# Activity: Pre-Surgery

# **Pre-Surgery**

Conditioning your body prior to undergoing joint surgery is an important step toward improving your strength and contributing to a successful post-operative recovery. Patients who exercise before joint replacement surgery have several advantages:

### You will be stronger before surgery.

People with arthritis can still exercise. In fact, it has been shown that regular moderate-level exercise does not exacerbate arthritic pain. An exercise program composed of joint stretching, low-impact resistance training, and aerobic exercise increases joint flexibility, combats fatigue, and supports weight management. All are beneficial in building stronger muscles to support your joints.

### You will have a faster recovery.

By adhering to an exercise training program before surgery, patients are more likely to spend less time in the hospital, return directly home from the hospital, and reach their goals sooner.

Always consult your Surgeon before beginning any exercise program.

# Rehabilitation after Total Joint Replacement

Moving is critical to a successful recovery. While rehabilitating at CJRI, you will focus on walking, climbing stairs, getting in and out of bed, and exercising.

## Walking

Walking is one of the best exercises to assist in your recovery from joint replacement surgery. Your first steps with the physical therapist will often be taken using a walker. As your motion, strength, and endurance improves your surgeon may allow you to walk with a single cane or crutch. Your goal is to regain enough strength and flexibility to eventually walk without the use of an assistive device. At home walk hourly during the day when possible. Start with 3 minutes per hour and advance to 10 minutes per hour.

# **Stair Climbing**

The ability to go up and down stairs requires strength and flexibility. It is best practice to have a handrail at home. Plan to install one prior to surgery if not present. Your physical therapist can modify the technique if you have no rails; however, we ask that you have assistance available if no rails are present. Always lead with your non-operated leg (good) going up the stairs, and your operated leg (bad) when going down the stairs.



## Remember, "up with the good" and "down with the bad."

# Lying in Bed

When lying on your back, avoid placing a pillow directly under your knee as this promotes tightness. Instead, place a pillow underneath your lower leg and elevate as shown in the picture to the right. It is best practice to lie on your back after surgery. You may lie on either side if unable to tolerate sleeping on your back. Pillow may be placed between legs when side-lying for comfort as needed.



### Car Transfer

When performing car transfer move car seat back as far as it can go and recline seat about 30 degrees. Back up and hold onto car seat or dashboard for support. Lower yourself onto seat being careful to avoid hitting head on roof of vehicle. Slide back towards driver's seat and lift legs in one at a time.



# Exercises after Total Hip Replacement Surgery

The goals of your exercise program are to reduce pain and swelling with the hip joint; increase flexibility of your hip joint; achieve full range of motion; and restore strength of the muscles around the hip joint, improving overall function.

Remember: Do **not** hold your breath while exercising. Exercises may be performed in bed or recliner chair.

### Hip Flexor Stretch



Lay flat down on your back with multiple pillows under your head. You will feel a stretch in the front of your hip. Relax in this position by allowing your hip to fully straighten. Remove one pillow every few minutes until only pillow is remaining. May place ice on hip during this exercise.

## **Ankle Pumps**



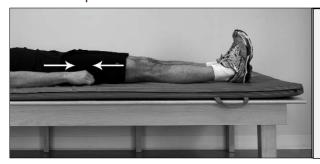
Move your foot up and down as shown above. May be performed lying down or sitting. 10 repetitions/hour.

#### **Quad Sets**



Sit or lie on your back with your leg extended. Try to push your knee downward. (You should feel the muscle in the front of your thigh tighten). Hold this position for 5 seconds. 10 repetitions/hour.

### **Buttock Squeezes**



Sit or lie on your back with legs straight. Squeeze muscles of your buttocks together. Hold this position for 5 seconds. 10 repetitions/hour.

#### **Heel Slides**



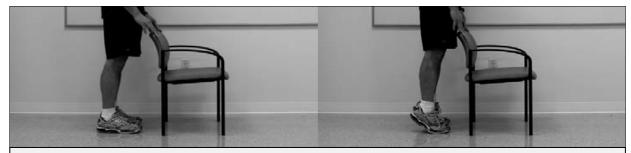
Lie on your back with your legs straight. Bend your knee by sliding your foot upwards until you feel a gentle stretch. Hold for 5 seconds. 10 repetitions/hour.

### Knee Extensions (Kicks)



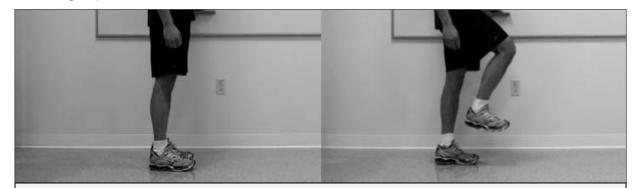
Sit in a chair with your knees bent. Lift your foot off the floor. Return to the starting position and repeat. To be performed at the discretion of your MD and home physical therapist.

