After Knee Replacement

Living in Comfort with Your New Knee

Returning to Everyday Activities
After knee replacement, you can look forward to moving more easily. With the help of your healthcare team, you’ll regain strength and confidence in your new knee. Within a few months after surgery, you’ll likely be back to your normal routine. This includes returning to work if you have an office job. The goal: Being able to do the activities you enjoy without pain getting in the way.

Follow-Up Care
After surgery, see your surgeon for follow-up visits as directed. These visits help your surgeon make sure that your knee is healing well. Use this time to ask any questions you have about your recovery or activities.

This booklet is not intended as a substitute for professional medical care. Only your doctor can diagnose and treat a medical problem.

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### Your Personal Exercise Program

Use the space below for your exercise instructions. For each exercise, write the number of repetitions and sessions you should do per day. At the bottom, fill in any additional exercises you are given.

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<th>Exercise</th>
<th>Week 1</th>
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<th>Week 3</th>
<th>Week 4</th>
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<th>Week 6</th>
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<tbody>
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<td>Gluteal sets</td>
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### Stepping into Recovery

Before knee replacement surgery, your painful knee may have limited your activity. Replacing your knee joint was your first step to regaining an active life. Now it’s time to recover. This takes time and effort. But it’s worth it. Your work now will help you get the best results from your knee replacement.

**Addressing Your Concerns**

You may have concerns about your new knee and recovery. Here are some answers to common questions about knee replacement:

- **Will the pain in my knee stop?** Your new knee and exercise program should help relieve the pain you had before surgery. Medication helps manage pain due to the surgery and doing knee exercises. The pain will lessen as you recover.

- **When will I go home?** You will likely leave the hospital after several days. You may go to a rehabilitation (rehab) center for more therapy. Or you may recover at home with the help of a home health team. Ask your surgeon which method will be used for you.

- **Will I be able to do the things I enjoy again?** In most cases, yes! With time, you’ll return to many of your favorite activities. You may have to limit certain high-impact activities, though. Talk to your doctor about activities that you want to return to.

You’ll work with your healthcare provider after surgery to ensure the best recovery for your knee.
Understanding Knee Replacement

The knee is a hingelike joint, formed where the thighbone, shinbone, and kneecap meet. The joint is supported by muscles and ligaments. It’s lined with a smooth tissue called cartilage. Sometimes the cushioning cartilage wears away. If it does, the knee becomes stiff and painful. A knee prosthesis (artificial joint) can help restore proper movement.

A problem knee is stiff or painful. Cartilage cracks or wears away due to overuse, inflammation, or injury. Worn, roughened cartilage no longer allows the joint to glide freely, so it feels stiff. As more cartilage wears away, exposed bones rub together. This causes pain when the knee bends. With time, bone surfaces also become rough, making pain worse.

A knee prosthesis lets your knee bend easily again. The ends of the thighbone and shinbone and the underside of the kneecap are replaced with metal and strong plastic parts. With new smooth surfaces, the bones can once again glide freely. A knee prosthesis does have limitations. But it can let you walk and move with greater comfort.

Keeping Your Knee Healthy

Know the right moves and avoid the wrong ones. This will help keep your knee healthy. Learn which movements and activities are safe, and which could harm your new knee.

Do’s
 ✓ Do position your knee comfortably as you go about daily activities.
 ✓ Do exercise and walk every day.
 ✓ Do use an ice pack if your knee begins to swell or feel tender.
 ✓ Do wear shoes with good traction and support.

Don’ts
 ✗ Don’t force your knee into position. Avoid bending your knee too far.
 ✗ Don’t do high-impact activities such as jumping. They could loosen your new knee joint.
 ✗ Don’t overdo it. Take activities slowly and rest when you need to.
 ✗ Don’t twist your knee. Turn your entire body instead.
 ✗ Don’t kneel on your operated knee.

Preventing Infections

An infection in another part of your body can harm the new joint. Call your surgeon or primary care doctor if you think you have an infection. Also call if you schedule a medical or dental procedure. You may need to take antibiotics to prevent infection.

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Your healthcare team will monitor your progress after you wake from surgery. They will use support equipment to help you recover. Be sure to let them know how you feel and how well your pain is controlled.

**Your Healthcare Team**
- An orthopaedic surgeon manages your treatment program, checks your progress, and provides follow-up care.
- Nurses monitor recovery and help keep you comfortable.
- A physical therapist (PT) designs a movement program that includes leg exercises and walking.
- An occupational therapist (OT) teaches you skills to use during recovery. Daily tasks such as dressing and bathing are covered.

**Understanding Support Equipment**
Special tubes and machines that help you recover after surgery can include:
- An intravenous (IV) line to provide needed fluids and medications.
- A catheter tube to help drain your bladder.
- A drainage tube in your leg to release excess fluid and reduce swelling.
- An ice machine or ice pack to reduce inflammation.
- A sequential compression machine (SCM) to help prevent blood clots by gently squeezing, then releasing, your foot and calf.
- A continual passive motion (CPM) machine to increase flexibility by gently moving your knee.

