

# Physical Therapy After Your Rotationplasty

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This handout has information about your rotationplasty and the exercises you will need to do after your surgery. Your therapist will put a check (✓) by the information below that applies to your surgery.

## Surgery Information:

### 1. Muscle tendon transfers

- Quadriceps to gastrocsoleus
- Biceps femoris to anterior tibialis

### 2. Neurolysis

- Peroneal nerve
- Sciatic nerve
- Sural nerve
- Tibial Nerve

### 3. Swelling

- Yes
- No

### 4. Neuropraxia

- Yes
- No

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This handout is for informational purposes only. Talk with your doctor or health care team if you have any questions about your care.

## **Physical therapy goals and limits for your ankle/new knee:**

- Expected range of motion outcome:
  - ▶ At least 0/neutral dorsiflexion to be able to have 90 to 110 degrees of knee flexion with your prosthetic.
  - ▶ Full 90 degrees plantarflexion to be able to have full knee extension with your prosthetic.
- Your rehab team will help you with activities of daily living and teach you how to walk with an assistive device, such as a walker or crutches.
- You may return to physical activity once your health care team has told you it is okay.
- Your doctor will refer you to an outpatient physical therapist after you are discharged from the hospital.
- **Do not** use electrostimulation (ESTIM) at any time on the leg that had surgery.

# Early Post-Surgery Rehab (First 6 Weeks After Surgery)

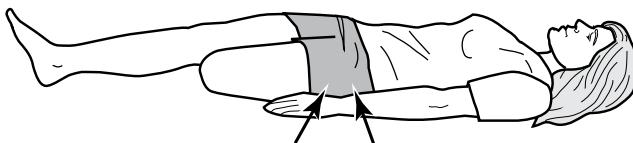
The goal of your early post-surgery rehab is to protect and maintain the range of motion of your hip and ankle. **It is important to keep your leg in a neutral position at all times.** When you walk, keep your heel pointed forward. When you lie down, keep your heel pointed up toward the ceiling. It may help to place a rolled towel under your ankle for support.

## During the first 6 weeks after your surgery:

- **Do not** do any manual/passive motion stretching of your ankle until a member of your surgery team has told you it is okay.
- **Do not** do any weight-bearing activity until your bone has healed and a member of your surgery team has told you it is okay.
- You may do active range of motion exercises for your ankle and hip.
- Use short stretch bandages or talk to your physical therapist to help with leg swelling.
- Your rehab team will help you with activities of daily living and teach you how to walk with an assistive device, such as a walker or crutches.

## Gluteal Sets

1. Tightly squeeze the muscles in your bottom.
2. Hold for 5 seconds and then relax.
3. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



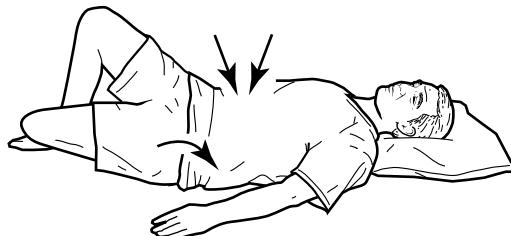
## Hip Adduction with Towel

1. Lie on your back. Place a rolled towel or pillow between your thighs.
2. Gently squeeze the towel between your thighs for 5 seconds and then relax.
3. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



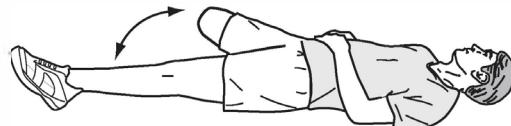
## Abdominal Bracing

1. Lie on your back. Keep your neck and shoulders relaxed when you do this exercise.
2. Breathe in (inhale) and gently press your lower back against the floor.
3. Breathe out (exhale) and gently pull in your abdominal (stomach) muscles.
4. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



