

## ASSISTIVE DEVICES

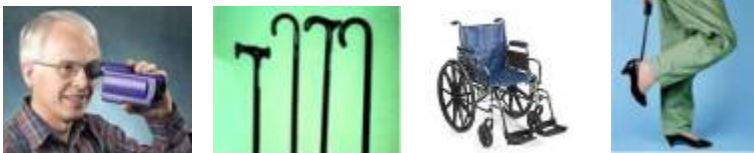
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### What are assistive devices?

An assistive device is any piece of equipment that you can use to help make your daily activities easier to perform. Examples of assistive devices include wheelchairs or bath benches, as well as talking, hearing and vision aids. They can assist you with:

- Walking,
- Bathing,
- Dressing,
- Eating,
- Communicating with family/friends.

Many devices are commercially available (e.g. bath bench) or home-made by family or health care professionals.



### Which assistive devices can help with walking?

One study looked at the effects of walking with a cane after a stroke. In this study, some patients walked with a cane while others walked without one. The authors reported that those who used the cane improved on most aspects of walking. While the results of this study were promising, the study itself was not of good quality. We therefore cannot make any firm recommendations about the use of assistive devices.

### Which assistive devices can help with bathing?

Studies show that assistive devices often help people to be more independent. Everyone has their own bathing/showering habits and needs. Usually a combination of the following equipments is helpful. **Grab bars:** Grab bars can be installed in the shower and/or next to the bathtub. Holding onto a grab bar will provide support when you:

- Stand up and sit down
- Go in and out of the shower or bathtub



The number and type of grab bars depends on your needs. Some people only need one, others need more. This diagram shows some of the grab bars that are available. It is very important to install the grab bars firmly and at the right height or place to ensure your safety. You should talk to your occupational therapist or another health care professional for suggestions on the best way to install the bars. Grab bars can be installed onto the wall or clamped directly on the bathtub. Some



bars may not be safe for you if you have a weak arm or leg caused by the stroke. Again, make sure to ask a health professional for help or advice before you purchase or install bars. **Bath chair/bench:** A bath chair or bench allows you to sit during your bath or shower, which will save your personal energy levels. Sitting in the bath or shower is also a good idea if you are experiencing problems with balance. **Transfer bath bench:** A transfer bath bench can make it easier



for you to get in and out of the bathtub. Once you are securely seated on the bench, you can lift your legs over the edge into the bathtub. Most people find this easier than lifting their leg over the edge of the bathtub while standing up. Again, it is important that a therapist or nurse show you the safest way to use this device before you try it on



your own or with your family. **Anti-slip rubber mats:** Anti-slip rubber mats placed inside and outside of the shower/bathtub help prevent falls by providing a surface that is not slippery when it is wet. **Tap turners:** By adding leverage, tap turners make it easier for you to open and close taps. **Long handle brushes and sponges:** These devices provide assistance in washing parts of your body that require bending and stretching. **Bath mitt:** If you cannot use both hands it is often difficult to hold the soap, lather a washcloth, and wring it out. **A possible solution:** You can put a bar of soap inside a bath mitt so you do not have to hold it. This site does not show all the available assistive devices for



bathing. There may be additional devices that could be helpful to you. Further information can be found by asking your health care professional or searching on the Internet by typing key words such as “assistive devices” or “assistive technology”.



### Which assistive devices can help with toileting?

Toileting is a task involving many steps:

- Entering the bathroom
- Getting on/off the toilet
- Managing clothing
- Cleaning yourself



Each of these steps can represent a challenge for an individual who has had a stroke. The use of assistive devices can help you to perform these tasks more easily and more safely. **Bathroom accessibility:** If you need to adapt your bathroom because it is not accessible for you, here are some guidelines to follow:

- The doorframe should be large enough for you to enter the bathroom easily, especially if you have a wheelchair or walker.
- The space available within the bathroom should be large enough to allow you to circulate easily with a walker or a wheelchair if you have one.
- To reduce the risk of falling, make sure the floor is free from unstable carpets and other objects that may cause you to slip.

If you can not access the bathroom, there are other solutions available for you. You can use a urinal and/or a commode in another room.



- **Getting on/off the toilet:**

Many assistive devices can help if you have difficulty getting on/off the toilet.



