

Below Knee Amputation: Post-op Information

This package contains information to help as you begin the recovery process following your amputation. The topics included are:

- **Emotions following an amputation.**
- **Information about pain management following amputation.**
- **Instructions about activities and exercises to help you maximize your potential for using a prosthesis in the future.**
- **How to care for your amputated limb and your remaining limb.**
- **Healthy living guidelines.**

You are a part of the health care team. Your participation in your recovery will help you to return to being able to manage your day-to-day activities independently.

After the Amputation

As a new amputee it is normal to experience a variety of emotions following surgery. You may feel sad and even depressed. If you have suffered intense pain for a long time before surgery you may feel relieved despite the loss of your limb. All of these emotions are normal. Regardless of the nature of your limb loss, feelings of depression will soon be replaced by the will to once again resume an active lifestyle.

Depression is not the same for everybody. Some people describe depression as a feeling of emptiness and despair. Others experience an overwhelming sense of helplessness, hopelessness or anger. Some people don't act out emotionally, but may feel apathetic or even restless.

If you are struggling with the loss of your limb you may benefit from counseling to help you work through the 5 stages of grief. Below are the 5 stages of grief. Reading through these stages may help you understand where you are at in the acceptance of your loss.

- Denial and Isolation
- Anger
- Bargaining
- Depression
- Acceptance

If you are having trouble working through the acceptance of losing a limb and you would like help from a social worker, counselor or psychologist, please ask your physician or therapist to refer you to someone who can help. How well you do during the limb loss rehabilitation process can depend a lot on your ability to accept your loss.

Wound Management

After the amputation there will be a post-operative dressing on your amputated limb (residual limb). The purpose of the dressing is to help control swelling, protect your incision and promote wound healing. You may also have a drainage tube in place to remove fluids and help with healing. Your health care team will take care of these dressings for you.

Your role in wound management includes the following:

1. Notify your nurse if your dressing becomes soiled or you notice any leakage of drainage.
2. Wash your hands well with soap and water or hand sanitizer if you come in contact with drainage.
3. Make sure everyone who comes in contact with your wound wears gloves and washes his/her hands before and after a dressing change.
4. Be careful when moving in bed, getting in and out of bed to avoid dislodging dressings or drainage tubes.
5. Notify the nursing staff if dressings become loose or dislodged.
6. Eat a good diet. Tissues cannot heal without good nutrition.
7. Tell your health care team if you experience pain during the care of your wound. By working together, you and your rehab team can establish a medication schedule that will minimize your discomfort during dressing changes.

Pain Management

It is normal to feel some pain following an amputation. This is the result of the surgical trauma to bone, nerve, and soft tissue. As with any major surgery postoperative pain can be expected to resolve in the first few weeks. This pain is often described as sharp, is localized to the surgical site. It resolves as the edema decreases and wound heals. In the immediate postoperative period the primary method of pain control is medication.

Your health care team will help you with other activities to manage pain. This may include the use of compression garments, exercises and other therapeutic activities.

It is not unusual following an amputation to experience sensations in the limb that is gone. This is normal. If these sensations are painful, let your health care team know. There are specific medications and therapeutic activities that may help with this kind of pain.

Managing pain is important. If you are in pain you will be less willing to do the things you need to do to maximize your recovery.

Early Rehabilitation:

There are several rehabilitation goals in this first phase of your recovery including:

- Regaining functional mobility.
- Stretching, strengthening and conditioning.
- Residual limb management.

It is important to work hard at the exercises recommended to you by your health care team. Doing so will maximize your independence and wellbeing. As well, if it is your goal to use a prosthesis it is vital that you strength, flexibility, endurance and overall condition are maximized.

1. Functional Mobility:

Your health care team will help to you learn how to move independently in bed, to get out of bed, and to move to a variety of locations. Following their advice with help you to be safe and independent.

2. Stretching, Strengthening and conditioning:

If your goal is to use a prosthesis it is vital to have adequate range of motion and strength. Keeping your residual limb in the right position prevents muscle shortening and tightening (**contracture**), which prevents full range of motion. To avoid contracture, you must stretch and strengthen your hips and knees every day.

Whether you go on to use a prosthesis or not having good strength and flexibility will make day-day activities easier, safer and will maximize your independence.

