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# **Leg Amputation and Peripheral Vascular Disease**

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# Table of Contents

	<b>Page</b>
Why do I need my leg amputated? .....	1
About your surgery.....	1
Before your surgery.....	1
The day before your surgery.....	2
The day of your surgery .....	2
After your surgery .....	3
During your hospital stay .....	3
(Stump wrapping, pain, emotions, diet and exercise)	
How long will I be in hospital?.....	16
Rehabilitation after surgery .....	16
When you are at home.....	17
What are the signs of an infection?.....	17
Constipation .....	18
When can I return to work?.....	18
When can I drive? .....	18
When should I see my doctors for follow-up?.....	19
Community supports .....	19
Staying safe in your home.....	19
Healthy living guidelines .....	22
Questions.....	23



## **Why do I need my leg amputated?**

You have a narrowing or blockage in the arteries that supply blood to your leg. This means there is not enough blood going to your leg. Your surgeon has decided that it is not possible to increase the flow of blood to your leg so you need to have your leg removed, called an amputation.

This handout gives information about your surgery, what to expect from surgery, how to prepare for it and what to expect after surgery.

If you have any religious beliefs about having a leg amputation, please talk to your surgeon before your surgery.

## **About your surgery**

Your surgeon will decide whether you need an amputation below or above your knee. There are benefits to both types of surgery and your surgeon will explain the difference.

You will be given either a general anesthetic (you will be asleep) or an epidural (you will be awake) during the surgery. Your anesthesiologist and surgeon will choose what is right for you.

The surgery usually takes 1 to 2 hours.

## **Before your surgery**

You will attend the Pre-Op Clinic about 1 week before your surgery.

At this visit you will:

- have blood work, a heart test called an ECG and a chest X-ray
- see a nurse who will take your health history and go over your medications with you. Please bring all medications with you to this appointment.
- receive information about what time to come to the hospital and what medications to take at home before you come in.
- meet with an anesthesiologist who will review the types of anesthetic available for this surgery.

**Please feel free to ask any questions or talk about any concerns you have during this visit.**

## **The day before your surgery**

Take a shower the night before with the special scrub you got in the Pre-op Clinic. Do not eat or drink anything after midnight unless you were told otherwise at the Pre-op Clinic.

## The day of your surgery

Bring a housecoat and slippers with you to the hospital. Your family can bring anything else you may need after your surgery. This includes a toothbrush, toothpaste, shampoo, soap, lotion and deodorant.

Go to Admitting the day of your surgery. From there you will be taken to Same Day Surgery. In Same Day Surgery you will be asked to change into a hospital gown. An intravenous (IV) line will be started in your arm to give you fluid and medication. You will meet your anesthesiologist. From there you will be taken into the operating room. Your family can wait in the waiting rooms on the 3rd floor.

In the operating room you will meet the nurses who will be providing care during your surgery. They will position you on the operating table. Your skin will be prepared with a cleaning solution and you will be covered with special drapes and blankets. Tell the nurses if you are uncomfortable.

If you are having an epidural it will be put in at this time. During the surgery you should not feel any pain. Tell the anesthesiologist or the nurses if you feel pain.

## After your surgery

After surgery you will be taken to the Post-Anesthetic Care Unit (PACU) for a couple of hours. From there you will be taken to 5 West.

The nurses on 5 West will check your blood pressure and incision sites a number of times throughout the night. You may have a splint on your leg to help keep your knee straight. You will likely wear the splint while you are in the hospital. Your doctor or therapist will tell you when you no longer need to wear the splint.

The next day you will begin having a regular diet. Your IV will be removed after you are eating and drinking well.

You may have a catheter in your bladder after surgery to collect urine. The catheter is removed within a day or two after you are able to move around. The health care team will help you get to the bathroom as needed. **Do not get out of bed without help.**

## **During your hospital stay**

### **How do I care for my stump?**

Your amputated leg is called your stump. Your nurse or health care aid will help you wash your stump every day with warm water and mild soap once the incision has started to healed.

