing and footwear, and the other parts of this chapter talk about devices that are helpful in achieving that level of independence.

**For more information, check the following chapters ...**

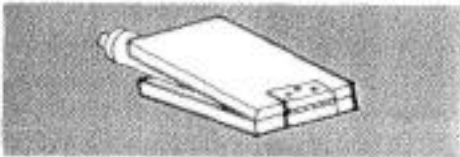
- **Grab Bars**
- **BathingAids**
- **Showers**
- **Bath, Shower and Transfer Seats**



**Built-up handles and cuffs are helpful for holding on to a brush.**



**One-handed cleaning of dentures is possible using this brush.**



**Make your own toothpaste squeezer.**

## Grooming Aids

Your daily grooming routine is made up of the movements that require hand and wrist flexibility, arm extension and rotation, and some strength and coordination. When these movements are difficult or painful, grooming tasks can become frustrating experiences, but they don't have to be.

### Brushing your teeth...

You can make your toothbrush handle larger and easier to grip by adding a ready-made built-up handle, a child's bicycle handle, or a palm or wrist cuff as illustrated.

Foam tubing called Robazote, from medical suppliers, has a hollow centre to insert a handle and is frequently used for forks and spoons. Extension handles, also available for eating utensils, can be helpful when you can't comfortably reach your mouth.

A denture brush can be attached to the sink or counter with a suction cup device - or make it yourself.

The important flossing step in dental hygiene may be easier if you use a floss holder. It can be found in most drug stores and can be fitted with a built-up handle.

Squeezing toothpaste tubes is a problem of the past with the new "pump" style dispenser. But if you find the pump even harder to manipulate - many do - or if your brand of toothpaste is not available this way, try a twisting key at the end of the tube, or the squeezing device shown in the illustration.

Both are available at medical supply shops or can be devised at home. Another alternative is to use toothpowder - empty the container into a small dish and just dip your moistened brush into the powder.

### **Hair care...**

The handles illustrated earlier can be used to make your comb and hairbrush easier to hold. Extension handles are particularly helpful if your shoulder or arm movement is limited - but you'll lose some strength due to leverage. Make your own extension handle by attaching the brush to a piece of light dowel with a wing nut; fit the end with a comfortable handle.

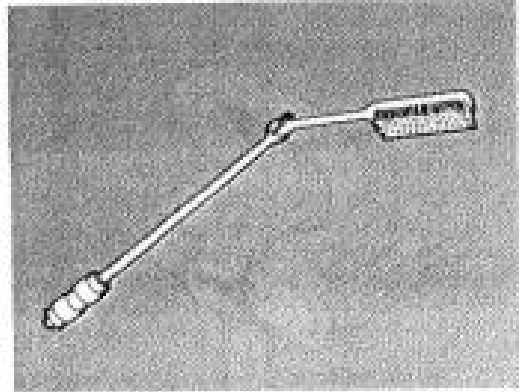
If you dry your hair with a hand dryer, mount it on the wall to leave your hands free (another good home hobbyist project). The bracket should allow enough movement so the dryer can be tilted in any direction.

Washing your hair is most easily accomplished in the shower. If you bathe in a tub, a hand-held shower fixture is useful for rinsing.

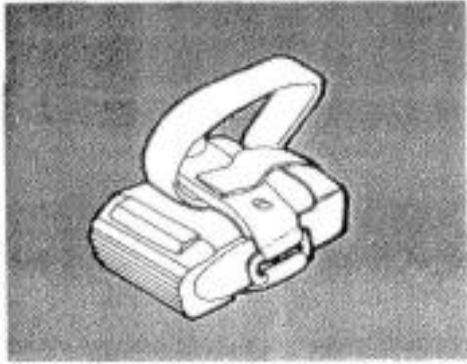
### **Skin care...**

A soap mitt eliminates fussing with slippery soap bars and awkward facecloths. Make your own from a piece of terrycloth, cuffed with elastic or Velcro strip, with a pocket and overlapping slit to hold the soap. This is a good way to use up those last little bits of soap we never know what to do with. You can also buy a soap mitt or use a sponge mitt from the car-washing section of a hardware store.

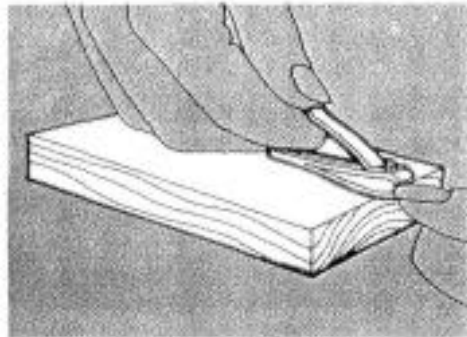
Loofah, actually the inside of dried gourd, is a good scrubbing material which helps to stimulate the skin. You should be able to find it in a drug store or natural food/health store. Use it in its natural form or attach a pad of it to a mitt or scrubber.



**This extension handle can be adjusted to the most comfortable angle for you.**



**This holder is useful if you find it difficult to hold your razor.**



**Some medical/surgical supply stores carry this kind of nail clipping device.**

## Shaving...

Men who grow a beard can avoid the problem of shaving altogether. But for those who "face" this daily ritual, here are some ideas.

- An electric razor is much easier to use than a blade. Flexible-headed razors require less hand movement to reach awkward places.
- If the razor is fixed at an appropriate angle, you can move your face against it without needing your hands. Rig a bracket or clamp to hold the razor firmly attached to a counter or other surface; a holder for most electric razors is illustrated here.
- Velcro strips attach the razor to the handle, which bends to fit your hand.

## Nails...

A nailbrush is easily mounted on the edge of the sink or counter with a couple of suction cups. Attach a nailfile or emery board to a piece of wood or tape it to the counter-top to stabilize it for one-handed use.

You can attach nailclippers to a piece of plywood to give you better control. Increase the leverage by elongating the handle.

Larger clippers are available at most drugstores for trimming your toenails; since you'll probably find them stronger and easier to manipulate than the small size, try using them for fingernails too.

Don't neglect proper foot care. Toe nails, corns, calluses and other problems can get out of control. Talk to your public health nurse about a foot care clinic or home visitation program.

## Dressing Aids

Buttons, buckles and zippers, hooks and snaps, belts, laces and ties: these simple devices can become instruments of torture - or at least extreme frustration - in the daily task of dressing yourself. If pain, strength and coordination problems are making this personal activity difficult for you, try some aids and ideas described here. They could be an important part of your independence.

### Where to get it...

Many of the items described here can be made at home or are sold at sewing or notion counters. You'll find some of the specialty items at a medical/surgical supply store that carries aids for independent living.