Following the exercise and positioning instructions in this document will help you achieve your goals.

3. Residual Limb Management:

Swelling: It is normal to have swelling in your residual limb in the early days. In order to proceed to using a prosthesis it is vital to have a well shaped residual limb. There are several shaping methods used for the below knee amputee.

- Tensor bandages are a traditional method. However, tensor bandages can be difficult to apply correctly. An incorrectly applied tensor may cause more harm than good. This method should only be used when you or a caregiver is able to independently and safely do the technique.
- Elastic stockinette socks can provide early compression to begin shaping your below knee residual limb. These should be removed and reapplied at least 4 times per day. The sock should be pulled above your knee and all wrinkles should be smoothed out.

- Manufactured shrinker socks can be measured and ordered from a prosthetist (leg maker). These should be removed and reapplied at least 4 times per day. The sock should be pulled above your knee and all wrinkles should be smoothed out.

Your therapist(s) will teach you about the shaping method that is best for you.

No matter which method is used there are some key rules to follow:

- ✓ Cover the entire residual limb.
- ✓ Socks must be pulled up well enough to touch the bottom of the residual limb (no pockets at the end)
- ✓ Socks (or tensors) must go above the knee. If you stop below the knee you may cause abrasions behind the knee or cut off circulation.
- ✓ Remove and re-apply your sock (or tensor) at least 4 times per day.

Desensitization: Your residual limb may be sensitive to touch. Desensitization can help. While your wound is healing you will need to avoid this area. However, you can begin to touch, massage and tap your residual limb using different items. (your hands, towel, brush, ice cube). Begin with a light, gentle touch. As your tolerance improves, slowly increase pressure.

Scar Mobilization: When your incision is healed and only has very small scabs. Gently massage the tissue near your incision using a hypoallergenic moisturizer.

Daily Limb Care and Hygiene:

Being clean is important for avoiding skin problems and infection. You should do the following activities daily.

- ✓ **Wash hands frequently:** Especially before and after touching your residual limb. Use warm water and mild soap or hand sanitizer.
- ✓ **Your amputated (residual) limb:**
 - While your wound heals you will need to be careful around your dressing.
 - Wash your residual limb with a soft cloth (baby face cloths are recommended).
 - Avoid rubbing.
 - Do not soak the limb.
 - Pay close attention to the skin behind your knee and on the bottom of your residual limb.
 - Pat dry with a clean, soft towel.
 - Once your wound heals use a moisturizer daily.

- ✓ **Your remaining limb:**
 - Check the your leg and foot twice daily.
 - **Seek medical attention if you notice any cuts, changes in your skin colour, or temperature.**
 - Wash your leg and foot daily using a soft cloth, again avoid rubbing.
 - Pat dry with a clean, soft towel.
 - Use a moisturizer daily.

Healthy Living Guidelines and Helpful links:

- ✓ Stop Smoking. Discuss with your health care team or Family Doctor if you want to quit and need help or use Smokers Helpline (www.smokershelpline.ca) 1-877-513-5333.
- ✓ Eat a balanced diet. Ask your health care team or Family Doctor to speak to a dietician.
- ✓ Manage your diabetes: **Waterloo Wellington Diabetes**
 - Provides valuable information for people and families living with diabetes
 - Website: <http://www.waterloowellingtondiabetes.ca/>
 - Email: info@waterloowellingtondiabetes.ca
 - 519-653-1470 x372
- ✓ Have regular follow-up visits with your Family Doctor.
- ✓ **War Amps:**
 - Adult Amputee Program: toll-free phone number 1-877-622-2472.
 - Website: www.waramps.ca
 - Email: nac@waramps.ca
 - Request literature regarding amputees and the “Disability Tax Credit Documentation Package”
- ✓ **Amputee Coalition of Canada: Peer Visiting Program:** Receive a visit from another amputee who has been trained & is a member of the Peer Visiting Program. 1-866-611-2677
 - Website: www.amputeecoalitioncanada.org
 - Email: [peervisitor @ amputeecoalitioncanada.org](mailto:peervisitor@amputeecoalitioncanada.org)

CCAC (Community Care Access Centre) for Waterloo Region 519-748-2222

If you wish to consider using a prosthesis you will be referred to a specialized amputee team. They will help guide you through the next steps of your recovery.