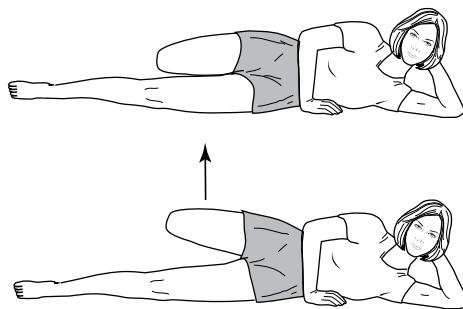
## Hip Adduction

1. Lie on your back. Slowly move your surgical leg out to the side and back in. Relax.
2. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



## Hip Abduction on Side

1. Lie down on your non-surgical side. Keep your heel pointed forward and slowly lift your top leg up toward the ceiling. Do not turn your leg up.
2. Slowly return to starting position.
3. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



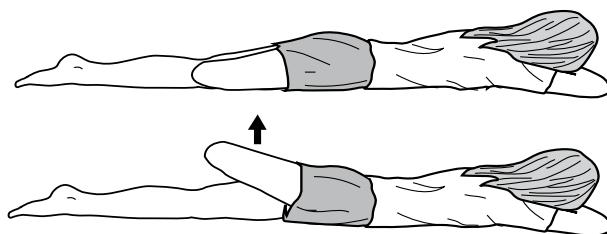
## Hip Extension on Side

1. Lie down on your non-surgical side. Slowly push your top leg straight behind you.
2. Hold for 5 seconds and slowly return to starting position.
3. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



## Hip Extension on Stomach

1. Lie on your stomach. Keep your hips flat on the floor and slowly lift your surgical leg up toward the ceiling.
2. Hold and then slowly return to starting position.
3. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



## Ankle Pumps

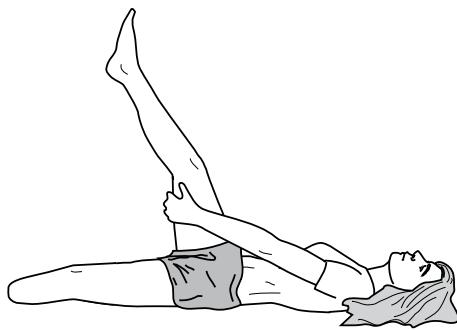
1. Move your foot on your surgical leg up and down as if you were pushing down or letting up on a gas pedal in a car.
2. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



## Lying Hamstring Stretch – Non-Surgical Leg

Use your non-surgical leg to do this exercise. **Do not** use your surgical leg.

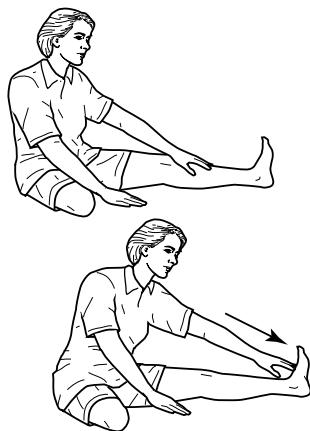
1. Lie on your back. Bend your non-surgical leg toward your chest.
2. Put your hands around your thigh and gently pull your leg in closer to your chest. Hold this stretch for 20 seconds.
3. Slowly straighten your non-surgical leg up toward the ceiling until you feel a stretch in the back of your thigh. Hold for 30 seconds.
4. Repeat 3 times. Do 2 to 3 times each day.



## Seated Hamstring Stretch – Non-Surgical Leg

Use your non-surgical leg to do this exercise. **Do not** use your surgical leg.

1. Sit with your back straight and your non-surgical leg straight out in front of you.
2. Reach your hand down toward your foot. Slowly lean forward to feel a stretch in the back of your thigh. Hold for 30 seconds.
3. Repeat 3 times. Do 2 to 3 days each day.



## Post-Surgery Rehab (6 Weeks After Surgery)

The goal of your post-surgery rehab is to regain your range of motion and improve your strength and mobility.