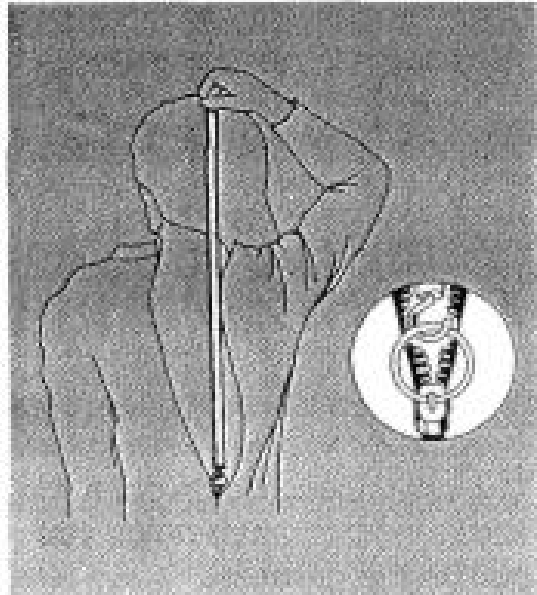
### Clothing...

Pain, stiffness or paralysis in your back, shoulders, or arms may complicate putting on and taking off you clothing, particularly underwear, socks or hose and slacks.

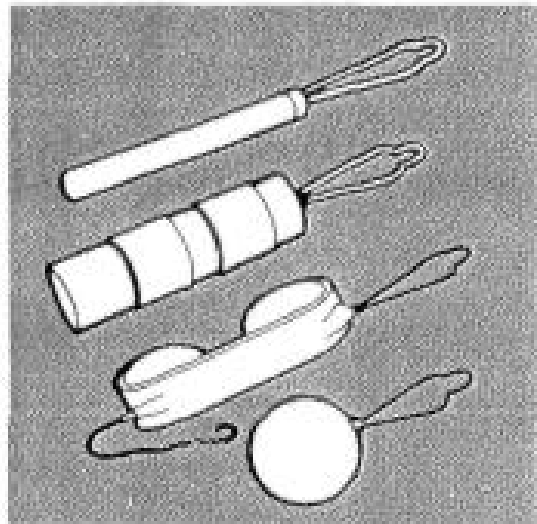
A well-designed dressing aid should be lightweight but sturdy, and will:

- help you reach your clothing and pull it towards you;
- hold the garment open so you can put in your foot, arm, etc.;
- pull the article on without stress on the back, shoulders or arms;
- attach to and detach from clothing easily.

A very simple dressing aid can be made by attaching a clothes peg, hook, garter or clamp to a piece of fabric tape, rope or a length of wood. The tape or rope can be tied into loops for easier manipulation; two aids can be used together to pull on slacks, pantyhose or a skirt.



**This zipper pull can be made at home.**



**The ball handle requires the least wrist movement.**

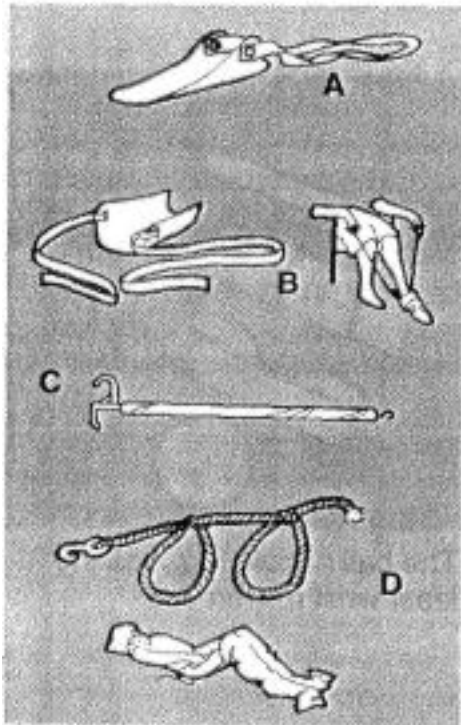


**The crosspiece holds open the slacks or skirt, then helps you pull on the garment.**

An instant dressing aid can be improvised from a wire coat hanger by bending the triangular form into a long thin handle; use the hook to reach, pull or zip.

Another type of pull-on dressing aid is the T-form. Take a broom handle or piece of light wooden dowel and add a crosspiece large enough to fit inside the garment to hold it open. You could improvise a couple of flanges or hooks on the crosspiece to hold the clothing more securely. Add a handle, notches or masking tape to improve your grip.

Sew small loops inside your clothes; catch them with the hook of your dressing aid to pull them towards you and to pull them on. Use belt loops on skirts or slacks and buttonholes on shirts, blouses and sweaters.



**a) Sock aid.  
b) Pantyhose aid.  
c) Dressing stick.  
d) Trouser pull.**

If you own a reaching aid, you've probably already used it as a dressing aid. Most reachers have jaws or a projecting hook or lug for catching articles and retrieving them.

Once you've pulled the garment on, you'll need to fasten it. Buttons can be dealt with easily with a button hook, available in many sizes and with a variety of handles. Push the hook through the buttonhole, catch the button in the hook and pull it through.

Attach a ring or loop to the zipper on slacks and jackets to make it easier to catch with your finger or the hook of a dressing stick. For back zippers, use a dressing stick if you can reach the zipper; otherwise, attach a hook with a cord as shown in the illustration before putting on the garment, if you can't reach behind), then grasp the cord or ring and pull on the zipper.



## Clothing and Footwear

The cut of your clothes and the way they are fastened can make you look and feel smart and fresh or sloppy and dull. This section describes clothing for easier dressing, more comfort and better looks. You'll also find pointers on special clothing designs for people with limited range of motion and people who use wheelchairs.

### Clothing adaptations...

If your movement is restricted by pain, paralysis or lack of coordination, try some of these ideas to make your clothes easier to put on, wear and take off.

Use elastic thread to sew buttons on cuffs. Keep them buttoned all the time and slide your hand through. Or sew the button to the buttonhole border and join the cuff with Velcro or a strip or two of elasticized tape.

Remove the buttons from the front or cuffs of a shirt or blouse and sew them to the buttonhole borders. Sew a strip of Velcro down each side and press to close.

Attach a ring or loop to the zipper slide to make it easier to catch with fingers or dressing aid.

Sew loops or tabs of ribbon or seam binding tape inside clothing to help when pulling on or off.

If you can't find a front-closing brassiere, adapt one by sewing up the rear closure, cutting the front open and attaching Velcro strips.

To keep your skirt or top tucked in, sew rubber strips to the inside waistband of your slacks or skirt.

Slacks can be fitted with side zippers in the legs to avoid pulling on and off. To accommodate a cast or brace, a zipper in the inside seam to the knee may be all that's required.



**A Velcro strip will help you avoid buttons.**

### **Choose accessible clothes...**

Roomy, stretchy clothes with simple fastenings are your best bet. Tight slacks, for example, are hard to pull on and off and can bind at the knees and crotch, hampering blood circulation and encouraging excessive perspiration. Stretch fabrics can provide that little extra bit of give to help put the garment on.

### **Fasteners...**

Buttons require the most movement and coordination; snaps or dome fasteners are easier. Zippers are faster and easier still, and simplest of all is the Velcro strip, fastening with a touch and undoing with only slightly more force.

Avoid rear closings in skirts and blouses. A front or side zipper can be just as attractive. Deep armholes and raglan sleeves, wide or gathered back yokes are easiest to put on and wear. Pull-on pants with an elastic waist, such as track pants, slip on without any fastening required, and are equally simple to remove. In addition, the soft, fleecy fabric allows your skin to breathe and keeps you warm in winter, cool in summer.

