

# Below Knee Amputation (BKA)

## Introduction:

Your recovery after an amputation includes:

- Wound healing
- Pain control
- Returning to function
- Proper residual limb shaping

Physical therapy will help with these goals.

## What to expect at Bronson:

A physical therapist will see you within a few days after your amputation. During therapy you will learn about:

- Proper positioning
- Residual limb shaping
- Exercises for range of motion and strengthening
- How to begin moving.

We encourage you to take pain medicines before starting therapy. Decreasing your pain will allow you to be able to fully participate.

## Positioning:

Changing positions and properly aligning your residual limb is important for the best healing. Positioning helps to:

- Prevent contractures and shortening of tissue
- Prevent swelling
- Prepare for prosthetic use.

In bed:

- **Do not** put pillows under your residual limb.
- Keep your residual limb straight.
- Keep your legs close together.
- Keep the foot of the bed flat at all times.
- Keep the head of the bed flat as much as possible.
- If you are able, lie on your stomach twice a day for 15-30 minutes.
- If you are unable to lie on your stomach, try side-lying with your residual limb as straight as possible at the hip and knee.
- Avoid having your knee flexed or bent.

In a chair:

- Keep your residual limb elevated.
- Support your leg on a firm surface.
- Keep your legs close together.
- Distribute your body weight equally on both hips.
- Limit or avoid time with your leg unsupported or hanging down.
- Keep your knee straight while sitting.

### **Exercises:**

Exercises with your residual limb help to:

- Strengthen your muscles
- Prevent contractures and shortening of the tissue
- Improve range of motion
- Make moving easier

Do your exercises slowly and in a controlled way. Remember to breathe. Do not hold your breath.

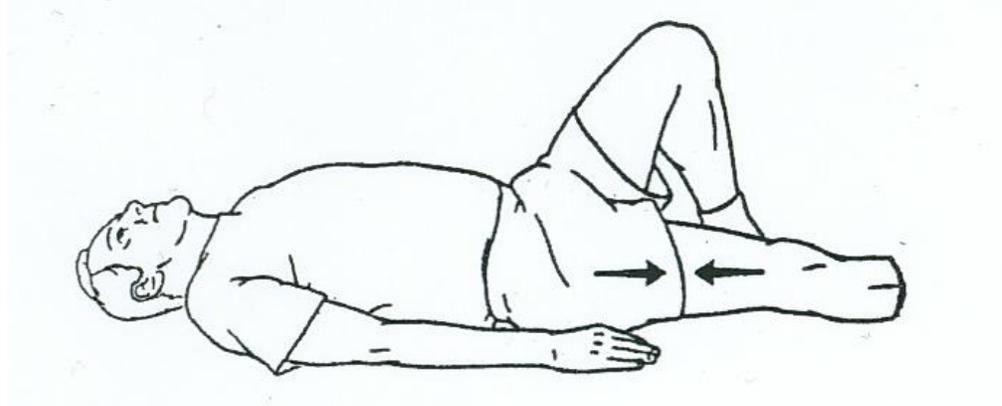
**Do at least 10 repetitions of each exercise 3 times a day.**

If you are not able to complete 10 repetitions initially, you can start with fewer repetitions and work up to 10.

Bed exercises are done in bed with the head and foot of the bed as flat as possible.

### **Quadriceps Sets:**

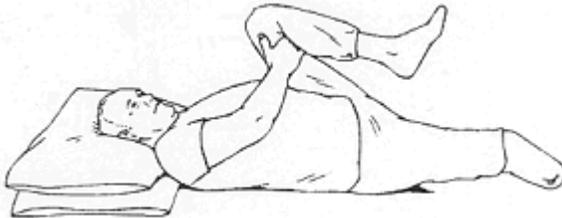
With other leg bent, foot flat, slowly tighten muscles on thigh of straight leg while counting out loud to five.