### **6 weeks after your surgery:**

- Your doctor will tell you when you may begin manual/passive range of motion stretching and joint mobilizations of your ankle.
- Your physical therapist will tell you how to start use of 5 to 10 pound resistance bands to strengthen your ankle and hip.
- Increase your physical activity to include cardiovascular and core strengthening exercises.
- Meet with your prosthetist to learn more about your prosthesis. Your prosthetist may fit you for a compression knee-high garment.
- If needed, use ankle orthotic/bracing to prevent ankle contracture. It is important to take off your ankle orthotic/bracing before you do your exercises.

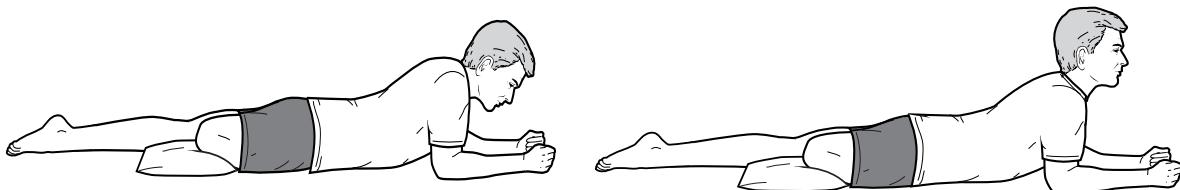
### **Hip Flexor Stretch**

1. Lie down on your stomach. Place a rolled towel under your surgical leg for support.
2. Keep your hips flat on the floor. Lie in this position for 20 minutes each day.
3. As you stretch your hip flexor muscle, you may increase the size of the towel you use.



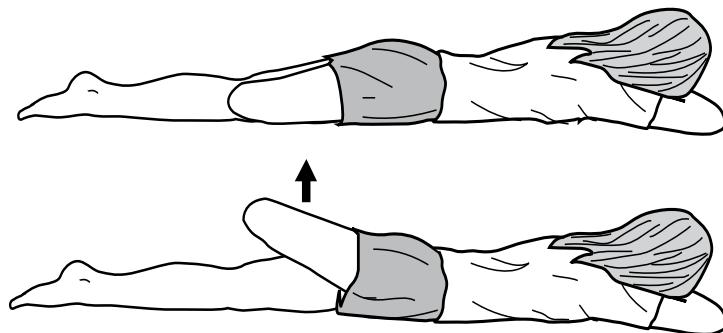
## Shoulder Push-Up

1. Lie down on your stomach with your legs straight out behind you. Rest on your elbows. Your elbows should be directly under your shoulders. You may place a rolled towel or pillow under your surgical leg for support.
2. Keep your hips on the floor and slowly rise up on your elbows as you arch your back.
3. Feel the stretch in your lower back and abdomen (stomach). Hold for 10 to 20 seconds.
4. Repeat 3 times. Do 2 to 3 times each day.



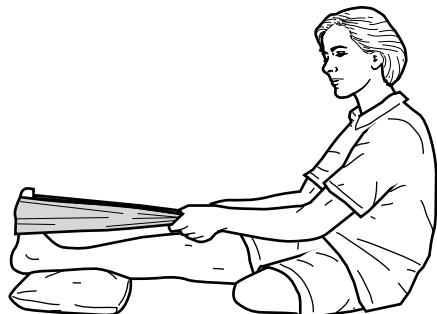
## Hip Extension on Stomach

1. Lie on your stomach. Keep your hips flat on the floor and slowly lift your surgical leg up toward the ceiling.
2. Hold and then slowly return to starting position.
3. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



## Calf Stretch with Towel

1. Sit with your back straight and your leg straight out in front of you. Loop a towel around your foot just below your toes. You may place another towel or pillow under your heel for comfort.
2. Hold the ends of the towel in your hands. Keep your knee straight. Gently pull back on the towel to feel a stretch in the back of your lower leg. Hold for 30 seconds.
3. Repeat 3 times with each leg. Do 2 to 3 times each day.