#### **Do**

- ✓ Wash your hands before touching your stump.
- ✓ Rinse the soap off your stump well. Pat dry with a towel.
- ✓ Use cotton swabs to clean any skin folds.
- ✓ Check the skin of your stump each day. Use a hand mirror to check the skin on the back of your stump.
- ✓ Check your stump for signs of pressure or infection, such as swelling, redness, bruising, open cuts or scrapes or hot spots. Let your doctor, nurse or therapist know if you see changes.
- ✓ Touch or gently massage your stump regularly to decrease the sensitivity. It is important that you become comfortable with touching your stump.

#### **Do not**

- ✗ Put lotion on open areas or broken skin. If your skin is dry and flaky, ask your nurse if you can rub a small amount of mild, non-greasy skin lotion on healthy skin at night.
- ✗ Put any chemical or strong ointments on your stump.
- ✗ Expose your stump to extreme temperatures.
- ✗ Use a heating pad or ice on your stump.
- ✗ Touch open or broken skin – your stump could become infected.



### **When will the staples be removed?**

Your staples will be removed 14 to 21 days after surgery by either your surgeon or your family doctor.

### **What should I know about wrapping my stump?**

Your stump may be wrapped with an elastic bandage after the thick dressings are removed, depending on how well your stump is healing. Your health care team will decide when it is appropriate to start stump wrapping.

Proper wrapping helps to support the soft tissue of your stump, prevents swelling and shapes your stump to fit a prosthesis (artificial leg).

At first, your nurse or physiotherapist will wrap your stump. When you are ready, he or she will show you how to wrap the stump yourself. You can also learn by watching other people wrap their stumps.

You will be given a handout with pictures to show you the steps to follow to wrap your stump.

Wear your elastic bandage all the time, except when you are washing your stump or checking the skin. During the day, take your elastic bandage off every 3 to 4 hours for 15 minutes. Use this time to check your skin for signs of pressure. You can also gently massage your stump at this time.

Keep the elastic bandage on at night while you sleep. This helps control swelling. Swelling makes it hard for you to fit your stump into a prosthesis.

Wrap your elastic bandage firmly at the bottom of your stump. Use less pressure as you wrap the bandage towards the top of your stump. If the bandage is too tight at the top, you may decrease the blood flow to your stump. Your bandage may be too tight if your stump feels cool or is painful. If so, you must rewrap your stump until it feels comfortable.

There must not be any wrinkles or folds in the bandage. This can cause added pressure on your skin.

Secure the bandage with masking tape. Do not use pins or clips as they can scratch your skin.

## How do I care for the elastic bandage?

Hand wash your bandage weekly, or more often if dirty. Wash it in warm water with a mild detergent such as Woolite or Ivory Snow. Rinse it well, until the water is clear.

Lay the bandage flat to dry, away from direct heat.

- ✗ Do not wash your bandage in the washing machine or use the dryer. This can destroy the elastic in your bandage.

## Will I have pain?

You may feel different kinds of pain after your amputation.

- **Stump or incisional pain** – tenderness in your stump, around the area where the skin was cut to operate.
- **Phantom sensation** – tingling, pressure, itching, or tickling in the part of your leg that has been removed. When it is severe, it may be called nerve pain.
- **Nerve or neuropathic pain** – mild to severe burning, squeezing, cramping, or stabbing pain in your stump or in the missing portion of your leg. You may feel as if an electric current flashes through your leg, which may cause your leg to jump.

Tell your doctor, nurse, or therapist if you have pain. Depending on the type of pain you have, different medications can be used to control it.

Take your pain medications before your pain is severe. When you have pain it is hard to sleep, eat or exercise. Take just enough to be comfortable. Too much pain medication may cause drowsiness, confusion, and constipation.

Narcotics such as codeine and oxycodone can cause constipation. Plain acetaminophen (Tylenol®) or ibuprofen do not cause constipation. See page 18 for information on constipation.