### **Heel Raises**



Stand with your feet flat on the floor, shoulder width apart. Ensure that you have a secure surface to hold onto with both hands. Raise up on your toes. Return to the starting position. To be performed at the discretion of your MD and home physical therapist.

### Standing Hip Flexion



Stand with your feet flat on the floor, shoulder width apart. Ensure that you have a secure surface to hold onto with both hands. Raise your leg up, letting the knee bend. Do not bend past a 90-degree angle. Return to the starting position. To be performed at the discretion of your MD and home physical therapist. The hip flexors are typically weak and painful after surgery. Wait for approval by your surgeon prior to performing this exercise.

### Standing Leg Swing



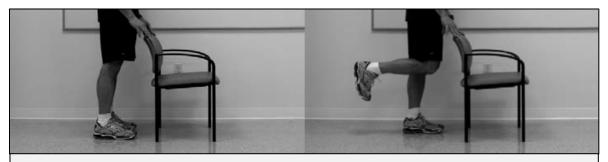
Stand with your feet flat on the floor, shoulder width apart. Ensure that you have a secure surface to hold onto with both hands. Lift your leg straight out in front of you. Return to the starting position. To be performed at the discretion of your MD and home physical therapist.

#### Sit to Stand



Sit in a chair that has armrests. Place your hands on the armrests of the chair and push yourself upwards to stand using your legs to lift you up. To sit back down, place your hands on the armrests of the chair and slowly lower yourself to a seated position. To be performed at the discretion of your MD and home physical therapist.

# Standing Knee Bend



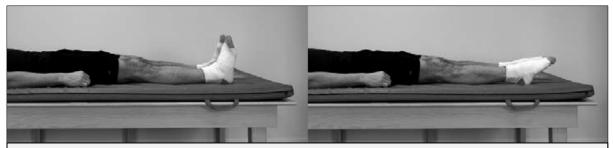
Stand with your feet flat on the floor, shoulder width apart. Ensure that you have a secure surface to hold onto with both hands. Bend your knee behind you as far as possible. Return to the starting position. To be performed at the discretion of your MD and home physical therapist.

# Exercises after Total Knee Replacement Surgery

The goals of your exercise program are to reduce pain and swelling with the knee joint; increase flexibility of your knee joint; achieve full range of motion; and restore strength of the muscles around the knee joint, improving overall function.

Remember: Do **not** hold your breath while exercising. Exercises may be performed in bed or recliner chair.

## Ankle Pumps



Move your foot up and down as shown above. May be performed lying down or sitting. 10 repetitions/hour.

### **Quad Sets**



Sit or lie on your back with your leg extended. Try to push your knee downward. (You should feel the muscle in the front of your thigh tighten). May place towel roll under heel for increased stretch. Hold this position for 5 seconds. 10 repetitions/hour.

## **Buttock Squeezes**



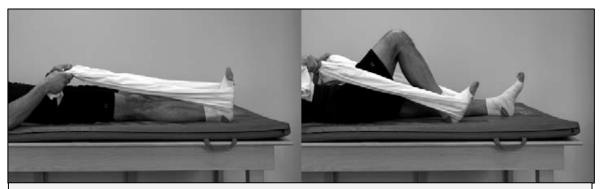
Sit or lie on your back with legs straight. Squeeze muscles of your buttocks together. Hold this position for 5 seconds. 10 repetitions/hour.

### **Towel Slides**



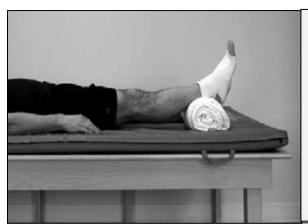
Sit in chair with your legs bent as shown. Place a towel under your operated leg. Slide your foot back until you feel a gentle stretch. Hold this position 5 seconds. Return to starting position. Perform exercise 10 repetitions/hour.

### Heel Slides (with Sheet)



Lie on your back with your legs straight. Wrap a sheet around your foot as shown and hold onto the ends with both hands. Bend your operated knee by sliding your foot upwards. Gently pull knee up with the sheet until you feel a stretch. Hold this position for 5 seconds. Perform exercise 10 repetitions/hour.

### **Extension Stretch**



Lie on your back with a towel under your ankle. Relax in this position by allowing gravity to straighten your leg. Ice your knee while stretching in this position for 5-15 minutes, or as tolerated.

#### Calf Stretch



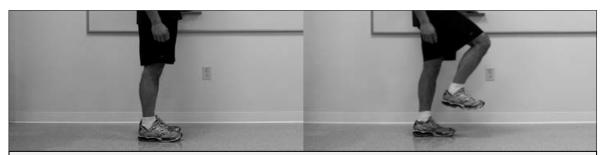
Sit with knee straight and a towel looped around the foot. Gently pull on the towel until you feel a stretch. Hold stretch for a count of 30 seconds. Perform 5 repetitions.