If you use crutches, keep in mind that too much roominess can also cause problems, such as bunching and binding under the arms. On the other hand, a tight top will restrict arm and shoulder movement across the back, which could lead to balance problems or split seams. Areas of extra wear, such as under the arms or from elbow to cuff, can be reinforced with fabric or leather.

Always choose new clothing that is functional and comfortable - but don't forget style. A garment should be easy to wear and attractive.

If you use a wheelchair, keep in mind that long ties and scarves, the tails of full-length coats, wide pant legs, and floppy sleeves can catch in the spokes of your wheels or pick up dirt from the tires. A good seamstress or tailor can alter your wardrobe as necessary.

Wrap-around skirts are particularly easy and fast to put on and the fullness affords a woman who uses a wheelchair some extra movement and adjustment.

A jacket with side (not rear) vents will fit a person who uses a wheelchair better and is less likely to ride up. Pre-tied, clip-on ties are available in attractive patterns for the dressy look. Avoid using the pants pockets - keep your wallet in a breast pocket. A strip of Velcro inside the front jacket pockets will make them more secure for your valuables.

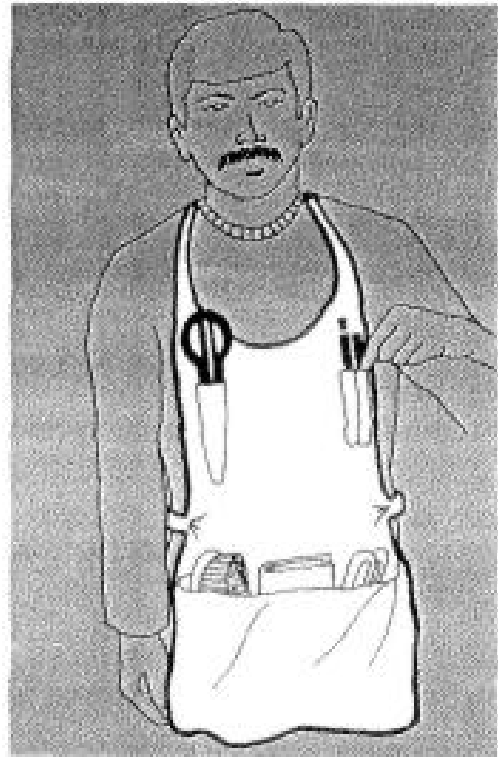
Speaking of pockets, there are times when we never seem to have enough of them. Make an apron full of custom pockets for your particular hobby or work, to fit over the head or around the waist (fasten with fabric tapes or an apron ring). Keep it close to your work area; slip it on and you're ready for business.

### **Outerwear...**

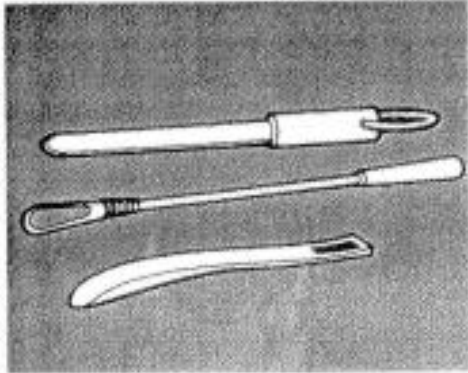
Coping with Canada's varied climate presents a considerable challenge. Outerwear that's warm and waterproof will do double duty from fall through winter to spring. Choose coats with the same design features (deep armholes, raglan sleeves, etc.) as tops and jackets described earlier.

A hooded poncho or cape is particularly suitable for protecting you from rain and cold if you use a wheelchair; it can be purchased at camping supply stores or medical supply shops. If you are designing your own, cut it just below waist level at the back and allow enough front length to drape over the knees. Taper the sides so the cape doesn't bunch or catch in the wheels. A zip-in liner of quilted insulating material or blanket fabric would make a rain cape into a warm poncho for cold weather.

A hat is essential in winter, since so much body heat escapes from an uncovered head. Toques should be on the large side, preferably of natural wool, with a band or flaps to cover the ears. If your neck is not protected by your collar, wear a scarf.



**This hobby apron is useful for carrying pencils, pens and other necessary tools.**



**A shoe horn makes pulling on your shoes easier.**

If gloves are difficult for you to wear, try mitts - they keep your hands warmer. An elasticized cuff or Velcro closure will make them easier to put on and keep on.

### **Where to find special designs...**

Several manufacturers of specially designed clothing for persons with disabilities are now open in Canada. Check with the nearest branch of the Canadian Paraplegic Association, Multiple Sclerosis Society, Arthritis Society or the yellow pages for an address. A medical/surgical supply shop might carry some of these products. Frequently, these items are made to order to your body measurements.

### **Footwear...**

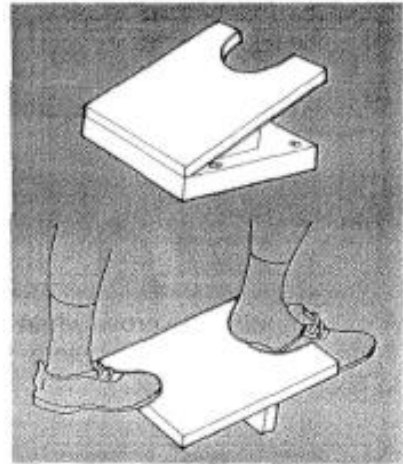
A simple shoe horn can be your best friend when it comes to putting on shoes and boots, whether they are laced, buckled or slip-on. Shop around for a long-handled model to reduce bending and straining; check to ensure that the point where the horn joins the handle is sturdy, particularly if you use it for heavy shoes or boots. The handle can be built up if you find it hard or painful to grip. Push your shoe against the wall or a solid piece of furniture for stability when putting it on. Use the rung of a chair or stool to catch the heel when removing footwear.

Removing boots and shoes can also be difficult, but another old friend, the bootjack, will help. Place the heel in the prong of the bootjack and pull - your foot should slide out. A bootjack can be fixed to the floor in a convenient location or left free to be moved when needed.

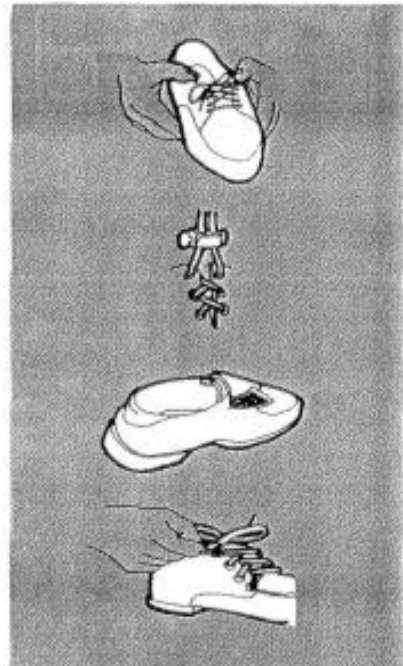
### **Here are some ideas for accessible footwear:**

- If shoe laces give you problems, try slip-on shoes; or you might choose a shoe or boot with a side zipper.
- Sport shoes, boots and some dress shoes are available with Velcro tab fasteners. Try them out.