## **Is it normal to feel upset and sad?**

Yes. The amputation of a leg is a major loss. It is similar to the death of a good friend or family member. When you are grieving this loss, you may feel many different emotions such as:

- denial
- anger
- frustration
- fear
- sadness
- guilt
- depression
- hopelessness
- relief

It is very common to feel many of these emotions at the same time. Although these emotions may be uncomfortable, experiencing them may help you to adjust to your amputation.

Having an amputation may require changes in the way you live. Worrying about these changes places stress on you and your family. Stress can cause you to feel tense, sad or hopeless.

Everyone has his or her own way of adjusting to an amputation. You are not alone in learning to cope with your amputation. Sharing your feelings with others may help to ease the stress you are feeling. You can contact Chedoke Amputee Peer Support (CAPS) by calling 905-521-2100, ext. 77575 to talk to others who are in a similar situation. You may find it is helpful just to listen to their experiences.

Families are also affected by amputations. They may feel many of the same emotions you are feeling. Sharing your concerns and information about your progress with your family helps them to support you as you become more independent.

A social worker is available to meet with you. He or she will help you adjust to the amputation or help with other personal issues that may be affecting your ability to cope.



### **Do I need to change my diet?**

You may need to change your diet. The types of food you eat after an amputation is important. You will need to eat enough calories and protein to help your wound heal, maintain your immune function and prevent an infection.

It is also important to drink enough fluids. You may need to see a dietitian to discuss your need for nutrition drinks (such as Ensure and Boost) and extra vitamins, minerals or both.

### **Will I need to change any of my personal care routines?**

Yes, you may need to change your routines. After an amputation you may sweat more because:

- you have lost some skin surface
- exercise and walking take more effort

Showering or bathing increases your blood circulation. This can slightly increase the size of your stump. It is better to shower or bathe in the evening rather than the morning. You should apply your bandage to the stump following bathing to control the swelling.

You may need to learn different techniques for bathing and dressing. An occupational therapist will help you adjust to doing your personal care from a wheelchair or seated position.

### **What exercises can I do?**

These are exercises you will learn in the hospital to help maintain your muscle strength and range of movement.

Do all of the exercises that your therapist has put a check mark ✓ in the boxes [ ] on the next few pages.

Do each exercise 10 times, unless you were told something else. Repeat the whole set of exercises 2 to 3 times a day.

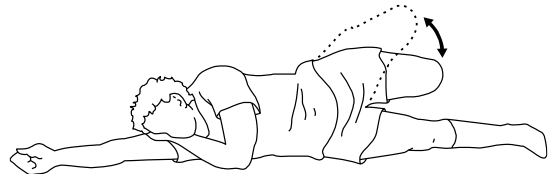
## Leg exercises for your stump

### [ ] Exercise #1 – Hip Abduction, in side lying

Lie on your side. Your stump should be on top.

Slowly lift your stump upward. Be careful not to roll your hip backward.

Slowly return to the starting position and relax.

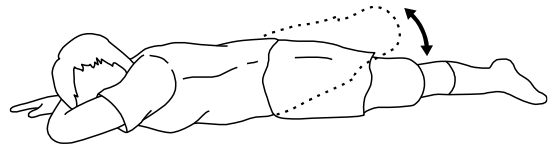


### [ ] Exercise #2 – Hip Extension, in lying

Lie flat on your stomach with your arms folded under your head.

Keep both legs straight and close together.

Lift your stump off the bed as high as you can without your stomach lifting off the bed.



### [ ] Exercise #3 – Straight Leg Raise (Hip Flexion)

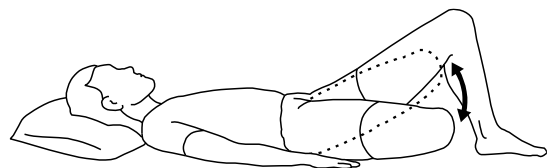
Lie on your back.

Keep your stump straight and bend the other leg. Keep your legs close together.

Straighten your stump as much as possible, tightening the muscles on top of the thigh.

Raise your stump off the bed approximately 4 inches (20 cm) and hold for 5 seconds.

Slowly return to the starting position and relax.