#### **Heel Raises**



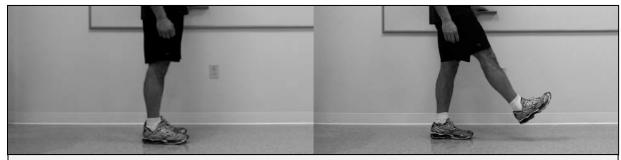
Stand with your feet flat on the floor, shoulder width apart. Ensure that you have a secure surface to hold onto with both hands. Raise up on your toes. Return to the starting position. To be performed at the discretion of your MD and home physical therapist.

## Standing Hip Flexion



Stand with your feet flat on the floor, shoulder width apart. Ensure that you have a secure surface to hold onto with both hands. Raise your leg up, letting the knee bend. Do not bend past a 90-degree angle. Return to the starting position. To be performed at the discretion of your MD and home physical therapist.

### Standing Leg Swing



Stand with your feet flat on the floor, shoulder width apart. Ensure that you have a secure surface to hold onto with both hands. Lift your leg straight out in front of you. Return to the starting position. To be performed at the discretion of your MD and home physical therapist.

### Sit to Stand



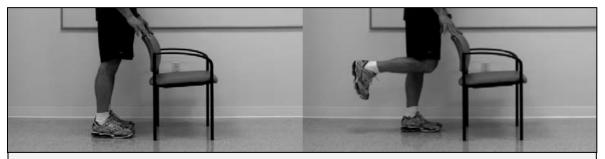
Sit in a chair that has armrests. Place your hands on the armrests of the chair and push yourself upwards to stand using your legs to lift you up. To sit back down, place your hands on the armrests of the chair and slowly lower yourself to a seated position. To be performed at the discretion of your MD and home physical therapist.

# Knee Extensions (Kicks)



Sit in a chair with your knees bent. Lift your foot off the floor and straighten the knee fully. Return to the starting position. To be performed at the discretion of your MD and home physical therapist.

# Standing Knee Bend



Stand with your feet flat on the floor, shoulder width apart. Ensure that you have a secure surface to hold onto with both hands. Bend your knee behind you as far as possible. Return to the starting position. To be performed at the discretion of your MD and home physical therapist.

# Patients Having a Total Shoulder Replacement Surgery

Tips for a Successful Shoulder Recovery

Making simple changes in your home before surgery can make your recovery period easier and safer.

For the first several weeks after surgery, it will be hard to reach high shelves and cupboards. Before your surgery, be sure to go through your home and place any items you will need on lower shelves or even the countertops. Other arrangements that you should make prior to surgery are:

- Prepare microwavable meals
- Stock up on nutritious ready-made meals
- Remove scatter rugs
- Reduce and/or eliminate clutter which can be a safety hazard
- Organize your clothes closets and drawers for easier access
- Wear loose fitting stretchable clothing with no/minimal fasteners
- · Consider shirts with button front or with large neck openings

When you come home from CJRI, you will need help for a few weeks with some daily tasks like bathing, dressing, undressing, cooking, laundry and grocery shopping.

#### Do

- Do wear your sling as instructed
- Do ice as indicated by your surgeon and/or therapist
- Do follow the exercise program prescribed for you
- Do ask for assistance
- Do any light housework/activity you can do with one hand
- Only use your non-surgical arm to do all the work

### Don't

- Do not use your operated arm to push up in bed or from a chair because this requires forceful contraction of muscles
- Do not lift anything no lifting with your operative arm per surgeon protocol
- Do not pull with your operative arm
- Do not place your arm in any extreme position, such as straight out to the side or behind your body
- Do not rotate your arm outward or away from your body

# Rehabilitation after Total Shoulder Replacement Surgery

Even though shoulder joint replacement is less common than knee or hip replacement, it is just as successful in relieving joint pain. The key to your recovery after surgery is managing pain and following your surgeon's specific instructions.

After surgery, your operated arm will be immobilized at your side with the use of a specialized sling. Based on the surgical technique, you may begin gentle therapy post-operatively. Sling immobilization is enforced during the early rehabilitation phase. However, your surgeon may allow you to begin a specific and personalized exercise program. An occupational therapist will instruct you on which exercises you may begin for your shoulder, elbow, wrist and/or hand. Progression to more advanced exercises to improve strength and flexibility will occur under the direction of your surgeon.

In the hospital, our goal is to help promote function and protect your new shoulder from wear-and-tear of daily activities. The occupational therapist will teach you how to manage your sling (taking it off and putting it on) and perform modified bathing, dressing, undressing and toileting using non-surgical arm. If needed, physical therapy will also work with you to ensure independence with transfers and ambulating.