## Ankle Pumps

1. Move your foot on your surgical leg up and down as if you were pushing down or letting up on a gas pedal in a car.
2. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



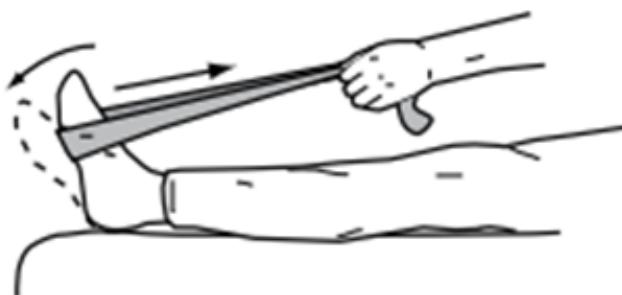
## Toe Pull Up

1. Loop the end of the theraband around the edge of your bed or leg of a chair. Loop the other end around the top of your foot on your surgical leg.
2. Pull your toes back toward you. Slowly return your foot back to starting position.
3. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



## Toe Point

1. Loop the theraband around the ball of your foot on your surgical leg. Hold the other end of the theraband in your hands.
2. Slowly point your toes as if you were pushing down on a gas pedal in a car. Slowly return your foot back to starting position.
3. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



## Foot Turn Out

1. Sit with your legs straight out in front of you. Loop one end of the theraband around the ball of your foot on your surgical leg.
2. Pull the theraband up along the side of your leg. Hold the other end of the theraband in your hands.
3. Turn your foot out to pull against the theraband. Slowly bring your foot back in.
4. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



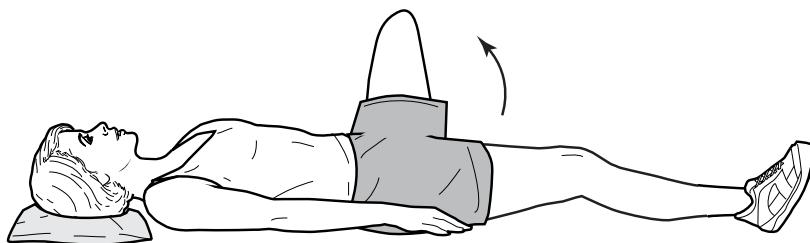
## Foot Turn In

1. Sit with your legs straight out in front of you. Loop one end of the theraband around the ball of your foot on your surgical leg.
2. Cross your other leg over top.
3. Pull the theraband up along the side of your leg. Hold the other end of the theraband in your hands.
4. Turn your foot in to pull against the theraband. Slowly bring your foot back out.
5. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



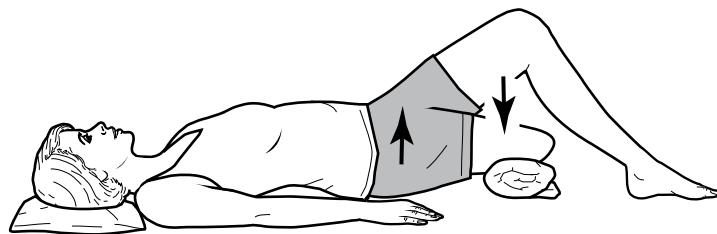
## Hip Flexion

1. Lie down on your back. Lift your surgical leg up toward the ceiling as high as you can.
2. Return to starting position and relax.
3. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



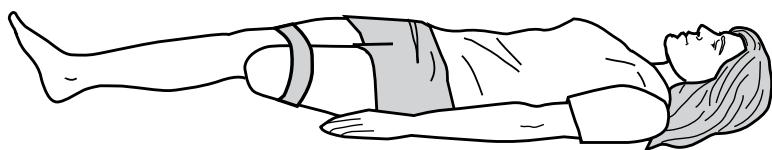
## Bridges

1. Lie on your back. Place a rolled up towel or pillow under your surgical leg for support.
2. Bend your knee of your non-surgical leg and rest your foot flat on the floor.
3. Tightly squeeze the muscles in your surgical leg to push down on the towel or pillow.
4. Lift your bottom up off the floor. Keep your abdomen (stomach) muscles tight. Hold for 2 to 3 seconds and then relax.
5. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