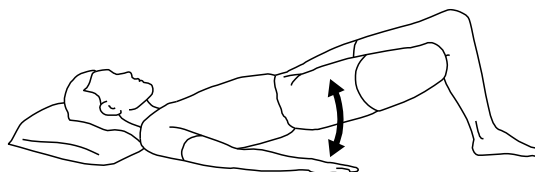


**[ ] Exercise #4 – Bridging**

Lie on your back with your knee bent and your foot flat on the bed.

Using your hands for balance, push down with your foot and lift your buttocks until your hips straighten completely.

Rotate the hip of your stump side in an upward direction until both of your hips are of equal height.



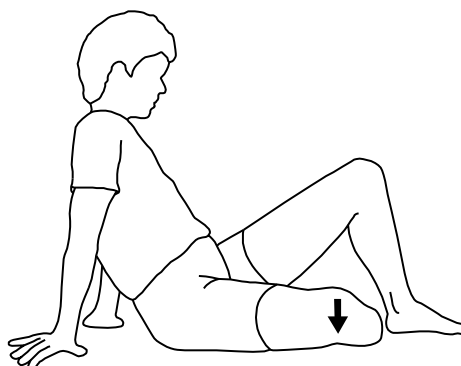
**[ ] Exercise #5 – Quadriceps Set**

Lie on your back or lean back on your arms.

Keep your stump straight and bend the other leg. Keep your legs close together.

Straighten the knee on your stump as much as possible, tightening the muscles on top of the thigh.

Try to press the back of your knee into the bed. Hold for 5 seconds, then relax.

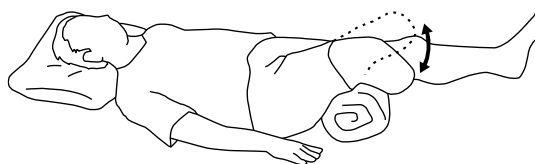


**[ ] Exercise #6 – Quads over a Roll (Knee Extension)**

Lie on your back with a large towel roll under the knee of your stump and the other leg straight on the bed.

Straighten the knee of your stump and hold for 5 seconds.

Slowly return to the starting position and relax.



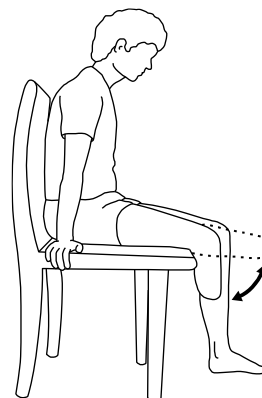
**[ ] Exercise #7 – Knee Extension, in sitting**

Sit up straight at the edge of your bed, chair or wheelchair.

Put your hands at your side for support.

Straighten the knee of your stump completely and hold for 5 seconds.

Slowly return to the starting position and relax.



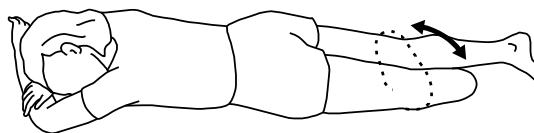
**[ ] Exercise #8 – Hamstring Curls (Knee Flexion)**

Lie flat on your stomach with your arms folded under your head.

Keep your legs straight and close together.

Slowly bend the knee of your stump, bringing it toward your buttocks.

Slowly return to the starting position and relax.



## Leg exercises for the other leg

### [ ] Exercise #9 – Ankle Pumps

Lie on your back. Without moving your knees, pull your foot and toes up towards your head as far as possible.

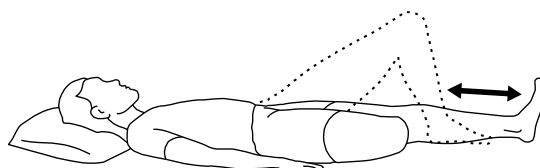
Next point your foot and toes down as far as possible.

Hold each position for 5 seconds.



### [ ] Exercise #10 – Hip and Knee Flexion and Extension

Lie on your back. Bend and straighten your leg.



### [ ] Exercise #11 – Quads over a Roll (Knee Extension)

Lie on your back. Rest your stump out straight on the bed.