**Hip and Knee Flexion:**

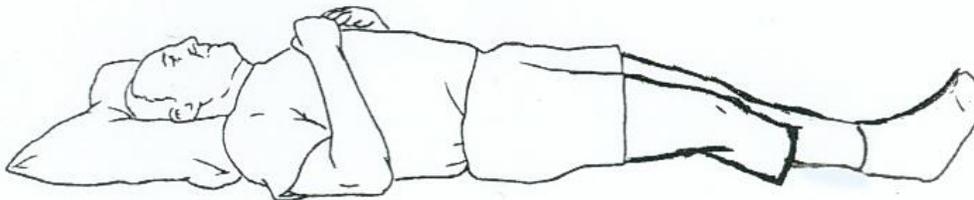
Bend residual limb toward your chest, bending your knee as you lift. Lower leg back to the bed, straightening your knee as you go. Hold 3 to 5 seconds.

Repeat with your opposite leg. Try to stretch your residual limb down flat to the bed as you do this stretch.



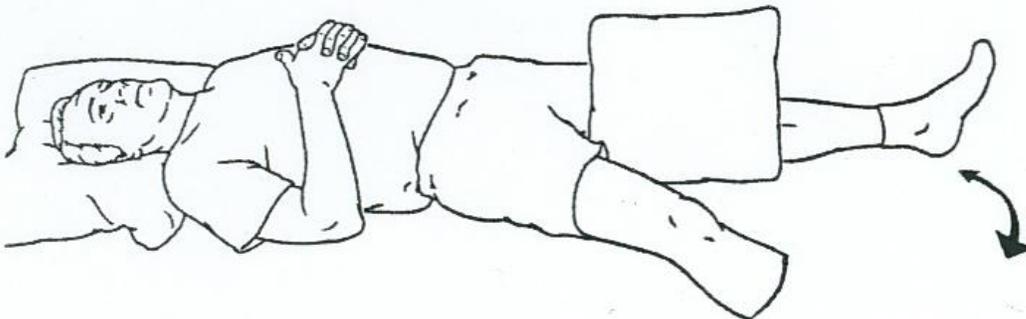
**Hip Extension:**

Push residual limb down into the bed. Hold for 5 seconds and then relax.



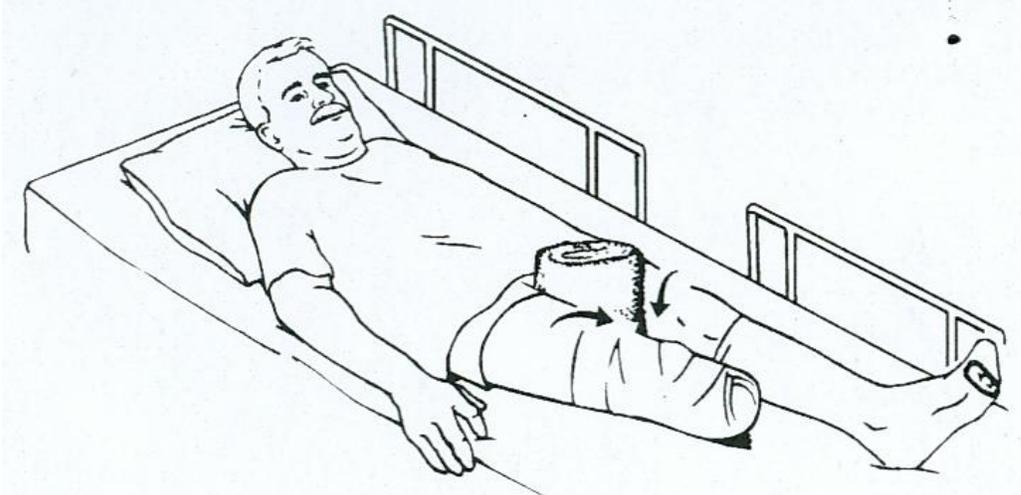
**Hip Abduction:**

Slide residual limb out to side. Gently bring leg back to pillow.