- **Fixed grab bars:**

These are recommended for someone who can walk into the bathroom and who can sit on the toilet while using only one hand for support. The grab bar has to be installed on a wall close to the toilet. ***The types of grab bars needed may differ from one person to another. The height of the grab bars is also variable depending on your needs. Consult an occupational therapist to ensure***

***that the type of grab bar and the place where you will install the grab bar fit your needs.***



- **Fixed toilet frame:**

If there is no wall close to the toilet, or if the person needs two hands to hold on to something to get on/off the toilet, a toilet frame can be fixed to the floor around the toilet.



- **Raised toilet seat:**

A raised toilet seat increases the height of the toilet pan. It makes it easier for you to sit down on the toilet and stand up. Raised toilet seats of different heights are available commercially. The adequate height should allow the user to place his/her foot flat on the floor while seated on the toilet.

If you live with other people who use the same bathroom, they will need to know how to remove the raised toilet seat. **NOTE:** It is important to make sure that it is securely attached to the toilet each time you use it. Incorrect

fitting of the raised toilet seat increases risks of falls since it can move. It can also damage the seat if it is placed incorrectly.



- **Toilet frame with seat /Toilet seat with handles:**

This device has both a toilet frame that allows you to hold onto something with two hands as well as a raised toilet seat. **All the assistive devices listed above should have non-slippery surfaces to maximize safety when using them. Managing clothing:** Refer to “Which assistive devices can help with dressing?” section to learn safe techniques to undress/dress the lower body. Do not rush the task and keep the bathroom floor dry at all times to reduce risks of falling. **Cleaning yourself:**

- **Sheets of toilet paper or wet wipe sheets:**

If you have difficulty separating the sheets off a roll of toilet paper, you can try to use already separated sheets or wet wipe sheets, as they are easier to manipulate with one hand.



- **Portable bidet/bidet-toilets:**

If using toilet paper is hard for you because you have difficulty moving one arm, you can also try to use a bidet, which is similar in appearance to a toilet bowl, however it projects water for personal cleaning. In addition to being expensive, bidets are not recommended if you have difficulty standing safely. **Other assistive devices:**



- **Urinals:**

If it is difficult for you to get into the bathroom or to transfer to the toilet, you can try using a urinal, which can be used in the lying or sitting positions. They may be convenient for day and/or night time use. Two types of urinals are available: male



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urinals (bottles) and female urinals. ***Urinals should not be used for bowel movements.***

- **Bed pans:**



A bed pan can be used if you have difficulty getting up from your bed safely to go to the bathroom. Bed pans are designed to be used for bowel movements or urinating. ***Bed pans and urinals should be washed regularly for cleanliness and to prevent odours.***

- **Bedside commode:**



A bedside commode can be used in the bedroom when it is difficult for you to access the bathroom or if you have difficulty reaching the bathroom on time. It is possible to adjust the height of a commode. It is important that your feet touch the ground (preferably flat) when you sit on the commode. ***Make sure that the brakes are on when transferring onto your commode. This will ensure safety and reduce the risk of injury.*** The bathroom is the most

frequent site of falls for people who have had a stroke. Hence, it is important to identify the potential dangers and to correct them. Also, try to make sure that you do not hurry to the bathroom and that the floor is dry to reduce the risks of falls. This site does not show all the available assistive devices for toileting. There may be additional devices that could be helpful to you. Further information can be found by asking your health care professional or searching on the Internet by typing key words such as “assistive devices” or “assistive technology”.

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**Which assistive devices can help with grooming?**

Individuals who have had a stroke may find it difficult to groom. This section will give you ideas about what assistive devices can be used to make it easier to:



- **Cut your nails:**

If you have difficulty cutting your nails, you can try to soak them in warm water before doing so. This will make them softer and easier to cut. Clippers can be easier to use than scissors as their design makes them easier to manipulate. If you have difficulty using a regular clipper because you lack strength in your hand, the clipper on the left may help you. It is designed to help you cut your nails using a minimal amount of force. Also, its shape makes it easier for you to grasp.



- **Shaving:**

If you feel that the sensation on your face is not the same as it was before you had your stroke or that your hand is less coordinated, it may be safer for you to use an electric shaver instead of a manual stick razor as they decrease the risks of cutting yourself. Also, it is recommended that you shave in front of a mirror so that you can see what you are doing.