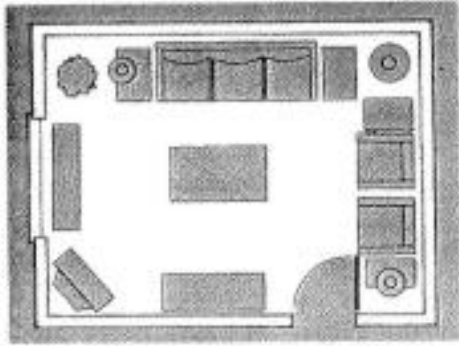
- Elastic shoelaces stay tied and then stretch open when you put on or remove your shoes.
- Shoelace clips, as illustrated, slide up and down the lace end and lock into place.
- A Velcro tab requires a different method of lacing the shoe - to the side instead of on top - and a strip of Velcro glued to the side of the shoe.
- A shoe button screws into the top lace hole on your shoe; once the lace is tied, you need only to hook it over the button to fasten.
- Ice cleats fit onto your shoes or boots in winter to improve your walking control on ice and snow. Available from a medical supply shop.



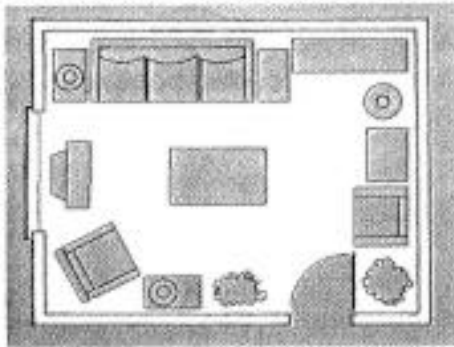
**Make this wooden bootjack at home.**



**You'll find these lace adaptations at shoe stores or medical supply shops.**



**A room is easier to cross when there are more support points to keep your balance.**



## Walking Aids

One of the keys to independent living is mobility: we want to be able to get from A to B with as little assistance as possible. For many, just moving around the house can pose problems, while others may find it difficult to walk long distances on ice or uneven ground. Steps and stairs, all too common in our built environment, are major obstacles to people who have trouble walking.

Mobility can be complicated by many factors, such as pain and weakness in the legs or back, uncertain balance or dizziness, muscular tremors or spasms and paralysis.

The information in this section is not meant to take the place of a professional assessment. If you are experiencing mobility problems, see your doctor or physiotherapist or speak to a public health nurse. Self-prescription of some walking aids, such as crutches and walkers, can lead to accidents.

## Modify your home...

Here are some ways to improve accessibility and safety in your own environment if you are having mobility problems:

Install grab bars in critical locations where you need support or might lose your balance: between or beside the toilet and tub in your bathroom and along counters in the kitchen. Put in a sturdy railing along halls and staircases.

Remove small mats which might bunch up or slide unexpectedly on a smooth floor. Avoid shag carpets.

Arrange your furniture so you can walk in straight lines. Set up a series of resting or balance points, such as the backs of chairs and sofas, so you can reach out for support if you suddenly need it. Put a chair near your bed for support in case you have to get up in the night.

Use a stool or chair in the kitchen to rest. Conserve your energy by sitting while you work; plan your meal preparation so that you take as few steps as possible.

Consider installing a ramp or lift to help you avoid steps and stairs.

### **Clothing and footwear...**

Choose pants and tops that are not so tight as to restrict movement, and not so loose that they catch on doorknobs, furniture, your wheelchair, etc. - stretch fabrics are good. The soles of your shoes should be rough enough not to be slippery, but not so rough that they catch you up suddenly and cause a fall. Rubber and crepe soles can be hazardous in this way.

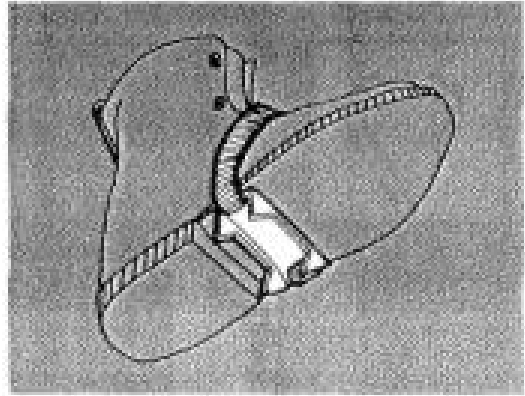
If you are unsteady on ice and snow, try the cleats shown in the illustration. They attach to your boots with an elastic strap and afford an extra bit of grip. Look for them at a medical/surgical supply shop.

### **Canes...**

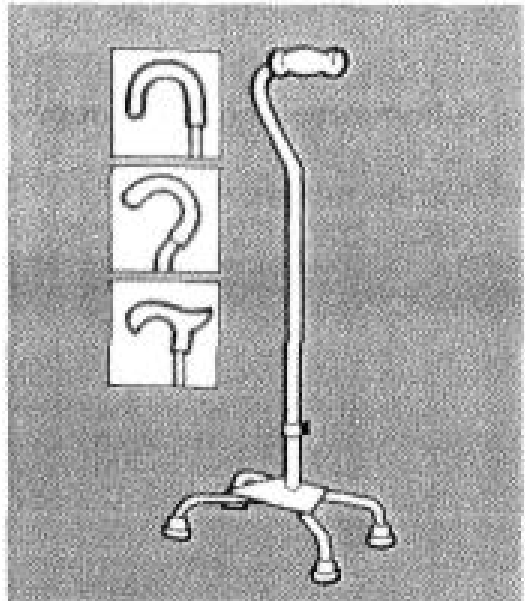
You can buy a cane at your local drugstore. This might be satisfactory if you're just looking for a little support on bad days. Ask your pharmacist for some help in choosing a cane; but consult with your doctor if you're having progressively worse days or periods of dizziness or poor co-ordination.

### **Base...**

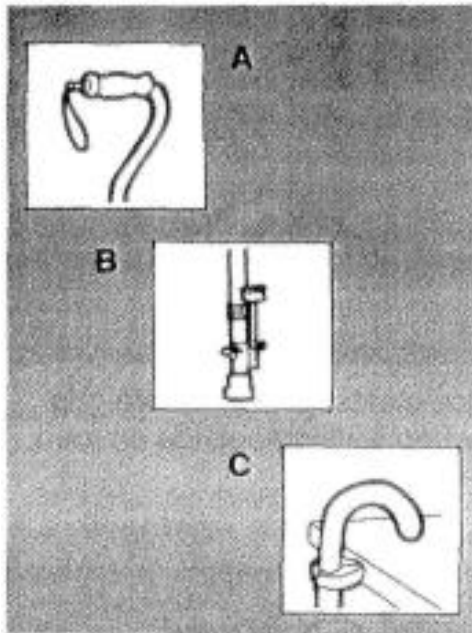
A single tip is suitable for individuals who have good balance. If your strength, balance or co-ordination is poor, try a cane with a wide base and four tips.