Place a large towel roll under the knee of your other leg.

Exercise the leg by straightening your knee and lifting your foot off the bed.

Hold for 5 seconds.

Slowly return to the starting position and relax.

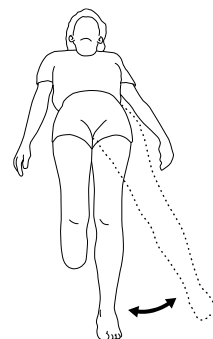




**[ ] Exercise #12 – Hip Abduction, in lying**

Lie on your back. Keep your toes pointing up.

Slowly bring your leg out to the side and then back to the middle position.



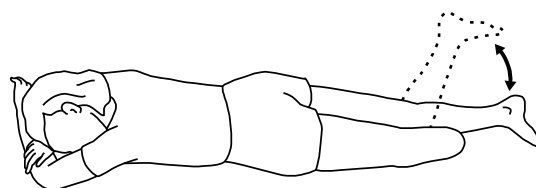
**[ ] Exercise #13 – Hamstring Curls (Knee Flexion)**

Lie flat on your stomach with your arms folded under your head.

Keep your legs straight and close together.

Slowly bend the knee of your leg (not stump side), bringing it toward your buttocks.

Slowly return to the starting position and relax.



**[ ] Exercise #14 – Knee Extension, in sitting**

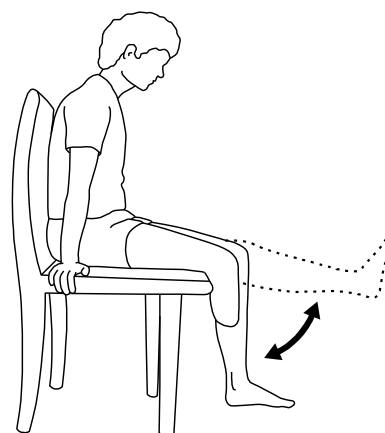
Sit up straight at the edge of your bed, chair or wheelchair.

Put your hands at your side for support.

Pull your toes up, tighten your thigh muscle and straighten your knee.

Hold for 5 seconds.

Slowly return to the starting position and relax.



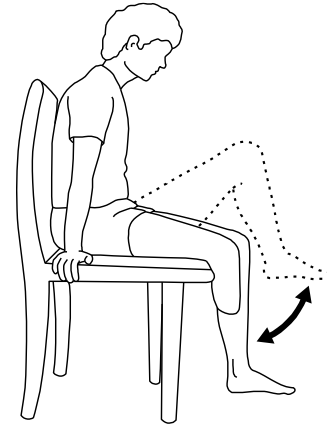
**[ ] Exercise #15 – Hip Flexion, in sitting**

Sit up straight at the edge of your bed, chair or wheelchair.

Put your hands at your side for support.

Slowly lift the thigh of your leg (not stump side) up off the seat, keeping the knee bent.

Slowly return to the starting position and relax.



## Arm exercises

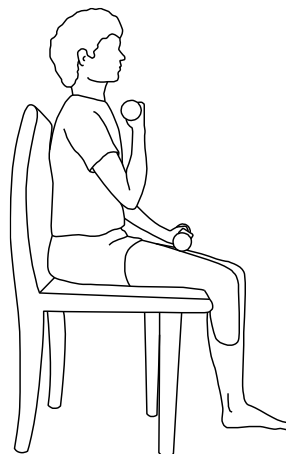
### [ ] Exercise #16 – Biceps (Elbow Flexion)

Sit up straight at the edge of your bed, chair or wheelchair.

Let your arms hang down. Turn your palms forward.

Bend then straighten one elbow, then the other elbow.

You may do this exercise while holding a \_\_\_\_ kg weight.



### [ ] Exercise #17 – Triceps (Elbow Extension)

Sit up straight at the edge of your bed, chair or wheelchair.

Bring the arm to be exercised up with the elbow pointing to the ceiling.