- **Cleaning your teeth:**

If you have difficulty squeezing the toothpaste out of the tube, you can use a tube dispenser that will allow you to put toothpaste on your toothbrush while using only one hand.

While brushing your teeth, you may find that using your strong hand to hold the toothbrush is easier. However, it is sometimes recommended that you still try to use your weak hand in daily tasks if regaining function is one of your rehabilitation goals. If you have dentures, you can use a one-handed technique to soak them. For

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example, you can open the container and put them in water or in a denture cleansing liquid using only your strong hand.

- **Applying makeup:**

Applying makeup can boost your morale. Try to continue wearing makeup as you would normally. If you have difficulty grasping the brush, a padded handle may help.



- **Brushing and combing your hair:**

Brushing your hair can be difficult after having a stroke, especially if you have lost strength in your arms and hands. Using a brush with a padded handle or adding a universal cuff will make it easier to hold. A long-handle comb can help you to reach the hair at the back of your head and does not require as much lifting and stretching of the arm as does the use of a regular comb. If you feel that these tasks are too difficult to do by yourself, ask the help of your friends or family members.



This site does not show all the available assistive devices for grooming. There may be additional devices that could be helpful to you. Further information can be found by asking your health care professional or searching on the Internet by typing key words such as “assistive devices” or “assistive technology”.

### Which assistive devices can help with dressing?

There are many reasons why people who have had a stroke have problems getting dressed and undressed. Assistive devices can help them to maintain their independence.

- **General Rule:** *Dressing techniques:* dress the weaker side first. *Undressing techniques:* techniques are always reversed for undressing.

Click [here](#) to see videos showing techniques as to how to dress after a stroke



**General advice:**

- Dressing and undressing should be done in a warm, comfortable environment. This will help you to focus on the task.
- It is recommended to sit on a chair while dressing.
- Contribute as much as you can to the task. ***Do not rush, and rest as needed.***
- Avoid tight-fitting clothes.
- Reduce the amount of clothes worn.
- Choose clothes made from cotton and natural fibres. This is especially important for someone who spends much of their time sitting. These fabrics are also easier to launder.

**Putting on a Sweater/Shirt *Dressing techniques:***

- Lay the garment on your lap or in front of you on a bed, with the back facing upwards.
- Put in your weaker arm first. Pull the sleeve of the sweater or shirt over your elbow. It will prevent the sleeve from falling.
- When the weaker arm is in, place the other arm into the other sleeve.
- Use the strong hand to grip the back of the sweater or shirt and pull it over your head.

***Undressing techniques:*** Remove clothing from your stronger arm first and then from the weaker one. ***Dressing aids:***



• **Button hook:**

If you have difficulty buttoning and unbuttoning, a button hook can be of help.

• **Velcro:**

Velcro fastening, which can be found at local fabric stores can replace buttons on clothing.



- **Long-handled reacher:**

It can help you:

- if you have difficulty reaching clothes that are placed too high, too low, or too far from you – if you use a wheelchair, since it may help you to take clothes out of the closet or pick up objects that are on the floor.

- **Putting on Pants:***Dressing techniques:*

While seated, place the weaker leg in the garment as far down as possible.

- Next, place the strong leg in.
- Bring your pants up to mid-thigh and stand to pull the top of the garment up.

***Extra-care is needed for people who have difficulty with balance when standing.***

A therapist can show you how to dress without standing up if this is safer for you.

For example, put pants on while lying on the bed. ***Undressing techniques:***

- Stand only to pull down lower garments.
- Sit to remove them from you legs.

***Dressing aids:***



- **Dressing stick:**

If you have difficulty getting your leg into the pant, a dressing stick may help you.

- **Footstool:**

If you have difficulty bending and reaching, a footstool may be of help, as it will raise your feet and legs off the floor.- you may need the help of another individual in getting dressed. Speak with a health professional who knows how to make dressing easier after a stroke. This person is usually an occupational therapist,- to prevent falls when bringing pants up, the individuals who has had a stroke should never stand in socks or barefoot.

**Other garments:**



- **Sock aids:**

A sock aid can be of help if you have difficulty bending forward to put on socks or holding your sock with one hand.



- **Long-handled shoe horn:**

A long-handled shoe horn can help you if you have difficulty bending and putting on your shoes.



- **Elastic shoe laces:**

Elastic shoelaces make lacing up shoes easier.