**Managing Pain at the Hospital**
Be honest about how much pain you feel. Don’t be afraid to ask for pain medication when you need it. You may receive pain medication through an IV, a pill, or an epidural catheter in the spine. An ice pack can also help reduce pain. Tell a nurse if the medications don’t reduce pain enough or if you suddenly feel worse.

**Controlling Swelling**
Swelling is common after knee replacement. It may be worse after exercise. The tips below may help:
- **Ice your knee.** Wrap an ice pack or bag of frozen peas in a thin cloth. Place it on your knee. Don’t place ice directly on the skin or use ice for more than 20 minutes at a time.
- **Elevate your leg** above your heart. Ask your team to show you safe ways to do this.
- **Continue doing ankle pumps** (see page 5). They help reduce swelling, improve blood flow, and help prevent blood clots.

**Walking in Stride**
Walking helps build a more normal, comfortable stride. It also keeps you in shape and helps prevent blood clots. Start by taking three or four short walks each day. Slowly increase how far and how long you walk. Be sure to step past your good leg with your operated leg with every stride. After walking, lie down, elevate your knee, and ice it to reduce swelling.

**When to Call Your Healthcare Provider**
During recovery, call your healthcare provider if you have:
- Excessive pain or swelling in the knee or calf
- Pain that is ongoing and not helped by over-the-counter pain relievers
- A feeling of looseness or instability in the knee joint
- Fever of 100.4°F (38°C) or higher, which may be a sign of infection
Quadriceps Sets
Quadriceps sets strengthen thigh muscles.
• Press the back of your knee into the bed.
  Tighten the muscle on the front of your thigh. Hold for 5 seconds. Release.
• Repeat 5 times each hour. Build up to 10 seconds per hold.

Your First Exercises
Shortly after surgery, you’ll start with some basic exercises. These help prevent blood clots, build leg strength, and increase range of motion (how much your knee can bend and straighten). Take deep, steady breaths as you exercise. Don’t hold your breath!

Ankle Pumps
Ankle pumps help reduce swelling and prevent blood clots.
• Point, then flex both feet slowly.
• Repeat 10 to 30 times each hour.

Gluteal Sets
Gluteal sets strengthen muscles in the buttocks.
• Squeeze your buttocks together tightly to raise your hips slightly. Hold for 5 seconds. Release.
• Repeat 5 to 10 times each hour.

Heel Slides
Heel slides increase range of motion and thigh muscle strength.
• Slide the heel of your operated leg up the bed toward your buttocks. Go until you feel a gentle stretch. Hold for 3 seconds. Slide your leg back down.
• Repeat 5 to 10 times an hour. Build up to 10 seconds per hold.

Your At-Home Program
Apply the skills you learned in the hospital or rehab center to your exercise program at home. Use a walker, cane, or crutches to help you move safely. By sticking with your exercise program, you’ll walk more easily and return to an active life sooner.

Maintaining Your Exercise Program
Make exercise part of your daily routine. Lack of exercise can cause joint stiffness and decreased range of motion. But with continued exercise, you may even gain more strength and range of motion than you had before surgery. Keep meeting with your PT as directed. He or she may add riding a stationary bike or other new exercises to your program.

Your PT will teach you how to use your operated knee safely.

Sitting Knee Exercises
Do sitting knee exercises along with your other exercises. (See page 8 for proper form.) Start with 10 repetitions, then build up to 25 repetitions per session. Do 2 sessions each day.
• Sit in a chair with both feet flat on the floor.
• Slowly straighten your operated leg as much as you can. Hold for 5 seconds.
• Slowly bend your leg under the chair, bringing it back as far as you can. Hold for 10 to 20 seconds. Return your leg to the starting point.

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Mastering the Basics

Your healthcare team will help you get up soon after surgery. They will show you how to sit up, stand, and use the bathroom safely. Use time in bed to do exercises. When resting, place a rolled-up towel under your ankle to help straighten your knee.

Sitting Up
The first few times you sit up, a healthcare provider will help you move your leg. Soon, you’ll be able to sit by yourself at the edge of the bed with your feet flat on the floor. Be sure to speak up if you feel faint or dizzy!

Standing with Support
A healthcare provider will help you stand. A safety belt may be placed around your waist for the provider to grasp. This helps to prevent falls. A knee immobilizer may be put on your leg to protect the knee as you stand and use a walker.

Going to the Bathroom
At first, you’ll be assisted to the bathroom. Later, you’ll go on your own with a walker. A commode chair over the toilet helps make sitting easier. Follow these steps:
• Back up until the backs of your legs touch the commode.
• With your weight on your good leg, place the operated leg in front of you. Reach back for the armrests. Lower yourself onto the commode.
• To stand, push up using the armrests. Keep your weight on your good leg.