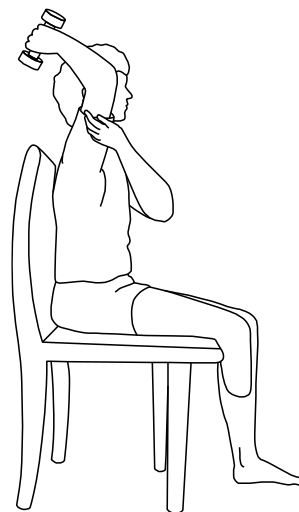
Support the elbow with the other hand.

Straighten the arm with toward the ceiling.

Slowly return to the starting position and relax.

After your 10 repetitions, do not forget to repeat this exercise for the other arm.

You may do this exercise while holding a \_\_\_\_ kg weight.

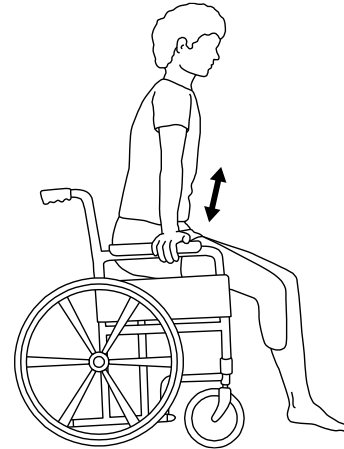


### [ ] Exercise #18 – Wheelchair Push-ups

Rest your hands comfortably on top of the armrests of the wheelchair.

Push downward into the armrest, straightening your elbow, raising your buttocks off the wheelchair.

Pause and slowly lower yourself to the resting surface.



## How long will I be in hospital?

If everything goes well, you may leave the hospital, also called discharge, 4 to 7 days after your surgery.

When you leave the hospital, you will need to have help at home for the first few weeks. You will also need equipment like a commode, walker and wheelchair.

If you need to use stairs in your home, you will need to learn how to safely travel on the stairs or make arrangements in your home so that you do not need to use them. This may increase your hospital stay.

You may go home before you enter a rehabilitation program for prosthetic fitting and training.

## Rehabilitation after surgery

There are many factors that affect your ability to take part in rehabilitation programs. The rehabilitation specialists will decide the type of rehabilitation program you will need with input from your health care team, yourself and your family.

## **When you are at home**

- Do your exercises every day.
- Plan for several rest periods during the day.
- Increase activity daily.
- Avoid caffeine and other stimulants before bedtime.
- Take showers. Do not soak in the tub until after your staples have been removed.
- Some stump swelling is normal after surgery.

## **What are the signs of an infection?**

Signs of infection are:

- redness or heat along the incision
- green, yellow or white drainage from your incision
- opening of your incision
- fever and chills or flu-like symptoms with any type of drainage from your incision

**If you have any signs of infection, call your family doctor or surgeon right away.**

## Constipation

You will be given a prescription for pain medication. Sometimes these medications cause constipation.

### **Tips to prevent constipation at home:**

- Add fibre to your diet. It is a good way to prevent or treat constipation. Foods that have fibre include whole grain breads, cereals, bran, rice, pasta, fruit, vegetables and legumes such as kidney beans, chick peas and lentils.
- Drink at least 1½ litres (6 cups) of fluid a day, unless told otherwise by your doctor or health care provider. This will help you to have a soft stool.
- Include exercise and activity to help your bowels move.

If you have questions or concerns talk to your family doctor or pharmacist.

## When can I return to work?

Your surgeon and your rehabilitation specialist will inform you when you may return to work. You should expect to be off of work for at least 6 to 8 weeks. You may need to modify your work environment.

## When can I drive?

Do not drive until you have talked to your surgeon or rehabilitation specialist about their recommendations for driving.

You will need to talk to a member of your health care team if you need forms completed for DARTS (Disabled And Aged Related Transportation System) and MTO (Ministry of Transportation of Ontario) handicap parking permits.

## **When should I see my doctors for follow-up?**

You will be given an appointment card at the time of discharge. It will indicate all of your follow-up appointments.