**Ice cleats give you more grip when walking outside on ice and snow.**



**Cane handles: Traditional curved, offset curved, straight handle. Note the wide-based model for extra support.**



**a) A home-made handle loop.**  
**b) An ice pick.**  
**c) A cane holder.**

### Tip...

A rubber cushioning tip reduces the shock transmitted to your hand and provides positive, no-slip contact with the floor surface. Attach a loop to the handle to hold the cane to your wrist while you reach for a bus ticket or your keys. A fold-up ice pick fits onto the base of your cane to give extra grip on winter days. Attach a broom holder (found at hardware stores) to a counter, vanity or other location to hold your cane when you don't need it.

You'll find the ice pick at a medical/surgical supply shop. You can make the loop yourself.

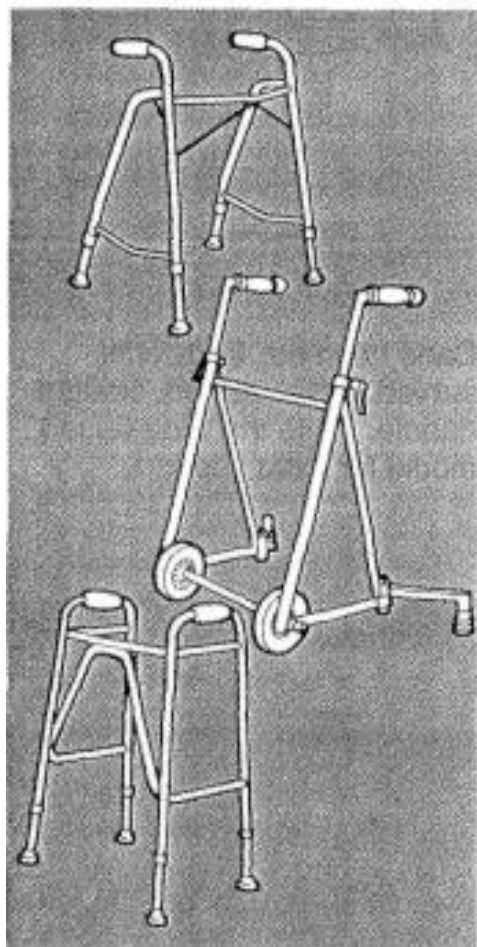
If you are using a cane to overcome weakness on one side or both, experiment until you find which side gives you the best support. Some people use two canes.

### Walkers...

The walker is particularly useful for individuals who have balance problems, since it affords support through both arms at a fixed distance apart. It also provides a resting point for people who are easily fatigued while walking or for those rebuilding their walking skills.

Again, ask for help when making your choice of a walker. As with canes, there are several features you can choose from, including materials (most are lightweight, metals, either chromed or coloured), size (most have adjustable legs) and base (some have wheels, some have rubber tips only). If you like to take your walker with you when you travel, choose a collapsible model which folds flat. The handles should provide a good grip but not make your hands tired. You'll find walkers at medical/surgical supply stores and some pharmacies.

You can add a small bag or pouch to your walker to carry valuables, hobby items, housecleaning products, etc.





## Reaching Aids

Pushing, pulling, grasping and turning are movements that can be easier for you with a reaching aid. The models shown here have been designed to cover a wide range of activities and will help people with a weak or painful grip or a limited range of movement.

The most common reachers consist of a pair of jaws controlled by a trigger mechanism. Made of lightweight aluminum and plastic, they are available in several lengths. The desk-size model, measuring around 60 cm (24 in.), is useful for retrieving objects on your desk, kitchen counter or bedside table. The mid-range lengths, about 70 cm (28 in.), are most useful for everyday activities such as picking up objects from the floor or reaching high storage areas. An extra-long model at 80 cm (32 in.) is available if you need extended reach. Features you'll find useful include a magnet for catching metal objects and a projecting lug for pulling things towards you.

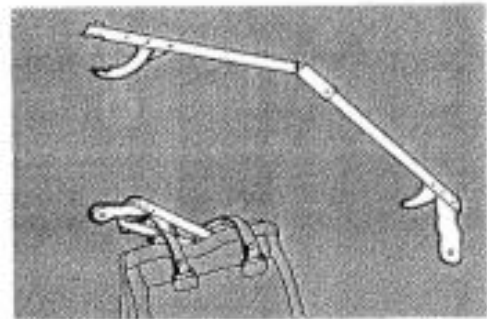
A strip of Velcro or a metal clip will attach your reacher to a chair, walker, etc.

Remember that the effective weight of an object increases with the length of the reaching aid. Use it for lightweight articles.

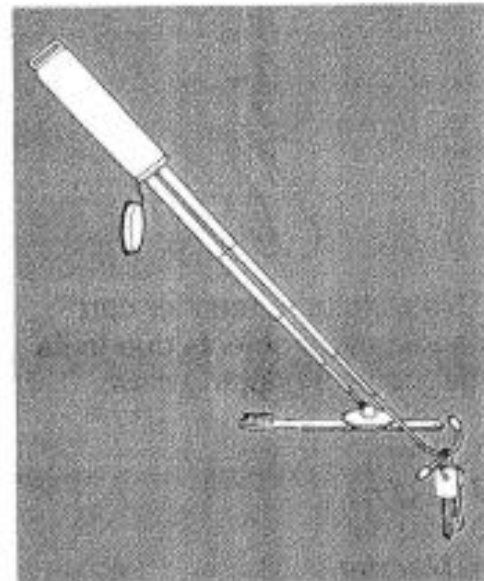
A folding reacher collapses to half its length to fit into pocket or bag.

A retainer reacher is useful if you can't operate a trigger mechanism; a toggle lever closes the jaws, which stay closed until released.

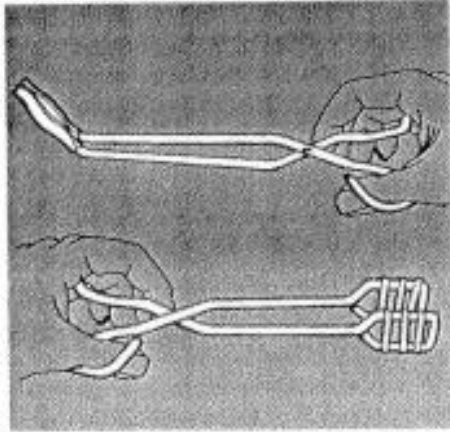
For small items there is a product called a "Telestick" which is quite portable.



