

*Your guide to*

# Total Knee Replacement



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*Your Guide to*

# **Total Knee Replacement**

Second Edition

Fairview Health Services

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## The road to a more enjoyable, active life begins here

*Fairview Health Services has a long history of excellence in knee replacement surgery. We partner with some of the finest surgeons in the country, offering services to support you from the day you decide to have surgery through the return to your full potential.*

Just like you, hundreds of thousands of people each year decide to have surgery to replace a painful knee. Most people are highly satisfied after the surgery and can return to the activities they once enjoyed.

Although you are likely eager to enjoy a life with less pain, you may have questions. You may even be a little nervous or fearful. As your care team, we will guide you through the whole process, advising you on what to expect and answering your questions. We want you and your family to be as comfortable as possible.

This book will help you prepare for your knee replacement. It has three chapters: Preparing for Your Surgery, Your Hospital Stay and Living with Your New Knee. Each chapter begins with an overview of what you can expect and ends with a to-do list. In between, you will find lots of helpful information.

We urge you to read this book before you arrive for your surgery. Read it at your own pace—you don't have to read it all in one sitting. You may also want to share it with family and friends who will be helping you as you recover.

**To get your best results after surgery, you will need to play an active role in your wellness.** We urge you and a family member to attend a Fairview Joint Replacement Class. There you will meet a nurse educator and have your questions answered. This is a great chance to learn what else you can do to help ensure the best results from your surgery.

Thank you for choosing Fairview Health Services.

## Watch for these highlights

As you read, look for these symbols pointing out key information.

**!** **Remember to ...** These “to-do” items remind you of the tasks that will help you get the best results from your surgery.

**?** **Did you know ...** These facts will help you better understand your care.

 **Expert tip ...** Wisdom from people who know: These tips come from past knee patients as well as health care providers.

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# Chapter **1**

## **Preparing for Your Surgery**

This chapter guides you through each step on the road to knee replacement surgery. First you will meet your health care team. Then, step by step, you will learn what will lead up to your surgery.

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# Meet your health care team

Your care team will work together during your surgery, hospital stay and recovery. You and your family are the most important members of your care team. **You will get the best results from your surgery by taking an active role in your care.**

Along with your surgeon, the members of your care team include:

- **Primary care provider.** Your regular health care provider will work with your surgeon to ensure your body is in the best health before surgery. Later, your hospital team will send your provider information about your hospital stay.
- **Anesthesia (an-es-THEE-zha) care team.** This team helps you sleep safely through your surgery. They will watch your responses to the anesthesia medicines and adjust them as needed. They will also manage your care while you are in the recovery room.
- **Hospitalist.** A hospitalist manages your medical care during your hospital stay. After you go home, your primary care provider will manage your medical care again.
- **Physician assistant (PA).** A physician assistant works side by side with a surgeon. The PA often helps with the surgery and the follow-up care. Either the surgeon or the PA will visit you in the hospital and follow your progress.
- **Nurses.** A team of nurses and support staff will help care for you before and after surgery. They help with your daily activities, medicines and other treatments, personal care and pain relief.
- **Physical therapists (PTs).** PTs help you learn to move safely with your new knee. They will teach you exercises to strengthen your muscles before and after surgery. They will also show you how to use a walker or crutches.
- **Occupational therapists (OTs).** OTs will teach you how to dress, manage personal care and do household tasks safely with your new knee. They will also show you how to use the equipment and simple tools you may need to do these tasks.

- **Social workers and care coordinators.** These team members help you and your family plan for when you leave the hospital. They can tell you about recovery resources such as home health care.
- **Pharmacist.** A hospital pharmacist will review your medicines and suggest ways to take them safely for best results.
- Fairview offers other special services, too. Please tell us if you would like:
  - **A language interpreter.** If you prefer a language other than English, our trained medical interpreters can help you talk with doctors and nurses.
  - **Services for the deaf or hard-of-hearing.** We provide many free services including sign language interpreters, speech interpreters, TTYs, telephone amplifiers, note takers and written materials.
  - **Spiritual support.** Our chaplains are ready to serve you, whatever your faith. We also urge you to contact your own faith community for further support.

# Step 1: Surgeon visit

What's the first step to recovering from a painful joint? For most people, it starts with a visit to an orthopedic (orth-oh-PEE-dik) surgeon. Your surgeon will examine your knee. Then, you will decide together if a knee replacement is best for you. If so, you will learn more about what kind of new knee (or “implant”) you will get. The surgeon can also tell you what results to expect, both in the short term and the long term.