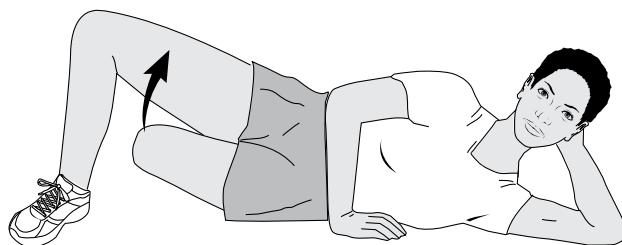
## Hip Abduction with Theraband

1. Lie down on your back. Loop the theraband around your thighs as low as it is comfortable.
2. Push out against the theraband to try to pull your thighs apart. Do this for 5 seconds and then relax.
3. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



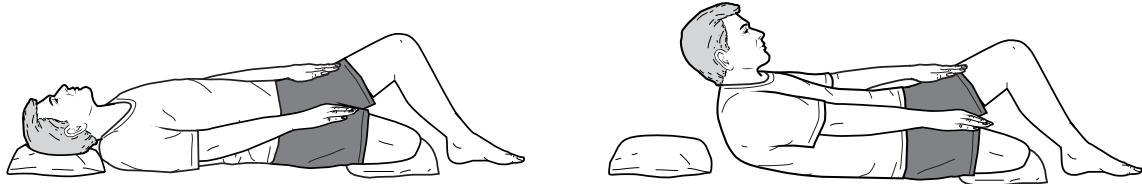
## Alternative Hip Adduction

1. Lie down on your surgical side with your non-surgical leg on top. Bring your top leg forward to rest your foot flat on the floor in front of you.
2. Slowly lift your surgical leg up toward the ceiling and back down.
3. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



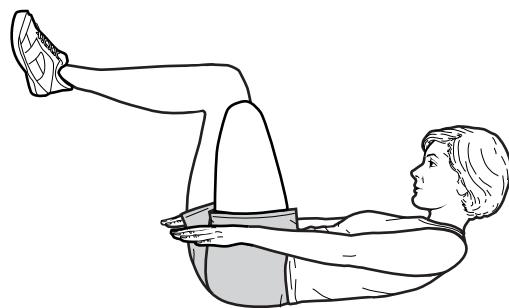
## Partial Sit-Up

1. Lie down on your back. You may use a rolled towel or small pillow under your surgical leg for support.
2. Bend your hips and place the foot of your non-surgical leg flat on the floor. Rest your hands on your thighs.
3. Use your abdomen (stomach) muscles to slowly curl up until your head and shoulders are off the floor. Look up to the ceiling when you do this exercise.
4. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



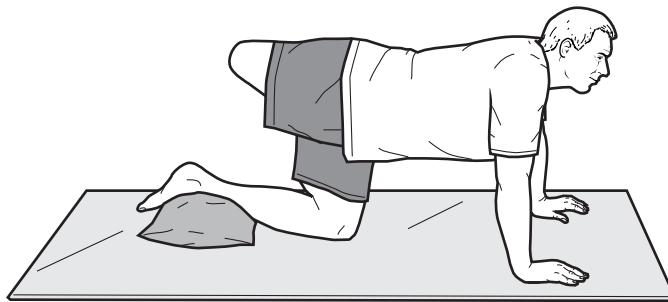
## Knee-Up Abdominal Crunches

1. Lie down on your back. Bend your hips and place the foot of your non-surgical leg flat on the floor. Rest your arms at your sides.
2. Lift your foot, head and hands off the floor. Keep your abdomen (stomach) muscles tight and press your lower back into the floor.
3. Pump your arms up and down.
4. Slowly return to starting position and relax.
5. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