**A standard reaching aid.**



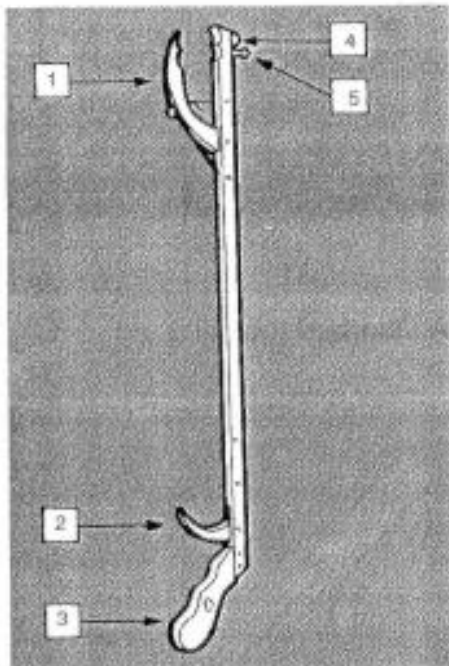
**You can find a variety of reaching aids.**



**Tongs can be used as a short reaching aid.**

Tongs are operated by a scissor grip which requires dexterity of thumb and fingers. Ordinary kitchen tongs will extend your reach by 15-20 cm (6-8 in.), which might be enough for you to operate a stove or washer with rear controls. Giant tongs, available at most housewares counters, will give an extra 40 cm (16 in.) and can be fitted with thick rubber bands to improve the grip.

A pistol grip reacher will increase the number of objects you can handle. The magnetized gripping claw has rubber pads and is shaped for both round and flat objects: cups and glasses, plates, bottles, pot lids, knobs and levers. The curved hook at the bottom of the tongs allows you to hook and pull large, heavy objects towards you. The wide trigger can be squeezed with all four fingers, requiring minimal strength. Also available with swivel head and forearm extension.



**This pistol grip reacher can handle more objects due to its magnetized gripping claw.**

1. Jaws
2. Trigger
3. Handle
4. Magnet
5. Lug

### **Using a reaching aid...**

By extending your reach, these aids can make your life a lot easier in many ways. Here are some ideas:

#### **In the kitchen...**

Use a reacher to operate rear-mounted stove controls (you might have to change the knobs) and to move pots and pans, lids and hot dishes on the stove. Take a hot potato out of the oven or check to see if a cake is done. Pull a muffin tin out of the storage drawer without bending over. Save the hard-to-reach shelves of the fridge for rarely used items; get at them with your reacher.

#### **In the bathroom...**

Keep extra towels, soap and toilet tissue stored within reach of your aid until you need them.

### **Around the house and garden...**

Control of your environment can be easier when you use a reaching aid. Reach taps in the kitchen or bathroom that are otherwise inaccessible. Attach a cloth to your reacher and dust, wipe a steamed mirror, clean UP a spill. Pick up litter, dead leaves or twigs and pull out weeds in your garden. You can cultivate the soil, use the hose and reach garden chemicals and equipment in storage.

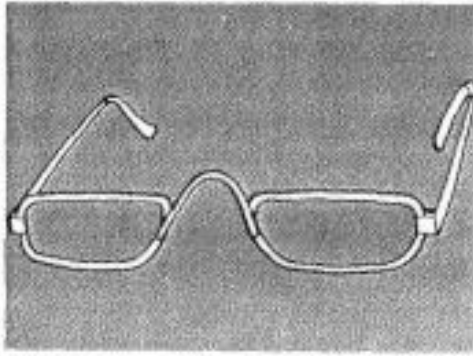
### **Storage...**

Storage space that's too high or too low can be used for light items you can handle with your reaching aid: boxes of cereal or crackers, small tins and spice jars; glasses, cups, bowls and baking tins; dishtowels, dust-cloths, placemats, napkins and tablecloths. Arrange the storage of clothing, hats, footwear to suit the range of your reaching aid.

### **Adapt your reaching aid...**

Attach a rubber tip, a penlight, your own specially designed hook. Let your daily routine and work or leisure activities tell you what your needs are. Try making your own reaching aid with a piece of wood, a hook and some wire.

Reaching aids are available at most medical/surgical supply outlets. If your dealer doesn't carry the model you need, ask if you can look through a catalogue to see what can be ordered.



**Lightweight and inexpensive reading glasses.**

## **Reading Aids**

Reading is an integral part of our lives. We rely on newspapers and magazines for current events and information, books for knowledge, adventure and the greater things in life. We even need to read to find out what's on television!

Physical problems with reading usually stem from either visual impairments - low vision, light sensitivity, etc. - or a physical disability that make it difficult to handle a book or turn pages. The devices and ideas in this section can help you to get back to the joys of reading.

### **Visual aids...**

Of course, you should have properly prescribed lenses if you are short- or far-sighted. See an eye doctor for an examination annually.

For years, the Canadian National Institute for the Blind (CNIB) has been specializing in devices and programs for people who are blind or visually impaired. Check your phone book for the closest office.

If you have a minor eye weakness and need correction only for reading, you might benefit from the inexpensive reading glasses now sold at drug stores and some optical shops. Designed for reading or other close work such as sewing, these 'half-glasses' let you see through the lenses while looking down, but not when you look up. They come in several strengths, so try a few pairs until you find the best lenses for your eyes. Take some reading material with you or read a few labels in the store to test them.

If you find the print too small in your reading material, try a magnifier.

Several models are available:

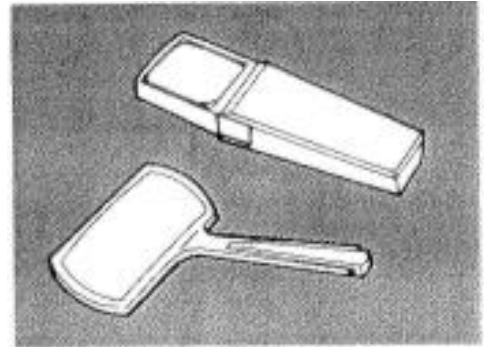
- A square lens, with a handle, is suitable for reading books and newspapers. You need a steady hand to hold this lens and your arm may tire after a while.
- A bar lens lies across the page and magnifies several lines at a time. You slide the bar down the page at your own speed.
- A lens fixed to a clamp mounts on the table or other surface. You move the reading material, not the lens.
- A similar lens hooks around your neck and rests on your abdomen just above the reading material. Move the book to read, not the lens.
- Another lens comes with a built-in light, powered by batteries. This device is handy if you need strong light to read, or for locations where the light level is too low.

### **Reading light...**

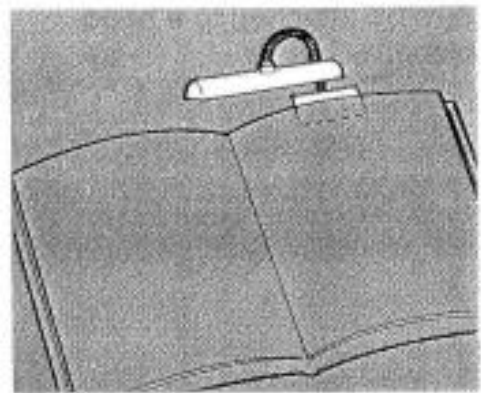
Reading in poor light can tire and weaken your eyes. Lighting should be strong and well-diffused to reduce shadows and glare. If your eyes are sensitive to light, take frequent rest breaks to close and relax your eyes.

### **Large print and reading services...**

Many books have been set in large type for easier reading. Many cookbooks, mysteries, crossword puzzles, and novels are available at your local public library. Ask your librarian. Some public school and university libraries feature an Audio Library as part of their service. With a portable cassette player and headphones, a talking book can make your long bus ride much more interesting!



