

Total Knee Replacement

Total knee replacement is also called total knee arthroplasty. It is surgery that is done to remove and replace (or resurface) the worn parts of your knee joint. The knee is made up of the lower end of the thighbone (femur), the upper end of the shin bone (tibia), and the kneecap (patella), which slides in a groove on the end of the femur. Large ligaments attach to the femur and tibia to provide stability. The long thigh muscles give the knee strength. The joint surfaces where these three bones touch are covered with articular cartilage, which cushions the bones and enables them to move easily. A thin membrane releases a special fluid that lubricates the knee, reducing friction during movement. Normally, all of these components work in harmony. However, disease or injury can cause pain, muscle weakness, and reduced function. If you have these problems, you may need to have a total knee replacement.

During the total knee replacement, the damaged surfaces of your knee joint are removed and replaced with an implant. This implant may be made of metal and/or plastic. Total knee replacement surgery may decrease or take away your knee pain and make standing, sitting, and walking easier.

Normal knee joint



Front view

Side view

Implanted knee joint



Front view

Side view

Total Joint Center at The Miriam Hospital



Orthopedics Institute

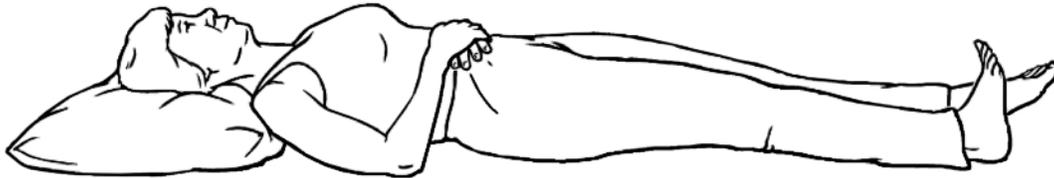
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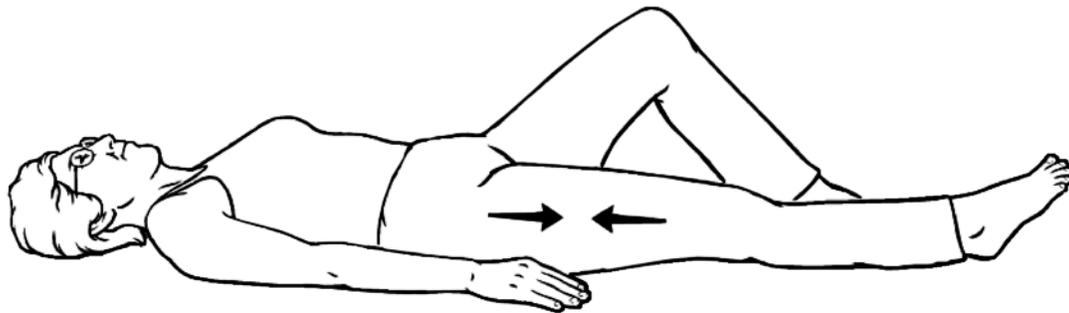
Total Knee Replacement: Pre- and Post-Op Exercises

These exercises should be completed both PRIOR to surgery and AFTER surgery. Participation in an exercise program before surgery as well as after surgery can greatly improve your recovery after knee replacement

surgery. Please review the exercises listed below and begin following this exercise guide two to four weeks prior to surgery.



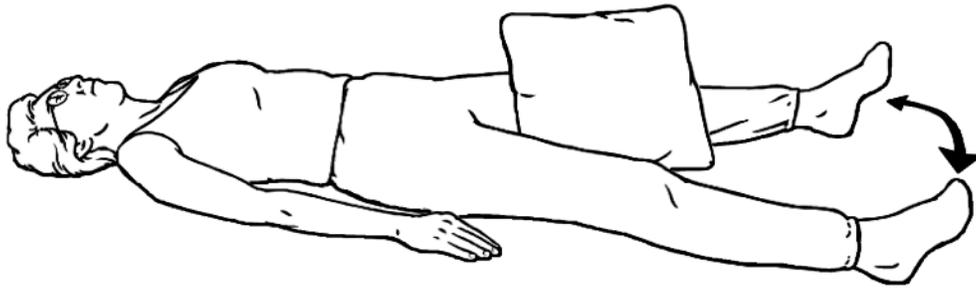
Ankle Pumps: Bend ankles up and down, alternating feet.
Repeat 10 times, 2 times a day.