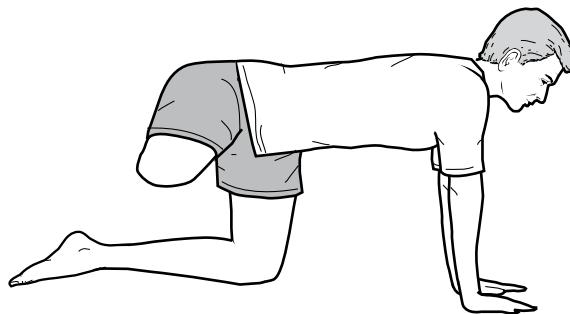
## Hip Extension on Hands and Knees

1. Kneel down on the floor. Place a pillow under your foot and lower leg.
2. Balance on your hands and knees. Keep your hips and back still and level to the ground. Tighten your bottom and slowly lift your surgical leg out behind you.
3. Slowly return to starting position.
4. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



## Leg to Side

1. Kneel down on the floor.
2. Balance on your hands and knees. Keep your hips and back still and level to the ground. Tighten your bottom and slowly lift your surgical leg out to the side.
3. Slowly return to starting position.
4. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



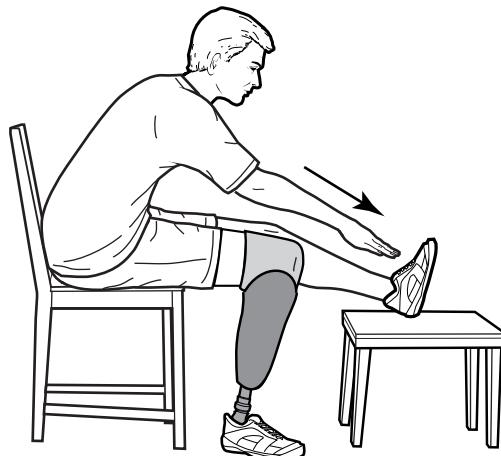
## Late Post-Surgery Rehab (3 to 6 Months After Surgery)

Once your bone has healed, you may be able to do more weight-bearing activities. It is important to talk with your doctor about what weight-bearing activity you can do. The goal of your post-surgery rehab after 3 months is to improve your range of motion, strength and cardiovascular endurance so you can return to walking. Your doctor and other rehabilitation therapists will tell you when you can start to wear your prosthesis and when to start exercises with your prosthesis.

### **Wear your prosthesis to do the following exercises:**

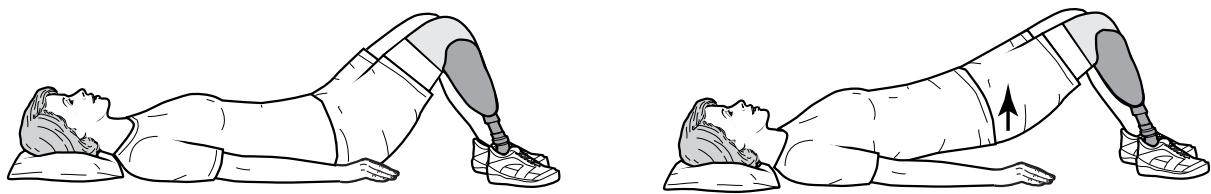
#### **Hamstring Stretch with Stool**

1. Sit on a stable chair. Put your prosthetic foot up on a stool or low table so that your surgical leg is out in front of you.
2. Keep your back straight and slowly lean forward to reach your hand down towards your foot on the stool. Feel the stretch in the back of your upper leg or thigh. Hold the stretch for 30 seconds and then relax.
3. Repeat 3 times. Do 2 to 3 times each day.