YOUR DAILY EXERCISE PROGRAM FOLLOWS

DAILY EXERCISES AND POSITIONING

POSITIONING IN BED: Keep your residual limb close to your other leg and flat on the bed. Do not prop it on pillows/blankets.

Prone lying



It is important to stretch the front of your hips every day.

Start by lying on your stomach for 5 minutes. Increase this as tolerated to 15 minutes.

If you are not feeling a stretch to the front of your hip you can put a rolled towel under the end of your residual limb.

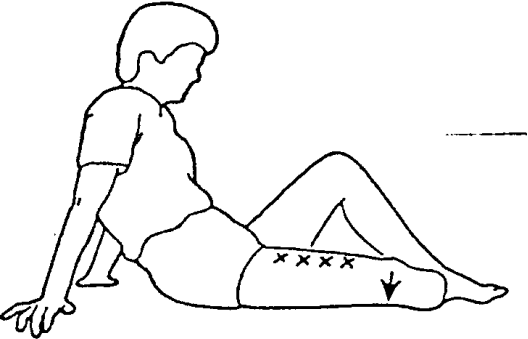
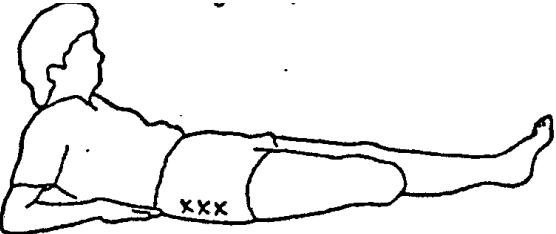
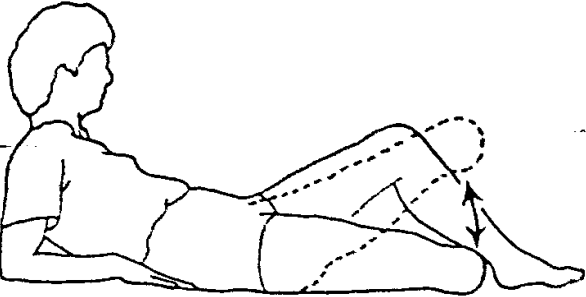
15 minutes, 3 times each day.

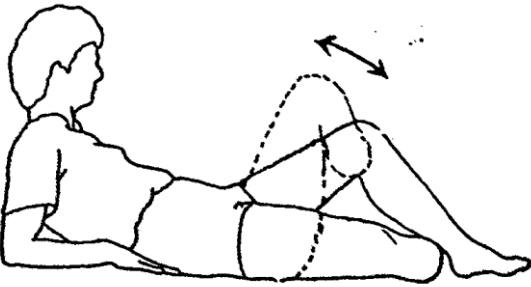
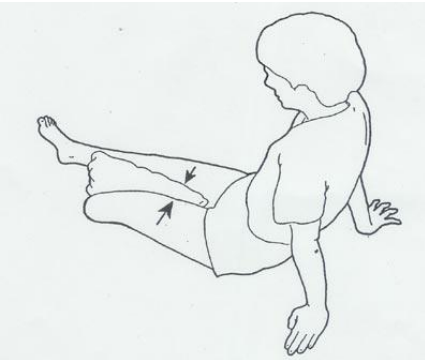

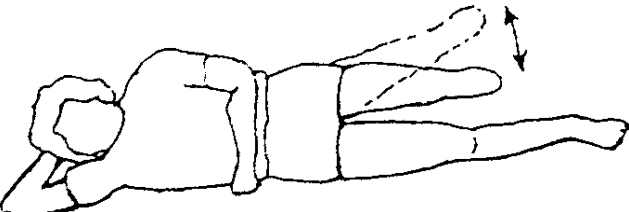
POSITIONING IN YOUR WHEELCHAIR: Your occupational therapist will help you with achieving comfortable seating in a wheelchair. Your wheelchair will be equipped with a “stump board” to prevent your residual limb from dangling. It is very important that you use this board whenever you are in the chair.



Take regular rest from being in your chair to stretch your hips.