**These magnifiers are available from medical/surgical supply shops, optical stores and some camera shops.**



**This clip-on light can be very handy.**



**A mouth stick or pointer with a rubber fingertip can be used to turn the pages. A pointer can also be attached to a head-piece.**

The CNIB also houses a library for people who are blind or visually impaired. When you become a client of the library, you can access books, magazines and other material in braille and audiocassette. The library will send your selection by mail, free of charge, wherever you are in Canada. For more information, contact your local CNIB District office.

### **Getting technical...**

High tech has moved into reading devices for people who are visually impaired or blind. Several companies manufacture a camera and monitor which scans the printed material (on a moving table) and reproduces it on a television monitor at larger size. The image of the print can be reversed to white on black if desired. A computer combined with this device makes a powerful word processor. There are also computers with voice synthesizers that will read text files to you. An optical scanning device called the Opticon skims across a line of text, translating each character into braille to be read by the person holding it. These systems can cost several thousand dollars; contact the CNIB for more information.

### **Financial assistance...**

If you require a reading aid for use in your employment, you may be eligible for financial assistance. Inquire through your provincial Vocational Rehabilitation program or the CNIB.

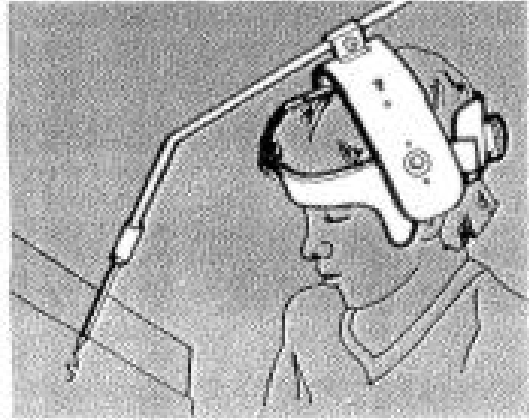
### **Page turners...**

If you find it difficult to hold a book and turn the pages, you can devise simple easel at home, with a strip of wood or an elastic band to hold the pages.

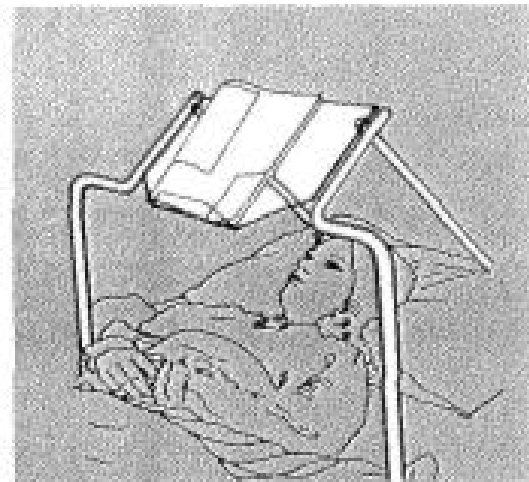
Again, high tech has made its mark - an expensive one - with an automatic reading machine for people with physical disabilities. This device does everything but write the book...

## Reading In bed...

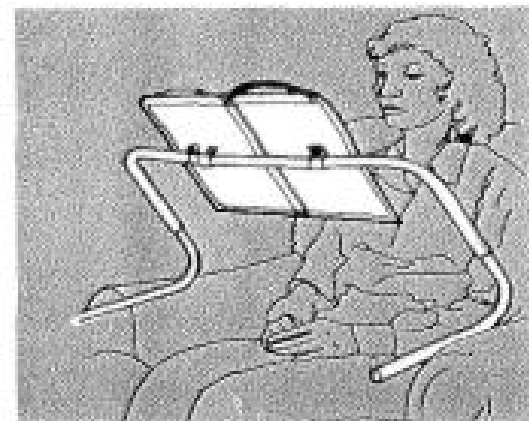
Reading in bed can be difficult because of the awkward angles. Prism glasses bend the light coming from a book and permit you to read or watch television while lying down. Another solution is to mount your reading material in a frame angled to your desire, as sketched. Both devices are available from medical/surgical supply shops.



**If you find it difficult to turn pages, try this pointer.**



**Angled frames for reading.**







## **Recreation**

Today, Canadians are more aware of the health benefits of physical activity. The type of definition of physical activity has changed from focusing on sport to all activities which allow us to move our bodies. This new concept is called "active living" and it can easily become a part of your life whether you have a disability or not. The idea of being physically active has shifted from simple physical fitness to total fitness or well-being. This includes walking, running, gardening, swimming, wheeling, aerobics, organized sports and so on.

Active living is defined as: "a way of life in which physical activity is valued and integrated into daily life." It results in an increased sense of well-being and quality of life. It is accessible to all, regardless of imagined restrictions due to age, gender or ability.

So take the plunge and start your own daily routine of active living.

## **Recreation Aids**

It's hard to estimate the value of recreation in our lives. The 'workaholic' who spends no time developing hobbies or pastimes may find work rewarding, but may need more. An individual who stares at a television screen instead of taking up an outside activity misses out on opportunities to enjoy a wealth of experiences.

## **Crafts...**

If you enjoy working with your hands and want to have something to show for your efforts, then explore the world of crafts: sewing, weaving, knitting, leatherwork, rugmaking, pottery, painting, drawing and sketching, woodwork and metal work. These activities are enjoyed by many people. If you need instruction, books are available at your library, bookstores, or craft shops; many community centres and school boards run courses for very moderate fees.

Working with your hands requires coordination and dexterity, along with some strength. Here are some ideas.

Handles on tools or brushes can be built up in a number of ways so they are easier to grip and control. Insert the tool into a specially designed handle or piece of sponge rubber tubing (called Rubazote; both are available at a medical supply shop). You can build up handles yourself by using a child's bicycle handle, a piece of kitchen sponge cut to size, or a rubber ball.

If you're working with a long handle, such as a paint brush or knitting needle, put a rubber band around your wrist and push the handle under it. You'll have some wrist control and less fatigue from holding the handle.

Devise a way of securing your work so it doesn't skitter across the table. A couple of bricks (covered with fabric) and a strip of wood can hold down the edges of your work. Try building a light wooden frame and use clamps to attach your work. Attach an embroidery hoop to a clamp so it can be fixed onto a table.

To keep everything within easy reach, sew up a hobby apron full of pockets designed to hold your tools and supplies. Or use a sewing box, tool or tackle box to keep materials together.

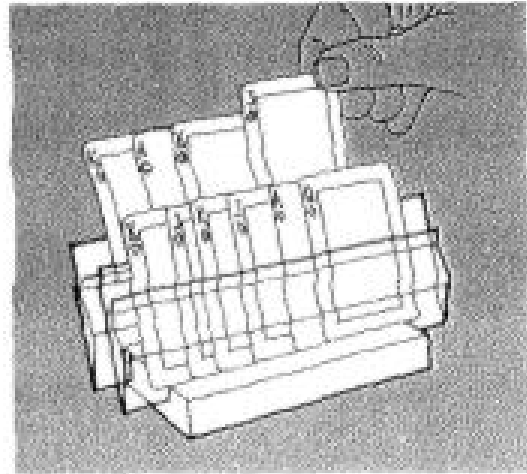
Special scissors that might help are left-handed scissors, spring-loaded scissors (which glide across a table and operate with a simple push), and battery operated scissors. Look for these in sewing shops, medical supply outlets or stores specializing in products for people who are left-handed.