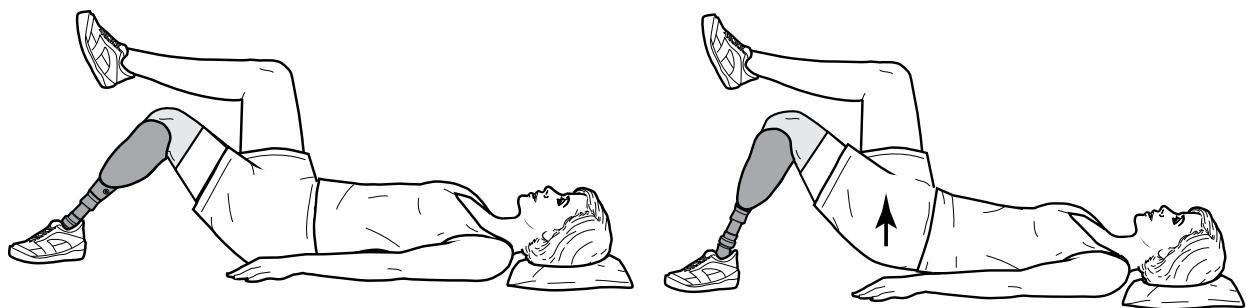


## Bridges with Prosthesis

1. Lie down on your back. Bend your knees and place your feet flat on the floor. Rest your arms at your sides. You may place a pillow under your head for comfort.
2. Tighten your abdomen (stomach) muscles and slowly lift your bottom off the floor. Hold for 2 to 3 seconds and then relax.
3. Repeat 10 times. Do 2 sets, 2 to 3 times each day.

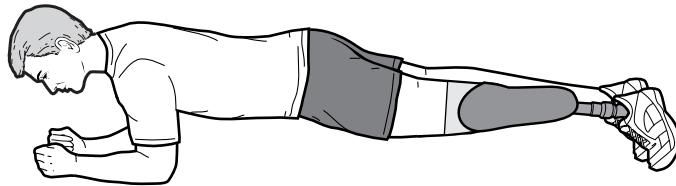


4. As your range of motion and strength improve, lift your non-surgical leg off the floor when you do this exercise. Use only your prosthetic leg to do this exercise.



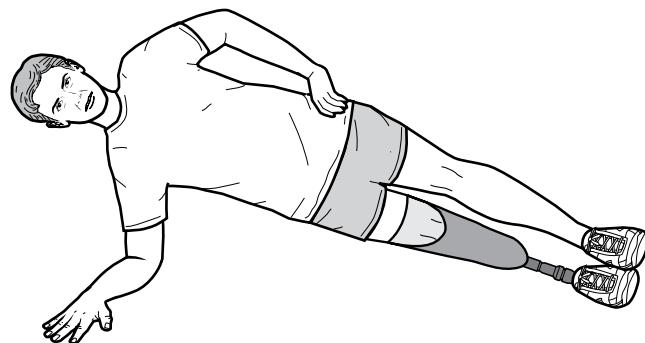
## Forward Plank

1. Lie down on your stomach. Bend your elbows and keep them shoulder-width apart. Lift your body up on your elbows and knees. Press your leg back into socket to keep your prosthetic knee bent.
2. Keep your elbows under your shoulders and tighten your abdomen (stomach) muscles to hold your body in this position. Hold for 20 to 30 seconds and then relax.
3. Repeat 5 times. Do 2 sets, 2 to 3 times each day.



## Side Plank with Bent Arm

1. Lie down on the side with your prosthesis. Lift your body up and use your hand, elbow and foot to support the weight of your body.
2. Keep your hand and elbow under your shoulder and tighten your abdomen (stomach) muscles to keep your body straight and off the floor. Hold for 20 to 30 seconds and then relax.
3. Repeat 5 times. Do 2 sets, 2 to 3 times each day.



## Side-to-Side Weight Shift

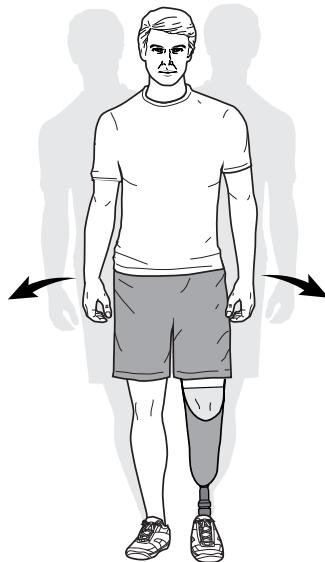
Your therapist will put a check (✓) by the hand to use for support during this exercise.