EXERCISE INSTRUCTIONS:

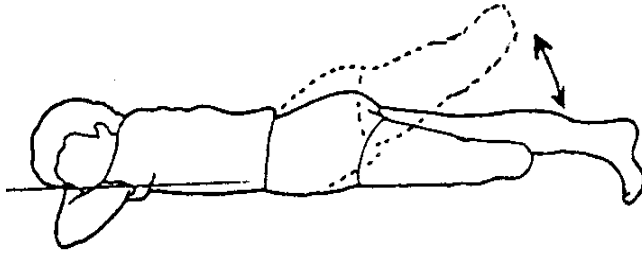
<u>Lying on your back</u>	
<p><input type="checkbox"/> Static quads</p> 	<p>For comfort, bend unaffected knee up. You may also place a rolled towel under the end of your residual limb.</p> <p>Tighten your quad muscle on the top of your thigh to straighten your knee as much as possible.</p> <p>Hold for 10 seconds. Return slowly to the starting position</p> <p>Repeat 8-10 times.</p>
<p><input type="checkbox"/> Glut squeeze</p> 	<p>With both legs straight, squeeze your buttocks together. You should feel as if your hips are lifting slightly off the bed.</p> <p>Hold for 5 seconds. Return slowly to the starting position.</p> <p>Repeat 8-10 times.</p>
<p><input type="checkbox"/> Straight leg raise</p> 	<p>For comfort, bend your unaffected knee up. Keep residual limb straight and lift your leg up about 4 inches.</p> <p>Hold for 5 seconds. Return slowly to the starting position.</p> <p>Repeat 8-10 times.</p>

<p><input type="checkbox"/> Knee bends</p> 	<p>Bend affected knee up towards your chest until you feel a gentle stretch in your knee. You can hook a towel under your knee to help pull your leg up.</p> <p>Return slowly to the starting position.</p> <p>Repeat 8-10 times.</p>
<p><input type="checkbox"/> Pillow Squeeze</p> 	<p>Fold a pillow and place it between your legs.</p> <p>Squeeze your legs together holding for 5 seconds.</p> <p>Repeat 8-10 times.</p>
<p><input type="checkbox"/> Ankle Pumping</p> 	<p>Pump your toes up and down, moving your ankle.</p> <p>Do this 10 times each hour throughout your day.</p>
<p><u>Lying on your unaffected side</u></p>	
<p><input type="checkbox"/> Hip Abduction</p> 	<p>With your residual limb straight, lift your leg towards the ceiling. Make sure your hips are stacked one on top of the other.</p> <p><u>Avoid bending your hip forward when doing this exercise.</u></p> <p>Hold for 5 seconds. Return slowly to the starting position.</p>

Repeat 8-10 times.

Lying on your stomach

Hip extension

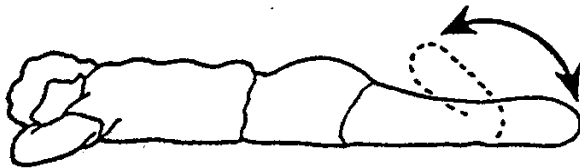


With your residual limb straight, lift your left off the bed slightly keeping your hips on the bed.

Hold for 5 seconds. Return slowly to the starting position.

Repeat 8-10 times.

Prone knee bends



Bend residual knee by bringing it back towards your buttock.

Slowly straighten your leg.

Repeat 8-10 times.

Sitting in a chair

Knee Extension



With your residual knee bent over the edge of the chair, straighten your residual limb.

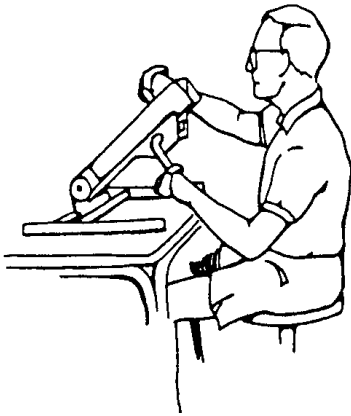
Relax and lower the limb.

Repeat 8-10 times.

NOTE: Do this exercise every 30 minutes when you are sitting.

Sitting upright

Arm bike



Use the arm bike for 5-10.

Increase time and resistance as tolerated.