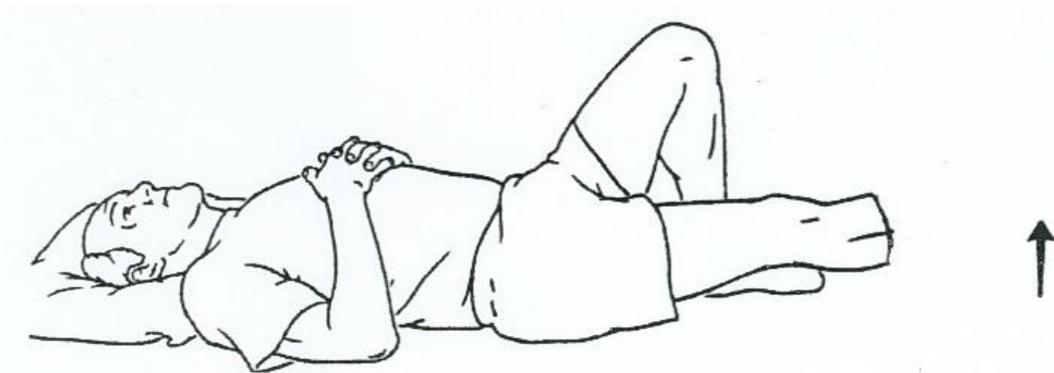
**Hip Adduction:**

With pillow between thighs, gently squeeze thighs together. Hold 5 seconds.



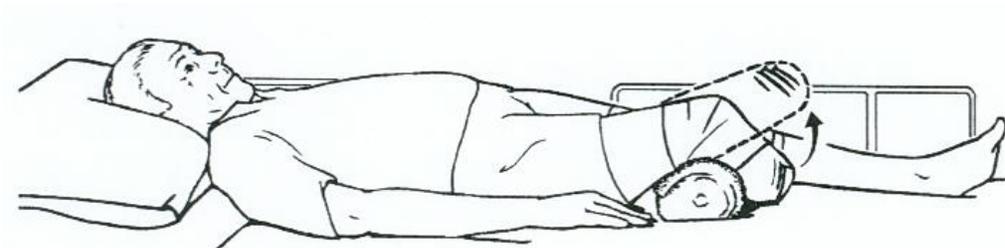
**Straight Leg Raise:**

Bend other leg. Raise residual limb 6 inches with knee locked. Exhale and tighten thigh muscles while raising leg.



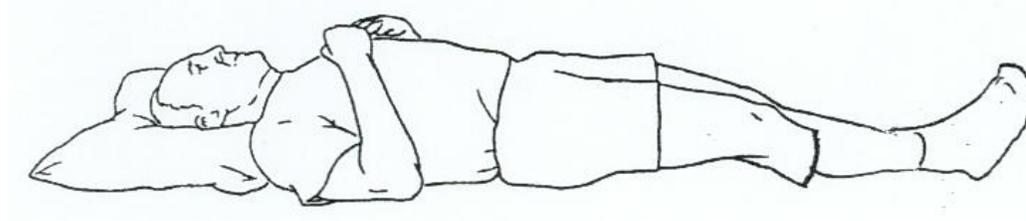
**Knee Extension:**

With towel roll behind knee, gently bend and straighten knee over the towel roll.



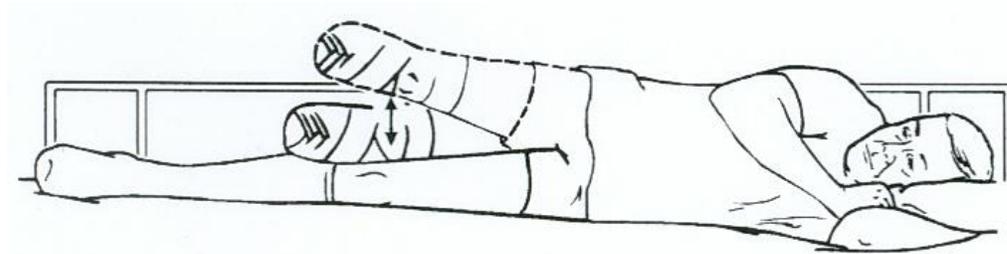
**Gluteal Squeeze:**

Squeeze buttocks muscles as tightly as possible while slowly counting out loud to 5.