Right hand

Leg hand

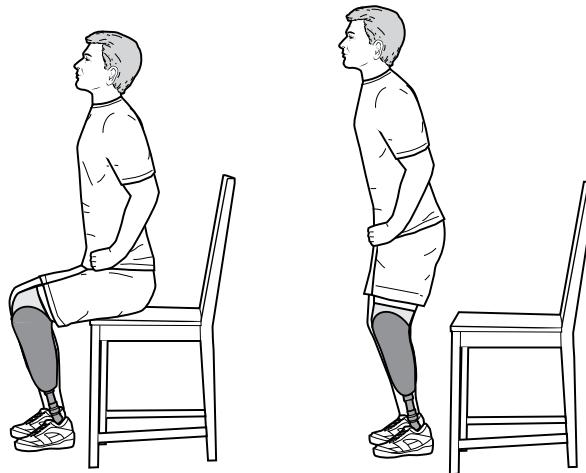
Both hands

1. Stand up straight with your head up. Look straight ahead. Slowly shift your weight to your non-surgical side as far as you can go. Do not move your feet.
2. When you shift onto your surgical leg, squeeze your bottom and tighten your muscles in the socket of your prosthetic. You will feel the pressure in your socket change when you shift your weight. Slowly return back to center.
3. Shift your weight back to your other side as far as you can go. Do not move your feet.
4. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



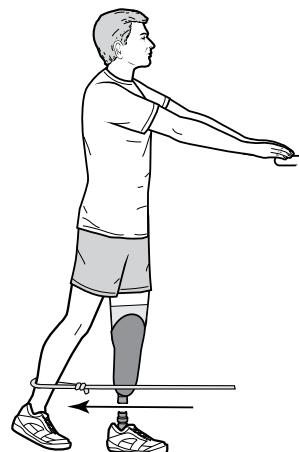
## Sit to Stand

1. Sit on the edge of a stable chair. Put your feet underneath you and keep them flat on the floor. Cross your hands over your chest or keep them on your hips.
2. Lead with your head and stand up to straighten your knees. It is important to keep the same amount of weight on each leg.
3. Slowly lower your body back down to seated position.
4. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



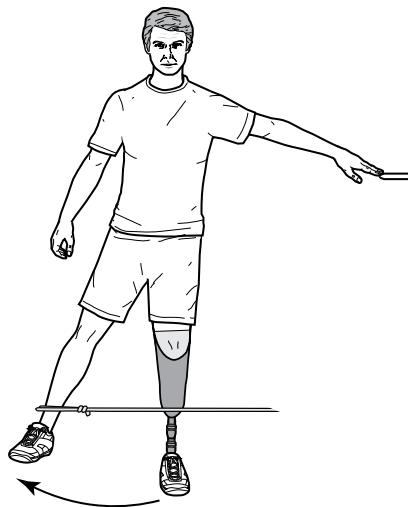
## Hip Extension with Theraband – Pull Back

1. Stand up and hold onto a table or chair for support. Loop the theraband around the leg of the table or chair. Loop the other end around your non-surgical leg.
2. Keep the weight of your body on your prosthetic leg and slowly pull your other leg back behind you to stretch the theraband.
3. Slowly return to starting position.
4. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



## Hip Abduction with Theraband – Pull to the Side

1. Stand up with your prosthetic leg closest to the table or chair. It may help to hold onto the table or chair for support. Loop the theraband around the leg of the table or chair. Loop the other end around your non-surgical leg.
2. Keep the weight of your body on your prosthetic leg and slowly pull your other leg out to the side away from your body to stretch the theraband.
3. Slowly return to starting position
4. Repeat 10 times. Do 2 sets, 2 to 3 times each day.



## **Late Post-Surgery Rehab (6 Months After Surgery)**

The goal of your late post-surgery rehab, 6 months after your surgery, is to return to activities that you did before your surgery. Your therapist and other members of your health care team will help you with this and talk with you about what exercises to do.