## **Community supports**

Supports in your community may include:

- Meals on Wheels
- Hamilton Niagara Haldimand Brant Local Health Integrated Network (HNHB LHIN) - formerly Community Care Access Centre (CCAC)

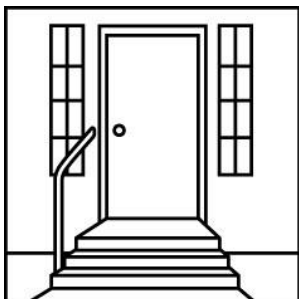
## **Staying safe in your home**

A safe home is important for everyone. A large number of accidents in the home are a result of falls.

Reading this information can help you.

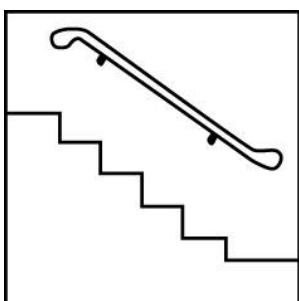
- recognize potential dangers, and
- take action to prevent accidents in your home

### For the entrance



- Install at least one railing if there are several steps.
- Keep the steps and landing free from dirt, snow and ice.
- Keep outside walkways clear and in good repair.

### Inside stairways



- Install at least one handrail that extends beyond the top and bottom steps.
- Keep stairs free of clutter.
- Use non-slip treads if the stairways are slippery.

### Living room



- Select stable chairs that are a good height for you to get up from. Avoid rockers, chairs with wheels, and low, soft sofas.
- Arrange your furniture for clear, safe walking or wheeling.
- Keep things you use often within your reach.

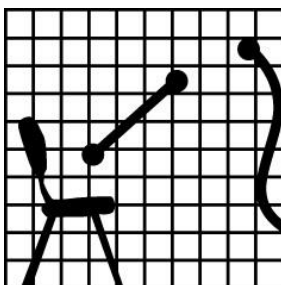


## Kitchen



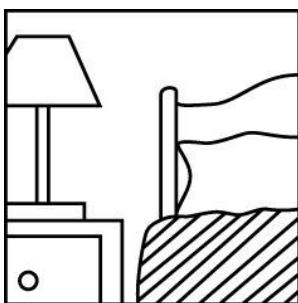
- Store items you use the most within easy reach, preferably between knee and shoulder height.
- If you use a walking aid, look for a safe way to lift and carry items.
- Keep a fire extinguisher in the kitchen.

## Bathroom



- Use a non-slip bathtub mat or non-slip strips in the tub or shower.
- Do not stand in the tub or shower on one leg.
- Bath seats, shower hose extensions and grab bars can help you bathe safely by yourself. Your occupational therapist can help you choose the right equipment.

## Bedroom



- Use a commode chair or a urine bottle beside the bed rather than getting up to go to the bathroom during the night.
- Keep a light handy beside your bed.

### **More safety ideas**

- Make sure there is enough light in your home and stairways.
- Keep electrical and long telephone cords well away from walking or wheeling areas.
- Use smoke detectors.
- Consider using a cordless phone for example, in your bathroom, basement or backyard.
- Plan ahead and conserve your energy. Never try to do a chore when you are tired. You are more likely to have an accident when you are tired.
- If you live alone, plan in advance for emergency situations.
- Remove all loose scatter rugs. If you want to cover your floors, choose a dense, short pile carpet.
- Do not have highly waxed floors.
- Wear footwear at all times when you are up.

**If you have any questions about making your home safer,  
please talk with your occupational therapist.**

## Healthy living guidelines

- Stop or reduce smoking if you smoke. Talk to your family doctor or health care provider if you want to quit and need help.
- Eat a balanced diet. Ask to talk with a dietitian if you need help.
- Exercise daily.
- Clean and dry your skin every day.
- Check your skin for changes every day.
- Manage diabetes, if present, so blood sugars are kept within range as prescribed by your family doctor or health care provider.
- Manage other medical conditions such as high blood pressure or seizures as prescribed by your family doctor or health care provider.
- Keep follow-up visits with your surgeon, family doctor and prosthetic clinic.

## Questions

You may keep track of your questions here and ask your family doctor, nurse or therapist at your next visit.

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