- **Bras:**

Fastening a bra at the front around your waist, then turning it around, followed by placing your arms in can make it easier to put on a bra. Alternatively, you can buy a front fastening bra.



- **Neckties:**

If you have difficulty putting on a necktie: – Do not loosen the tie completely after wearing it so that you can re-use the knot by just slipping it over your head with one hand. – You can purchase a clip that is put on the tie that saves you from having to tie a knot.

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### Which assistive devices can help with preparing meals?

Individuals who have had a stroke may find it difficult to prepare meals. This next section will give you ideas about what assistive devices can be used to make it easier to:



- **Transport Objects:**

A kitchen trolley can be used to transport objects from the kitchen to the dining room table. This is a good product to use to make it safer to carry heavy objects. ***If you choose to use a trolley on wheels, remember that it is not as stable as your walking aid. Make sure***



***that you do not lean on it.*** Home-made or specialized bags can be attached to your kitchen trolley or walking aid and are useful for carrying items. ***If you choose to attach bags to your walking aid, make sure that it is not too heavy as carrying a lot of weight in your bag could make your walking aid tip over.***

- **Use of utensils:**

Adapted utensils can be useful if you find that you are having more difficulty in using your hands after the stroke. Try combined utensils such as a spoon combined with a fork or a fork with a serrated edge. A rocker knife can help you to cut your food with one hand. The rocking motion of the knife makes it easier to cut without stabilizing the food with the other hand. You can also try a cutting board with spikes to stabilize the food while cutting.



- **Making toast:**

You can use a buttering board to make it easier to spread butter on your toast. The raised edges will keep the bread in place while you are buttering it.





- **Making hot beverages:**

To maximize safety, try using a kettle that turns itself off automatically. You can also try to use a kettle tipper which makes it easier to pour hot liquid into a cup with one hand. *In the beginning, pouring hot liquid with one hand can be difficult. It is recommended that you*

*practice using the kettle tipper a few times with a kettle filled with cold water before using it with hot liquids.*



- **Other assistive**

**devices:** Many other assistive devices are available to help you prepare meals. For example, you can use a bowl holder to transfer food from one bowl to another. A can opener that is mounted on the wall makes it easier to open a can with one hand. Finally, you can try a grater with suction feet if you want to prepare cheese with one hand.



**Which assistive devices can help with eating/feeding?**

First, it is important for you to maintain a good position when eating. Sit in a chair that provides good support. If your trunk is weak and you need extra support, you can use pillows, an arm trough for your weaker arm, or a lap board. Good positioning will make it easier for you to swallow your food safely.



- **Use cutlery:** If it is difficult for you to use cutlery because one of your arms is weak, you can use adapted utensils which require the use of one hand.



- **Combined utensils** (fork and knife, spoon and fork): Using these makes it so that you don't need to switch from one utensil to another. These utensils have been created for people who have one strong hand.



- **Rocking knives:** The rocking action prevents you from having to hold the food in place with the other hand allowing you to cut your food with only one hand.

- **Adhesive placemats:** These hold the plate in place. People who have had a stroke often use only one hand when eating. Because they do not have the other hand to hold things down, the plate often moves during cutting or eating. By using a mat like the one in the picture, your plate will stay in one place.



- **Plate guards:** These can help you use utensils without pushing food off of your plate. This is helpful for people who cannot use their second hand to hold the knife.



<http://www.handiplat.fr/>

- **Grasp objects:** If it is difficult for you to grasp objects, you can try:



- **Utensils with built-in or longer handles:** If your hand is weak, these are easier to grasp.

- **Cups with T-shaped handles:** These are easy to hold if you have trouble gripping, since you can simply put your fingers around the handle without closing your hand around it.



- **Attachable handle to add on a glass or soft drink can:** These can help you to hold a glass or a can without having to grasp it. They can be attached to any glass or can.

- **Universal cuff:** These are to hold a utensil in place, making it easier for some individuals who have difficulty grasping utensils. It is possible to make the cuff tighter around your hand so that the utensil will not move.



- **Drink from a glass or cup:** The muscles that you use for drinking and swallowing may be weaker since your stroke. This can cause you to have difficulty drinking. If liquid is leaking out of your mouth when you drink, a straw might help you. You should talk to your health professional if you are having difficulty drinking. There are assessments that he or she will do to see if you are having problems with the muscles that are used for swallowing. A straw-holder may also make drinking easier for you as the straw is fixed into the glass and cannot fall out or move.