### **Games...**

A board game like chess or backgammon or a deck of cards and a copy of Hoyle's Rules of Games (or Games of Patience for solitaire lovers) can stimulate hours of fun, strategic planning and mental gymnastics. If you can't hold your cards, try making the device illustrated here, a strip of wood with a slot for the cards (a two-tiered model for larger hands). Also available at some medical supply shops.

Large numbered and braille cards are available from the Canadian National Institute for the Blind for people who are blind or visually impaired.

Scrabble is a terrific word game. The new 'deluxe' model features a board which is well-designed for people with physical disabilities. Each square has plastic ridges to keep the letter tiles in place and the board rotates like a lazy susan to face each player. Your letters sit in a little holder while you ponder your next move.



**This two-tiered card holder will help you play cards.**

Many people who can't use their hands play cards or board games by using a pointer. They indicate to their partner or opponent which card to play, which pawn takes the bishop, and the other person makes the move. Pointers can be mouth or hand-held or mounted on a headpiece.

Your body responds to physical activity by becoming strong enough to take it. Exercise one day and you'll be able to do more the next.

Through recreational activities like dancing, swimming, sports, horseback riding, skiing, martial arts training, even walking, you can enjoy the process of exercising as well as the results. Many of these activities are organized for people with disabilities of all degrees. For example, yoga and Tai Chi are suitable for older adults, people with stiffjoints and people with disabilities.

## **Gardening Aids**

As a hobby, gardening has enjoyed enduring popularity. Everyone can appreciate the magic of growth and life, the beauty of a flower and the satisfaction of growing fresh flavourful produce for the table.

Growing and caring for plants is a satisfying pastime with some therapeutic value.

If you'd like to expand your 'green thumb' activities but are prevented from doing so by a physical disability, some of the ideas and aids in this section may make gardening a possibility. A few good books are mentioned to increase your basic knowledge of plants and gardening techniques.

## **Houseplants...**

Watering is probably the prime activity in the care of houseplants and it can be difficult if you can't reach the pot or manipulate a watering can. Here are some ideas:

Choose a small watering can which will weigh less when full. A long, narrow spout will permit you to control both the direction and the amount of water more accurately. If you can't bend your wrists to tilt the can, add a handle at an angle that is comfortable for your hand.

An indoor hose: this device attaches to your tap and gives you about eight m (30') of plastic tubing to carry the water to the plants. The water is controlled by a lever on the nozzle. Such a system would be useful if you couldn't carry a watering can, but you must be able to attach the hose and control the nozzle.

For plants that are out of reach, try an extension watering can. When you squeeze the bottle, the pressure forces the water up and out of the tube.

Misting may not be necessary all year round, but in the dry atmosphere of a heated home in the winter, some plants do better with some extra moisture. If the standard pump mister is hard for you to operate, try lengthening the handle. This will provide greater leverage and allow you to use a push-pull movement instead of a squeeze.

You might be able to eliminate the need for misting by providing extra moisture in an evaporation tray. Spread a layer of gravel in a watertight tray, set the plants on top, and keep the water level just under the top of the gravel.

### **Outdoors...**

If you are planning a garden, consider constructing raised beds. Although they are more expensive and difficult to build, they require less bending and are accessible to a person who uses a wheelchair. You can sit on the edge and cultivate the soil, weed or harvest with ease. Make sure the spaces around the beds are wide enough for a wheelchair or wheelbarrow to pass through and turn corners (about 1 m or 36").

Some tools are better than others if you have weak or painful grip or poor coordination. Choose small, light implements with full-sized handles. Avoid cheap materials - metals that bend easily, plastic handles that could snap off - and plan to maintain your tools properly.

Digging and raking can be difficult if you have back problems. The attachable handle gives you better control and prevents excessive stooping and bending.

Cutting tools, such as pruning shears and larger loopers, are essential in the garden. If you can't operate them easily, try the ratchet models. They require much less strength.

Keep your tools together in a basket or a bucket, along with your gardening gloves. Or make an apron full of pockets, where you can also carry seed packages, marker labels and a pencil, twist ties or twine.

### **Storage...**

Keep all your tools, fertilizers and other chemicals between knee and eye height - the most accessible range. Poisons should be kept locked away or out of reach of children. Make sure your tools are oiled and sharpened before you put them away for the winter.

## **Sports for People with Disabilities**

Sports for people with disabilities is a growth industry in this country. New clubs are springing up like mushrooms, so if you were an athlete before your disability, there is no need to despair.

There are sports for almost all disability groups. For more information, contact the following national offices. They will be able to get you in touch with a club in your area.

Canadian Amputee Sports Association  
4944 Norquay Drive N.W.  
Calgary, AB  
T2K 2I3  
(403) 264-5530  
(403) 289-3000

Canadian Association for Disabled Skiing  
Box 307  
Kimberley, B.C.  
V1A 2Y9  
(604) 427-7712

Canadian Blind Sports Association  
1600 James Naismith Drive  
Gloucester, ON  
K1B 5N4  
(613) 748-5609

Canadian Cerebral Palsy Sports Association  
1600 James Naismith Drive  
Gloucester, ON  
K1B 5N4  
(613) 748-5725

Canadian Deaf Sport Association  
1600 James Naismith Drive  
Gloucester, ON  
K1B 5N4  
(613) 748-5789



Canadian Special Olympics  
40 St. Clair Ave. West  
Toronto, ON  
M4V 1M6  
(416) 927-9050

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## **Further Reading**

**Crocket's Victory Garden, Crocket's Flower Garden and Crocket's Indoor Garden.** James Crocket. Published by Little, Brown & Co.

**The Reader's Digest Guide to Gardening in Canada.** Published by the Reader's Digest Association.

**Making your home accessible: A disabled consumer's guide.** Carol Kushner, Patricia Falta and Andrew Altkens. Consumer & Corporate Mfairs Canada, 1983. (Free of charge).

**How to create interiors for the disabled.** Jane Randolph Carey. New York: Pantheon Books, 1978.

**Canada's food guide handbook.** Ottawa: Health and Welfare Canada, 1977. Also available on tape.

**Help yourself to meals.** Toronto: Ontario Association for the Mentally Retarded, 1979. 2 vols.

**Mealtime manual for people with disabilities and the aging.** Ed. J.L. Klinger. 2nd ed. Camden, NJ: Campbell Soup Co., 1978.

**The wheelchair gourmet: a cookbook for the disabled.** Mary Blakeslee. Don Mills, ON: General Publishing, 1981.

**When the cook can't look.** Ralph Read. New York: The Continuum Publishing Co., 1981.