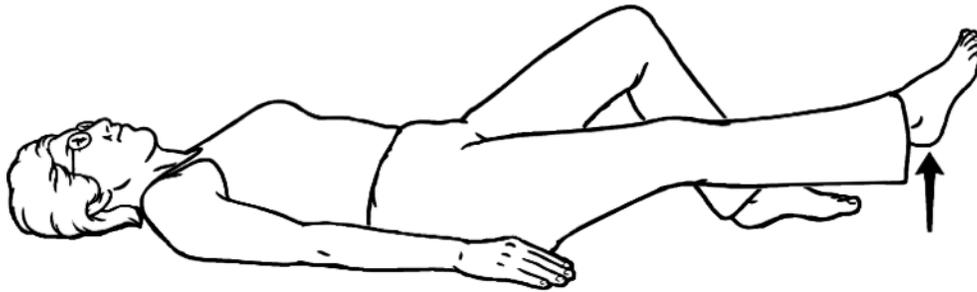
Quad Sets: With other leg bent and foot flat, slowly tighten thigh muscles of straight leg while counting to 5 out loud.
Repeat 10 times, 2 times a day.



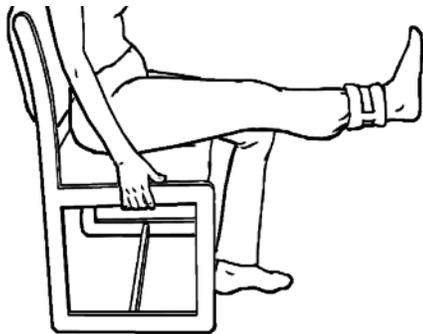
Heel Slides: Bend knee and pull heel toward buttocks. Hold for 5 seconds.
Return. Repeat with other knee.
Repeat 10 times, 2 times a day.



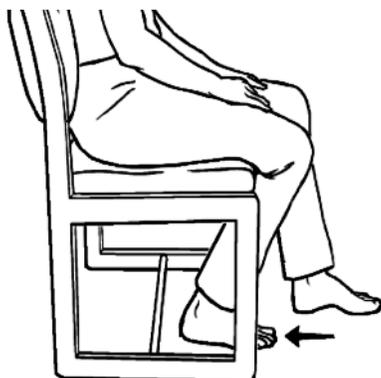
Knee Abduction: Slide one leg out to the side. Keep kneecap pointing toward ceiling. Gently bring leg back to pillow. Repeat with the other leg. Repeat 10 times, 2 times a day.



Straight Leg Raise: Bend one leg. Keep other leg as straight as possible and tighten muscles on top of thigh. Slowly raise straight leg 6 to 8 inches from bed and hold for 10 seconds. Lower it, keeping muscles tight. Relax. Repeat using other leg. Repeat 10 times, 2 times a day.



Long Arc Quad: Straighten operated leg; hold it for 10 seconds. Repeat set 10 times, 2 times a day.



Chair Knee Flexion: Keeping feet on the floor, slide foot of the operated leg back, bending the knee. Cross legs at ankles. Repeat entire exercise with legs switched. Repeat set 10 times, 2 times a day.

The Coach's Guide to Joint Replacement Surgery

Coach Definition: A coach is someone who will help you do your best by removing obstacles, helping you to set goals, and motivating you to remain active in your recovery process. The coach may be your spouse, child, close friend, or a combination of these people.

Coach Expectations:

A coach should be compassionate and patient, with good observation skills, excellent organizational skills and exceptional listening abilities. Coaches often must be tireless and resilient cheerleaders for their loved one.

Time Commitment:

- Attend joint replacement education class with the patient (approximately two hours total).
- Assist the patient with exercises at home once he or she is discharged from the hospital, two to three times per day, as needed.
- Attend outpatient physical therapy sessions with the patient, if needed (usually three times per week, 30 to 45 minutes per session).

Responsibilities:

- Assist with exercises pre-operatively, as needed, and encourage doing these daily.
- Be familiar with and able to reinforce Total Knee precautions (if having this type of surgery).
- If possible, find an alternative coach if you are unable to attend or assist. (Two are always better than one!)
- Safely operate wheelchair (brakes, foot rests, body mechanics).

- Assist with discharge from the hospital (transportation, medication, equipment, etc.).
- Do (or arrange for) the shopping, cleaning, cooking, laundry and errands.
- Assist with wound management, changing bandages, etc.
- Encourage adequate pain control both in the hospital and after discharge (medication, ice, elevation, etc.).
- Encourage exercise and mobility per instructions following discharge.
- Assist with moving from place to place, especially during the initial post-operative period.
- Keep track of medical appointments and provide transportation to and from the hospital, the surgeon's office, the physical therapist's office, and any other appointments.
- Pick up prescriptions or arrange for delivery of prescriptions.
- Manage finances, including paying regular household bills and handling insurance paperwork.
- Communicate with the health care team about any changes or concerns.
- Please review pre-op and post-op exercises.