Making Your Bathroom Safe
You may need to adjust the bathroom to make it safer and easier to use. Your OT can help you choose the right equipment. He or she will also teach you to bathe, dress, and sit more easily in the bathroom.
• Have grab bars installed in your shower or tub. They provide support as you get in and out.
• Have a handheld showerhead installed for easier bathing.
• Use a commode chair or elevated toilet seat to raise the height of your toilet.
• Sit on a shower chair while you bathe.
• Use a long-handled sponge to wash hard-to-reach areas.
• Use a rubber-backed bathroom mat to help keep the floor dry.

Managing Pain at Home
You may be prescribed pain medication to use at home. With pain under control, you’ll get back to an active life sooner. Use pain medication only as directed. Take each dose on schedule, before pain becomes severe. Wait about 30 to 40 minutes after taking pain medication before starting an activity, such as exercise. This will give it time to start working. Tell your doctor if the medication doesn’t control your pain enough or if you suddenly feel worse. Icing and elevating your leg can also help relieve pain (see page 13).
Using a Walker

Once you can stand, you’ll begin using a walker. As you become better at using the walker and your knee strengthens, you’ll be taught more advanced skills. For instance, you may practice stepping on and off a curb.

Walking Down a Curb
- Move your feet and the walker as close to the edge of the curb as you safely can.
- Lower the walker onto the ground, keeping its back legs against the curb.
- Using the walker to support your weight, lower the operated leg. Then step down with the other leg.

Walking Up a Curb
- Move your feet and the walker as close to the curb as possible.
- Put your weight on both your legs, then lift the walker onto the curb.
- Step up with the unoperated leg. Using the walker to support your weight, bring up the operated leg.

Your First Steps
- Push your walker a few inches in front of you.
- Keeping your back straight, lean on the walker so it supports your weight. Step into the center of the walker with your operated leg, being careful not to twist your leg. Then, step with your other leg.
- As you get more comfortable using the walker, you may be able to move it as you step.

Walking Safe Home
Is your home as safe as it should be? Or are there potential hazards, such as rugs and cords, ready to trip you up? Make sure your home is safe and free of hazards before you return. Ask friends or family to help you adjust rooms as needed. Once home, avoid uneven or wet floors that can cause slips.
- Move electrical cords out of the way.
- Keep items you use often within easy reach.
- Remove throw rugs.
- Wear rubber-soled shoes to prevent slipping.
- Install a rail along one side of the staircase, if needed.
- Watch for small pets or objects on the floor.
- Add pillows to a low chair.

Think Before You Move
You’ll be walking with a walker, cane, or crutches by the time you get home. To avoid injury, think before you move. If you’re tempted to twist and turn around quickly, slow down. Always be aware of your movements as you go about your daily activities.
- Hold the cane in the hand opposite your operated leg. Move the cane and operated leg forward at the same time. Then step through with your good leg.

Preparing to Go Home
Before returning home, you’ll need to prepare. You and your healthcare team will assess how well you can care for yourself at home. You may need friends, family, or a home health aide to help with chores and errands. Your OT will teach you the skills needed for daily living with your new knee.

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More Advanced Exercises

More advanced exercises help strengthen and stretch the muscles around your knee. Unless told otherwise, repeat each exercise 10 times per session. Build up to 25 repetitions. Do two sessions each day. You may be told to take pain medication 30 minutes before each session.

Short-Arc Knee Extensions
• Lie on your back. Place a rolled towel under your new knee and bend the other knee.
• Keeping your new knee on the towel, lift your foot several inches to straighten the knee.
• Hold for 3 seconds. Slowly lower the foot.

Standing Knee Bends
• Stand while holding onto a steady object, such as a table.
• Bend the operated knee as far as you can.
• Hold for 3 seconds. Slowly lower the leg.

Straight Leg Raises
• Lie on your back. Bend your good leg, keeping your foot flat on the bed.
• With your operated leg as straight as possible, lift it about 1 foot off the bed. (At first, you may only be able to lift the leg a few inches.)
• Hold for 3 seconds. Slowly lower the leg.

Long-Arc Knee Extensions
• Sit in a chair with both feet flat on the floor.
• Straighten the operated knee as much as you can.
• Hold for 3 seconds. Slowly lower the leg.

Using Crutches
• With crutches in place, lean on your hands. The top of the crutch should be just below, not in, the armpit.
• Move your operated leg and crutches forward at the same time. Keep the operated leg lined up with the crutches.
• Look straight ahead, and step through the crutches with your good leg.

Walking Up Stairs
• Hold the rail with one hand and both crutches in the other. Support your weight evenly between the rail and the crutches.
• With the crutches and operated leg on the lower step, step up with your unoperated leg.
• Keeping a grip on the rail, bring your operated leg and crutches up to the same step.

Walking Down Stairs
• Hold the rail with one hand and both crutches in the other.
• With your weight on your good leg, step down with your operated leg and crutches.
• Using the crutches and rail for balance, slowly bring your good leg down to the same step.

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Walking with Crutches

Once your balance improves, you may begin using crutches or a cane instead of a walker. Crutches and canes can help you walk with an even stride. Follow all instructions given to you by your PT.