This site does not show all the available assistive devices for eating/feeding. There may be additional devices that could be helpful to you. Further information can be found by asking your health care professional or searching on the Internet by typing key words such as "assistive devices" or "assistive technology."

**Which assistive devices can help with using a computer?**

Individuals who have had a stroke may find it difficult to use a computer. This next section will give you ideas about what assistive devices can be used for this task. First, it is important that you consult an occupational therapist if you think that some devices would help you to use your computer more easily. She or he will evaluate your physical and mental capacities as well as your environment, needs, and goals. Based on this evaluation, devices that best fit your needs will be chosen.

- **Accessibility features on your computer's operating system ( i.e. Windows):** These features are free and are already installed on your computer if you are using more recent versions of your operating system. Here are the main ones:
  - **Sticky keys:** This feature was designed for people who have difficulty holding down more than one key at a time i.e. if you can only use one hand to type. Once this function is activated pressing one key only can activate the SHIFT, CTRL, ALT, or Windows logo keys.
  - **Filter keys:** This function can help you if you have difficulty controlling the movements of your hands and fingers. It adjusts the keyboard response so that inadvertently repeated keystrokes are ignored. If you activate it, brief or repeated keystrokes will not be taken into consideration. You can also slow the rate at which a key repeats when you hold it down.
  - **Toggle keys:** When this feature is turned on, you will hear tones when pressing on the locking keys (CAPS LOCK, NUM LOCK, and SCROLL LOCK). A high sound is played when the keys are switched on and a low sound is played when they are switched off. This feature is helpful to someone with visual impairments.
  - **An on-screen keyboard is also available:** This may be helpful for you if typing on a regular keyboard is too difficult. It is a virtual keyboard displayed on the computer screen. It allows you to type by using a pointing device.
  - **A magnifier:** This can be used if you have difficulty reading small characters because of decreased vision. A second assistive device for people with low vision is a narrator which can read out loud what is displayed on the computer screen. It is designed to work with many programs including: Notepad, WordPad, Control Panel programs, Internet Explorer, the Windows desktop, and some parts of Windows Setup. Click on [www.microsoft.com](http://www.microsoft.com) for more information on free accessibility features available to users. Speak to your rehabilitation therapist for additional programs and technologies for using the computer.

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- **Ergonomic equipment:** Ergonomic equipment includes accessories that you can use to help you to maintain a good posture and to be more comfortable while using a computer. Here are a few examples of ergonomic equipment that can be helpful to you:



- **Foot rest:**

A foot rest may be useful if your feet are not in contact with the floor when using your computer. This will help you to maintain a better seating position when working at your computer.



- **Good chair:**

If you are using your computer often, it might be important to buy a quality chair with arm rests, adjustable height, and a back rest. It is recommended that you get a chair without wheels to decrease the risk of falls. Many other types of ergonomic supports are available on the market. You can ask your health

care professional or search on the Internet for more information.



- **Keyboard:**

A contracted keyboard can help you if your weaker arm has limited movement. This keyboard is small enough to be used easily with only one hand. There are also many different on-screen keyboards that are available and that can help you to type more efficiently. They consist of

virtual representations of keyboards displayed on the computer screen. They can also be useful if you are not able to use a regular mouse, since they can be used with other pointing devices, such as a joystick. Many other types of keyboards are available on the market. You can ask your health care professional or search on the Internet for more information.



- **Mouse and other pointing devices:** If the stroke has led to weakness in your dominant hand, you can use the computer mouse with your non-dominant one. Place the mouse on the other side of the keyboard and buttons by going into the control panel of your computer to change the mouse options.

Other types of pointing devices such as trackballs, joysticks, and head pointers are available commercially. You can ask your health care professional or search on the Internet for more information.

### Which assistive devices can help you communicate?

Individuals who have had a stroke may find it difficult to communicate if their symptoms include aphasia (Partial or complete loss of the ability to speak, or to understand spoken language). If this is your case, the use of assistive devices for communication can help you to communicate and interact socially. This next section will give you ideas about what assistive devices can be used to help you communicate. First, it is important that you consult an expert, such as a Speech-Language Pathologist or an Occupational Therapist, in order to choose the right device for you. She or he will evaluate your physical and mental capacities, as well as your environment, needs, and goals. Based on this evaluation, devices that best fit your needs will be chosen. There are two types of assistive devices that can help you communicate:

- **Alternative communication devices** are used for people who cannot speak. They utilize other ways of communication such as gestures and writing.
- **Augmentative communication devices** are used for people who are able to speak, but with some limitations in this type of communication. These devices utilize other ways to communicate to support speech.

