Exercises Before and After Surgery

Upper Extremity Exercise

Do this exercise before surgery. Exercising of the arms will help you use a walker or crutches. Strengthening your arms will make it easier as you learn how to move around after your total joint replacement surgery. This will include getting in and out of bed and moving between sitting and standing. If the exercise listed causes you pain, please do not continue with this exercise and consult your doctor or therapist.

Tricep Strengthening – Chair Push-Ups

Use a chair that will not slide and has arm rests. Lift buttocks off seat of chair by pushing down with arms. Keep feet firmly planted on the floor. Hold for 10 seconds then return to sitting. Repeat 10 times or as directed.
Exercises Before and After Surgery – Total Knee Replacement

The following exercises will help increase the strength of the muscles in your legs and around the knee. They will also help you to regain the range of motion in your knee after surgery and will help you to resume walking normally.

*If you have any exercise restrictions after surgery, your doctor and physical therapists will instruct you about them. If you have any questions, please call your doctor’s office.*

**Ankle Pumps**

Bend ankles up and down, alternating feet. Repeat 30 times or as directed.

![Ankle Pumps Image]

**Quad Sets**

Slowly tighten the thigh muscles of straight leg, pushing your knee into the bed. Count to 10. Relax. Repeat 10 times or as directed.

Your doctor or therapist will tell you whether to do one leg at a time or do both legs together. When exercising both legs at the same time, keep both legs straight.

![Quad Sets Image]
Gluteal Squeeze

Squeeze buttocks muscles as tightly as possible. Count to 10. Relax. Repeat 10 times or as directed.

Straight Leg Raise

Bend one leg. Keep the other leg as straight as possible and tighten muscles on top of thigh. Slowly lift straight leg six to eight inches from bed and hold for 1 – 2 seconds. Lower it, keeping muscles tight for 10 seconds. Relax. Repeat 10 times or as directed.

Hip Abduction

Keep your knee and foot straight as you slide your entire leg out to the side and then back to the center. Repeat 10 times or as directed.
Exercises Before After Surgery –
Total Knee Replacement

Heel Slides

Slide your foot up toward your hip, bending your knee as much as you can. Do not lift your foot off the bed. Hold 10 seconds. Slowly slide your leg back down until it is flat on the bed. You may do this lying flat as shown in the picture or slightly reclined. Repeat 10 times or as directed.

Short Arc Quad

Place a rolled towel under your knee. Lift your heel off the bed, straightening your knee and leg. Hold 10 seconds. Slowly lower your heel back to the bed. Repeat 10 times or as directed.

Heel Prop

Prop your heel on a towel and relax your leg. Hold for five minutes.
Long Arc Quad

Start with your leg bent at the knee. Straighten operated leg and hold it 10 seconds. You can use your arms to help balance your upper body. Repeat 10 times or as directed.

After consulting with your doctor or therapist, you may use a light ankle weight (no more than two pounds for the first three months) if available.

Active Assisted Knee Flexion

Sit with your back supported against a wall or a headboard. With towel around heel, gently pull knee up with towel as far as tolerated. Hold 10 seconds. Relax. Repeat 10 times or as directed.

Seated Knee Flexion

Keeping feet on floor, slide foot of operated leg back, bending knee. Hold for 10 seconds. Slide foot forward to starting position.

These exercises are extremely important for a successful total joint replacement. No one can do these exercises for you. Others may help you, but you must do the exercises to meet your goals.
Knee Range of Motion Goals

Most of your improvement after a knee replacement will take time. The one thing that you must work hard to accomplish is getting good range of motion or flexibility in your knee. Within 10 to 14 days after your knee replacement, you should be able to get your knee entirely straight, with no space between the back of your knee and the bed or firm surface you are lying on. Also you should be able to bend your knee at least 90 degrees, the same thing as a right angle. Once you achieve these goals, it is important to push forward with your exercises and you will have excellent range of motion in your knee. Most patients can achieve up to 120 to 125 degrees of bending of the knee.

Make sure you know how much flexibility you have in your knee. Ask your therapist to measure your motion at each visit. This will help you know if you are making progress.

Ice to Your Knee

Pain and swelling occur because you had surgery. They can make your rehab more difficult. This is particularly true if you have a total knee replacement. Icing the knee regularly plays an important role in controlling both pain and swelling.

- At a minimum, you should ice your knee after every therapy/exercise session and any time you have been particularly active.
- You should continue to ice at these times for the first three to four months after surgery.
- In the early weeks of recovery, icing more frequently will be beneficial.
- You can ice as much as you want, but you need to protect your skin from direct contact with the ice/moisture. Protect your skin with a towel or pillow case placed between your skin and the cold.
- You may use plastic bags filled with ice, frozen vegetables or a bag of frozen popcorn kernels wrapped in a towel to ice your knee. The hospital or physician may also provide specific equipment.
- Remember, you should not place a pillow under your knee.
- You should rest your leg up on a bed or couch to help with swelling.
The following exercises will help increase the strength of the muscles in your legs and around your hip after surgery.

If you have any exercise restrictions after surgery, your doctor and physical therapists will instruct you about them. If you have any questions, please call your doctor’s office.

**Ankle Pumps**

Bend ankles up and down, alternating feet. Repeat 30 times or as directed.

**Quad Sets**

Slowly tighten the thigh muscles of straight leg, pushing your knee into the bed. Count to 10. Relax. Repeat 10 times or as directed.

Your doctor or therapist will tell you whether to do one leg at a time or both legs together. When exercising both legs at the same time, keep both legs straight.
Exercises Before and After Surgery – Total Hip Replacement

**Gluteal Squeeze**

Squeeze buttocks muscles as tightly as possible. Count to 10. Relax. Repeat 10 times or as directed.

![Gluteal Squeeze Image]

**Straight Leg Raise**

Bend one leg. Keep the other leg as straight as possible and tighten muscles on top of thigh. Slowly lift straight leg six to eight inches from bed and hold for 1 – 2 seconds. Lower it, keeping muscles tight for 10 seconds. Relax. Repeat 10 times or as directed.

![Straight Leg Raise Images]

**Heel Slides**

While lying flat, slide your foot up to your hip, bending your knee as much as you can. Hold 10 seconds. Slowly slide your leg back down until it is flat on the bed. Do not lift your foot off the bed. Repeat with other leg. Repeat 10 times or as directed.

![Heel Slides Image]
Short Arc Quad

Place a rolled towel under your knee. Lift your heel off the bed, straightening your knee and leg. Hold 10 seconds. Slowly lower your heel back to the bed. Repeat 10 times or as directed.

Long Arc Quad

Start with your leg bent at the knee. Straighten operated leg and try to hold it 10 seconds. You can use your arms to help balance your upper body. After consulting with your doctor or therapist, you may use a light ankle weight (no more than two pounds for the first three months) if available. Repeat 10 times or as directed.

Hip Abduction

Keep your knee and foot straight as you slide your entire leg out to the side and then back to the center. Repeat 10 times or as directed.

Remember to maintain your hip precautions and do not let your legs cross while you are doing this exercise.

These exercises are extremely important for a successful total joint replacement. No one can do these exercises for you. Others may help you, but you must do the exercises to meet your goals.