You will learn a lot from your surgeon and may feel overwhelmed. This section will help you review the information shared during your visit. You can refer to it later, too. If you have specific questions, talk to your surgeon or another member of your care team.



## **Did you know . . .**

Studies have shown that 9 out of 10 people have little or no pain in their new joint one year after knee replacement surgery.

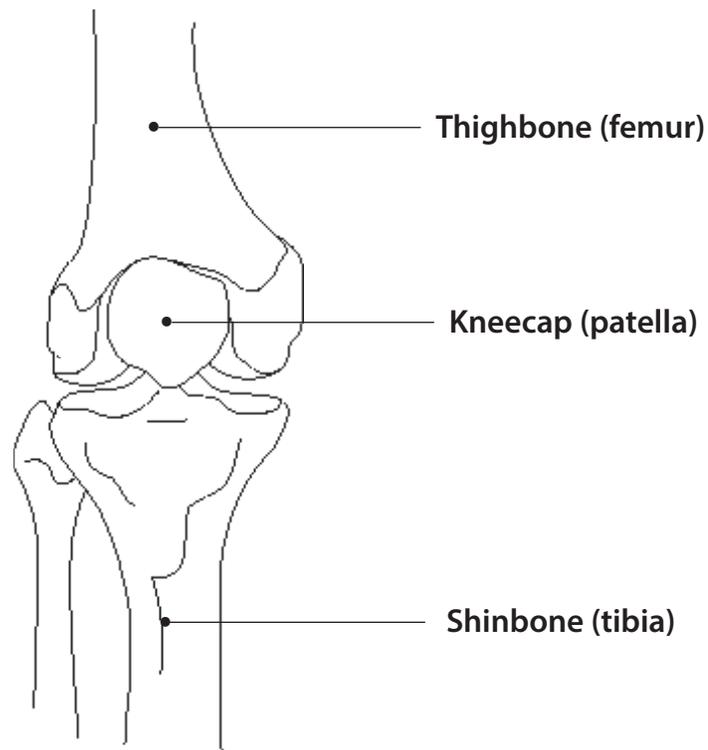
## **Understanding your knee**

The knee joint is made of three bones. The thighbone (femur) makes up the top part of the joint. It meets the shinbone (tibia) at the lower part of the joint. In front of these bones is the kneecap (patella). That's the bone you feel when you touch the front of your knee.

The ends of the thighbone and shinbone are covered with cartilage (KAR-tih-lej), a smooth, tough tissue that allows your knee to bend easily. The cartilage also acts as a cushion to protect the bones.

The knee is held together by tough bands of tissue called ligaments (LIG-uh-ments). Muscles and ligaments surround the knee joint and keep it stable as it moves. Two large muscles link the thigh to the knee joint: the quadriceps in the front and the hamstrings in the back.