Some of the many techniques and assistive devices that help with communication are:

- **Gestures:** You can use gestures and simple signing to make yourself more easily understood by your family members and friends.



- **Communication boards and books:**

These may contain pictures, drawings, letters, words, sentences, and/or symbols that represent objects. If you cannot speak, you can communicate your needs to others more easily with these devices by pointing to a specific symbol.





- **Electronic devices:** These produce speech when you activate the device, either by using a keyboard, switches, or other methods. There may be additional devices that could be helpful to you. Further information can be found by asking your health care professional or searching on the Internet by typing key words such as “communication” or “augmentative communication”.

**Which assistive devices can help with leisure activities (cards, golf, fishing, etc.)?**



**Cards:**

Card shuffling is easier with an automatic card shuffler. With a cardholder, you can give your hand a break when it feels tired.



The cardholder is a useful way of playing cards with only one hand.



• **Gardening:**

You can sit on a stool instead of kneeling. If you purchase a garden hopper (see picture) you can push with your feet to move around. A specially designed garden tool may also be helpful if your arm is weaker after your stroke. For example, the extra support offered by an arm cuff on garden tools makes gardening less strenuous. Look for a handle that is comfortable and easy for you to grasp.



• **Embroidery:**

If you enjoy embroidery, don't stop just because you have limited use of one hand. An embroidery hood holds the fabric and twists to a convenient angle.



- **Fishing:**

A fishing rod holder straps the fishing rod to your body so you can troll and cast with one strong arm. The fishing rod can also be attached to a wheelchair.



- **Golf:**

You can tee a golf ball standing with a tee tool. A claw is useful to pick up a ball so you do not have to bend down as much. With a specialized golf glove, your golf club is attached firmly with Velcro fastening and allows a controlled swing even if you now have a weak grip.

### Who can teach me how to use assistive devices?

Different health care professionals focus on assistive devices in their field:

- **Hearing specialists (audiologists):** For hearing aids such as sound magnifiers.
- **Low vision specialists:** For visual aids such as glasses, magnifiers, etc.
- **Speech-language pathologists:** For communication aids.
- **Physical therapists:** For mobility aids such as canes and walkers.
- **Occupational therapists:** For wheelchair fittings, devices to help things you do everyday activities such as feeding, dressing, toileting, grooming, cooking, and adaptations to help you continue with your hobbies.

You can always ask any health care professional with whom you are in contact and they will refer you to the right health professional.

### Where can I find assistive devices?

Before you decide to buy an assistive device (especially an expensive one) it is usually better to ask the advice of a health professional. They can guide you in choosing an appropriate model, help to make sure the device will be useful to you, and most importantly, to minimize risk of injury. You might be able to buy some simple assistive devices, such as a dressing aid, in the hospital or rehabilitation

center where you are receiving treatment. Usually, the occupational therapist will have a list of companies supplying assistive devices in your area. There are many private companies who sell different kinds of assistive devices. In addition to your healthcare provider, the Internet is a valuable source of information.

### How much do assistive devices cost?

It is difficult to put a price range on assistive devices because there are many different kinds, and the cost varies from country to country. A long-handle sponge might cost less than 15\$, while a powered wheelchair can cost more than 3000\$ Canadian.

- **Are they covered by my insurance company or other governmental programs?** If you have private insurance, contact your insurance company to find out your personal coverage information as different plans vary. Governmental programs also provide some coverage on assistive devices. Ask your healthcare professional for details. Note: In Canada, programs vary by province.

### Which assistive devices can help with going back to work?

It is possible to go back to work after you have had your stroke. Depending on the type of work you want to do, there are many assistive devices that may help you. Assistive devices for driving, walking and communication can help make the transition back to work more successful. Your healthcare provider can assess your needs and can help you choose the proper assistive devices.

*Information on this web site is provided for informational purposes only and is not a substitute for professional medical advice. If you have or suspect you have a medical problem, promptly contact your professional healthcare provider.*