Knee Replacement Physical Therapy
Pre- and Post- Op Exercises

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PRE-SURGICAL EXERCISES

The at-home pre- and post-operative exercises described in the following pages are intended to safely build the strength and balance you will need to successfully complete your joint replacement journey.

These exercises should be done daily as directed by your physical therapist in the days leading up to and following surgery. However, it is important not to push yourself beyond your ability or pain threshold. As with any new exercise program, it is important to have your physician or physical therapist determine if these exercises are right for your individual condition.
PRE-SURGICAL EXERCISES

Perform these exercises two times a day. They should take about 15-20 minutes to complete. REMEMBER: Don’t push yourself beyond your ability or pain threshold unless instructed by your physician or physical therapist.

NOTE: These illustrations represent exercises for pre-surgery to the right knee. Reverse for the left knee.

1. Ankle Pumps

Alternate between flexing the ankle and pointing the toes upward. Repeat 20 times.
PRE-SURGICAL EXERCISES

2. Quad Sets (Knee Push-Downs)
Lie on your back and press your surgical knee into the floor or mat, tightening the muscles in the front of the thigh. DO NOT hold your breath. Relax. Repeat 20 times.

3. Gluteal Sets (Bottom Squeezes)
Tighten the muscles in your buttocks. Hold for 10 seconds. DO NOT hold your breath. Relax. Repeat 20 times.
PRE-SURGICAL EXERCISES

4. Heel Slides

Lie on a couch, bed or the floor with both legs flat. Slide the foot of your surgical leg back toward your buttocks, then slide back to parallel position. Repeat 20 times.

5. Short Arc Quads

With a rolled up towel beneath your calf or thigh, lift your surgical foot, keeping a straight knee. Do not lift your thigh from the towel or surface. Relax. Repeat 20 times.
PRE-SURGICAL EXERCISES

6. Armchair Push Ups
This exercise will help strengthen your arms for walking with crutches or a walker. Sit in an armchair. Place your hands on the armrests. Straighten your arms to lift your buttocks up from the chair, if possible. Slowly lower to the seat. Repeat 20 times.

7. Seated Hamstring Stretch
Sit on a bed or couch with your leg extended. Keeping your back straight, lean forward to pull your toes toward your body. Hold the stretch for 20 – 30 seconds. Relax. Repeat 5 times.
PRE-SURGICAL EXERCISES

8. Straight Leg Raises

Lie on your back with your unaffected leg bent at the knee and foot flat. Lift your surgical leg 12 inches, keeping your knee straight and your toes pointed up. Slowly lower your leg to the surface. Relax. Repeat 20 times.

9. Hip Flexion

March in place, slowly alternating lifted knees, 20 times. Repeat three times.
PRE-SURGICAL EXERCISES

10. Ankle Dorsiflexion (Plantar Flexion)

Hold on to the back of a chair or a firm surface such as a kitchen counter. Lift up onto your toes. Lower your heels and raise your toes. Alternate each position 20 times.
POST-SURGICAL EXERCISES

The following exercises will help you make a complete recovery from your knee replacement. The first set will improve your range of motion and flexibility. The second set includes exercises to restore your strength.

1. Ankle Pumps

Alternate between flexing the ankle and pointing the toes upward. Repeat 20 times.
POST-SURGICAL EXERCISES

2. Quad Sets (Knee Push-Downs)
Lie on your back and press your surgical knee into the floor or mat, tightening the muscles in the front of the thigh. DO NOT hold your breath. Relax. Repeat 20 times.

3. Gluteal Sets (Bottom Squeezes)
Tighten the muscles in your buttocks. Hold for 10 seconds. DO NOT hold your breath. Relax. Repeat 20 times.
4. Knee Abduction and Adduction (Slide Legs In and Out)
Lie on your back. Slide your legs outward, keeping your toes pointed up and knees straight. Then slide your legs back together. Repeat 20 times.

5. Heel Slides (Slide Heels Up and Down)
Lie on a couch, bed or the floor with both legs flat. Slide the foot of your surgical leg back toward your buttocks, then slide it back to the parallel position. Repeat 20 times.
POST-SURGICAL EXERCISES

6. Short Arc Quads

With a rolled up towel beneath your calf or thigh, lift your surgical foot, keeping a straight knee. Do not lift your leg from the towel or surface. Relax. Repeat 20 times.

7. Straight Leg Raises

Lie on your back with your unaffected leg bent at the knee and foot flat. Lift your surgical leg approximately 12 inches, keeping your knee straight and your toes pointed up. Relax. Repeat 20 times.
POST-SURGICAL EXERCISES

8. Seated Knee Flexion

Sit straight in a chair with your affected leg slightly outstretched. Gently slide that leg underneath the chair. Keeping your hips in the chair, try to gently extend and bend the knee as far as possible. Then, with both feet planted on the floor, move your buttocks forward and backward in the chair. Repeat 20 times.

9. Prone Knee Flexion Stretch

Lie on your stomach on a flat surface. Bring your heel toward your buttocks as far as possible, and then lower to the surface. If this bothers your back, put a pillow under your abdomen. Repeat 20 times.
10. Seated Hamstring Stretch
Sit on a bed or couch with your leg extended. Keeping your back straight, lean forward to pull your toes toward your body. Hold the stretch for 20 – 30 seconds. Relax. Repeat 5 times.

11. Knee Extension (Long Arc)
Sit with your back against a chair. Straighten knee and hold for 10 seconds. Relax. Repeat 20 times.
12. Armchair Squat
With feet shoulder-width apart and flat on the floor, squat as low as is comfortable. Use the back of the chair as support if necessary. Slowly rise to standing. **CAUTION:** You should not bend your knees to the point of pain.

13. Ankle Dorsiflexion (Plantar Flexion)
Hold on to the back of a chair or a firm surface such as a kitchen counter. Lift up onto your toes. Lower your heels and raise your toes. Alternate each position 20 times.
POST-SURGICAL EXERCISES

14. Hip Flexion
March in place, slowly alternating lifted knees, 20 times. Repeat three times.

15. Single Leg Step-Up
With foot of involved leg on the step, straighten it to lift your other foot from the floor. The height of the step will depend on your strength. Start low. Exercise the good leg for balance. Repeat each step 20 times.
16. Retro Leg Step-Up

Place a step or a thick hardcover book behind your heels. Step backwards with one foot and then the other. Step forward to the floor the same way. Consult with your physical therapist about the height of the step.