## A normal, healthy knee

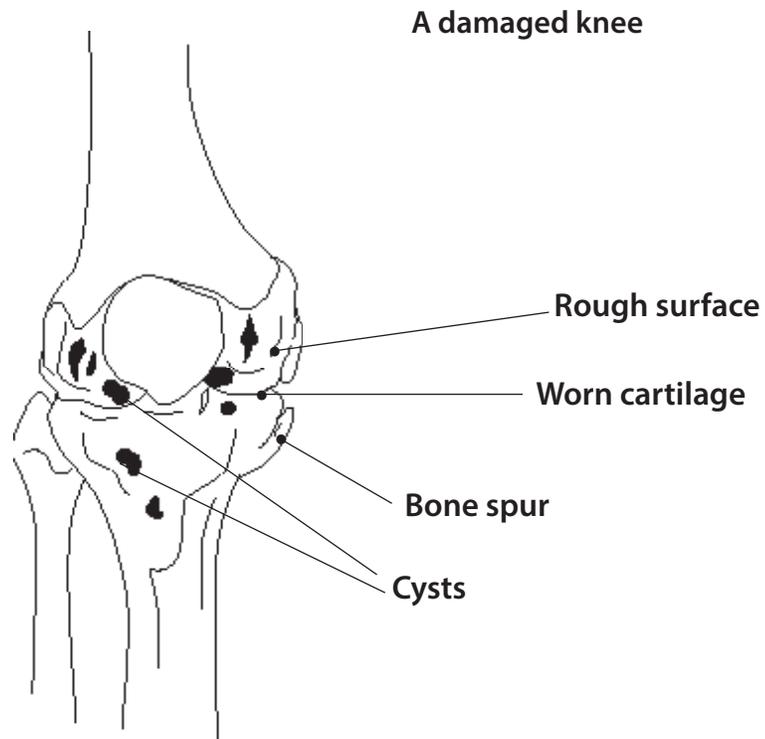


## What causes knee pain?

If your knee is hurt or worn down, the joint does not move smoothly. It hurts to move it. You may have trouble putting weight on that leg, causing you to limp. A painful knee may be stiff or swollen, which makes it hard to bend and straighten.

What causes the kind of knee pain that leads to replacement surgery? It's often a disease called arthritis, or osteoarthritis (AHS-tee-oh-arth-RY-tuss). The cartilage wears away from the bones, and the joint loses its cushion. The surface of the bones becomes rough. These rough edges may rub against each other, bone on bone, causing pain.

As the pain gets worse, you may try to stop using your knee. And as you use it less, the knee loses even more flexibility. It doesn't bend as well as it used to, and you can't fully straighten it, either. You may be unable to "lock" your knee while standing.



When you're less active, your leg muscles get weaker. So even on days when the pain isn't bad, you may have trouble walking, climbing stairs and getting in and out of a chair.

Sometimes osteoarthritis occurs because of:

- General wear and tear over the years
- Past injuries, like broken bones or torn cartilage or ligaments

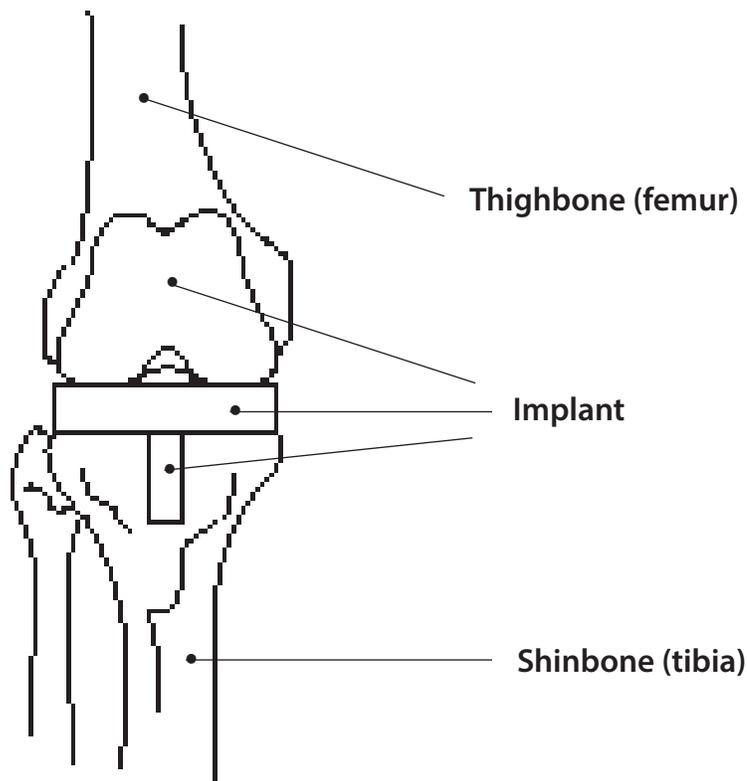
## Getting a new knee

During a total knee replacement, surgeons remove damaged cartilage and bone from your thighbone, shinbone and kneecap. They replace these with new parts made of metal and strong plastic.

The new knee is called an implant, artificial joint or prosthesis (prahss-THEE-sis). It has three parts:

- The upper part replaces the end of the thighbone. This part is made of titanium, stainless steel or another long-lasting metal.
- The lower part fits into the end of the shinbone. It is made of metal and sturdy plastic.
- The kneecap part replaces all or part of the kneecap.

### A new knee joint (prosthesis)



These parts fit together to create a new knee with smooth surfaces, so the knee can bend and straighten in a natural, comfortable motion.

Surgery usually lasts about two hours. First the surgeon makes a 4-to-6-inch cut (called an incision) to reach the knee joint. After removing the diseased bone and cartilage, the surgeon prepares the remaining bone for the implant. The upper part of the implant fits into the thighbone, and the lower part fits into the shinbone. The surgeon then closes the skin with staples or stitches.