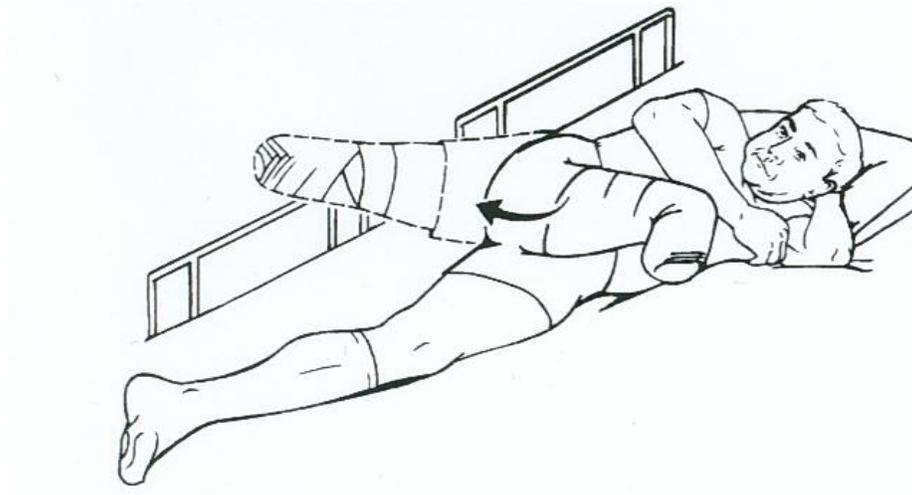
**Sidelying Hip Abduction:**

Roll to sound side. Lift residual limb up and down while keeping hip and knee straight.



**Hip and Knee Flexion and Extension:**

Roll to sound side. Bring knee to chest while bending knee. Reach limb back as far as possible while straightening knee.



**Sitting Knee Extension:**

Straighten residual limb and hold for 5 seconds.

**Standing exercises:**

Your therapist will add these exercises as you move through the phases of your recovery.

**Early mobility:**

After surgery you will be encouraged to regain your independence quickly. Your goal will be to return to your previous level of activity. You may need to change the way you do things and use equipment. As an outpatient, you may have prosthetic fitting and training.

**Sitting balance:**

Sitting balance is important to learn so you can evenly distribute your weight, adjust your sense of balance and perform exercises while sitting without support.

**Transfers and walking:**

Safety is very important when you start moving and learning to transfer. Do not try to get out of bed without help until your therapist says it is okay. Your therapist will teach you to safely transfer and walk with crutches or a walker. You will learn how to keep your residual limb straight and relaxed as you walk.

**Wrapping and shaping:**

The shape of the end of your residual limb is very important. Proper dressings provide compression and support. These may include ACE wraps, tubi-grip, or a rigid removable dressing. If you do not have proper dressings in place you may have increased swelling, increased pain, and the end of your residual limb may become improperly shaped.

**Skin care and desensitization:**

Check your residual limb's incision and skin for changes. Let your caregiver know if you notice any:

- Redness
- Increased swelling
- Foul odors
- Changes in the color of drainage

These changes can mean you have an infection.

Your skin may become sensitive to touch after surgery. Gently massaging your residual limb can help relieve pain and make the area less sensitive. Do not massage directly over your incision. Do not use lotions or creams until your doctor approves their use. Do not shower or get your incision or bandages wet until your doctor gives the okay.

**Phantom pain:**

Phantom pain is pain or movement felt in the limb that was amputated. Your therapist can help you in treating or managing phantom limb pain.

**Entering phase 2:**

As you move towards the next phase of your recovery you may begin using a prosthetic device. Your doctor will refer you for continued physical therapy. This therapy can be provided as an inpatient at an inpatient rehabilitation facility or at a skilled nursing home. If you are discharged home, home health or outpatient services are available. Bronson offers both home health and outpatient physical therapy.