Shoulder press



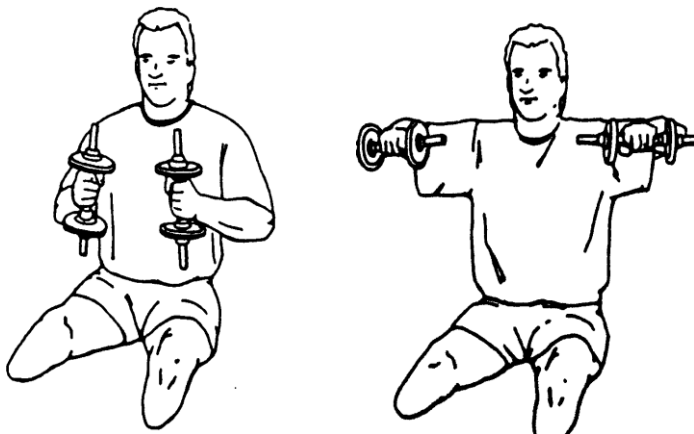
Slowly raise your arms and straighten your elbow over your head.

As your strength improves you can begin holding some weights in your hands.

Hold for 5 seconds. Return slowly to the starting position.

Repeat 8-10 times.

Lateral raises



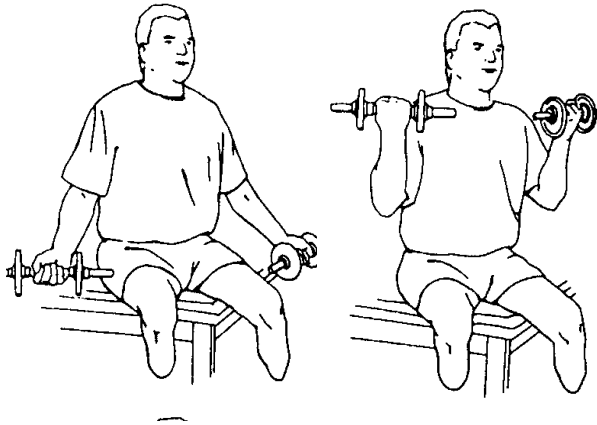
Face palms inward and bend elbows to a 90 degree angle.

Slowly raise your arms until your elbows and hands are equal height to your shoulders. Hold for 5 seconds. Slowly lower arms.

As your strength improves you can begin holding some weights in your hands.

Repeat 8-10 times.

Elbow flexion



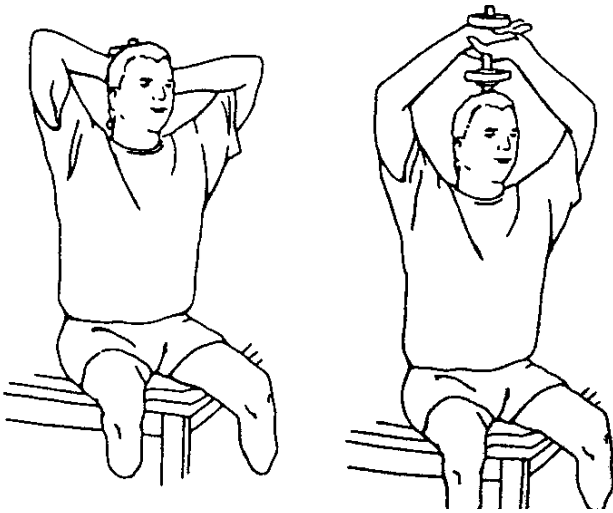
Slowly bend your elbows.

Hold for 5 seconds. Return slowly to the starting position.

As your strength improves you can begin holding some weights in your hands.

Repeat 8-10 times

Elbow extension



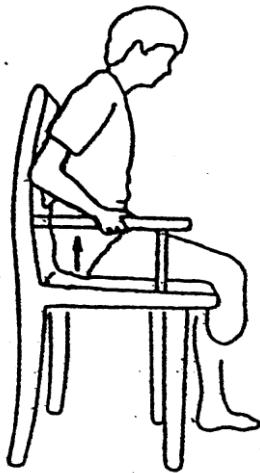
Bring both hands to shoulder level with elbows fully bent.

Slowly straighten your elbows over your head. Hold for 5 seconds. Return slowly to the starting position.

As your strength improves you can begin holding some weights in your hands.

Repeat 8-10 times.

Triceps lift



With your hands on the armrests of a chair, press up slightly lifting your bottom off the chair. Straighten your elbows.

Hold for 5 seconds. Return slowly to the starting position.

Repeat 8-10 times.