If your knee is damaged in only one area, your surgeon may suggest a partial knee replacement. In that case, the surgeon will replace only the most damaged parts. Your surgeon will decide which type of surgery is best for you.

## **What to expect after surgery**

In time, you should have less pain and stiffness. After the recovery period, most people have no ongoing pain, or they have a small amount that they control with over-the-counter medicine.

Although your long-term results should be very good, you can expect to have some pain right after surgery. This pain should lessen each day. Your care team will work with you to make this time of discomfort as short as it can be.

After the surgery pain goes away, you will likely notice that your arthritis pain is gone, too. Soon you'll be able to do many of the things you used to do, such as walking, biking, golfing, dancing and swimming.

- Remember to . . .**
- Ask your surgeon about what you can expect, both right away and later, too. For example, you might ask when you can drive a car again or return to work. You will also want an expert's opinion on how much extra help you might need at home, and for how long. Ask a member of your care team.

## **Risks of surgery**

Like any major surgery, knee replacement poses some risk. Major problems are rare and can often be treated. You should discuss your risks in detail with your surgeon.

You can do a lot to reduce the chance of problems. You'll learn more about this in chapter 2.

## **Legal and financial details**

### **Call your insurance company**

Make sure you know what your health plan covers. Health care benefits differ from one plan to another, and benefits often change. Call your insurance company or look at your policy book. Review your coverage for surgery and the care you may receive after you leave the hospital, including medical equipment.

### **Write a health care directive**

A health care directive (also called an advance directive or living will) is a written, legal document. It states what medical care you would want if you could not speak for yourself. It tells your family and care team about your wishes for treatment, such as whether you would want to be on a life-support machine.

Bring a copy of your health care directive with you to the hospital—it will become a part of your files. If you don't have a health care directive, we can give you the form you need to make one. Or you can print the form yourself from [www.fvfiles.com/1628.pdf](http://www.fvfiles.com/1628.pdf).

## Step 2: Primary care provider visit

An important part of getting ready for your surgery is to have a pre-op health exam with your primary care provider. If you do not have a primary care provider, your insurance company can suggest one.

This exam tells us what you need to do to have the safest surgery with the best results. Be honest with your provider. That way, we can plan your care to meet your real needs.



### Expert tip . . .

Prepare ahead of time for your pre-op visit. Bring a list of all of your medicines, vitamins and supplements, how many you take, and how often. Make a list of your past surgeries. Write down all your questions to ask, too. Time always goes by quickly. Even important questions are easy to forget.

**Your primary care provider will tell you which medicines you must stop taking before surgery. Make sure you know:**

- When to stop taking your medicines
- When to stop taking vitamins and herbal products (such as ginkgo, St. John's wort, garlic, glucosamine, flax seed or echinacea)
- Which medicines you should take the morning of surgery (including diabetes medicine), and how to take them

See your primary care provider about 3 to 4 weeks before your surgery. (It must be within 30 days of your surgery date.) This will give you enough time to complete any tests that might be ordered. **If you don't complete all the tests ordered by your primary care provider, we may have to postpone your surgery (move it to a later date).**



### Remember to . . .

Schedule your pre-op visit with your primary care provider as soon as you know your surgery date.

## Step 3: Joint Replacement Class

Plan to attend a free Joint Replacement Class 2 to 3 weeks before your knee surgery. This will help you prepare for surgery, know what to expect during your hospital stay, how to recover and any special equipment you might need. You will also meet others who will have the same surgery. Bring your coach to class as well! For more information about choosing a coach, see page 13.

We offer several classes each week at various times of day. If you have not already registered for a class, you can do so by calling 612-672-7272.

If you cannot attend an in-person class, you and your coach should view the online class at [www.fairview.org/JointClass](http://www.fairview.org/JointClass). Once you have completed the lesson, you will need to contact your site's nurse educator who will give you credit for the education. This nurse can also answer any questions you may still have.

### Class Benefits

Several studies show that people who attend a Joint Replacement Class before their surgery:

- have fewer problems after surgery
- have less pain
- go home sooner
- know what to expect
- are less nervous
- are active in their care plans and therapy
- are more likely to be satisfied with their results

## Step 4: Preparing for your return home

Planning ahead will make your recovery easier. **The time to make plans for leaving the hospital is *before* you go in for surgery.** The more ready you are, the more smoothly things will go at the hospital and at home.

### Make a recovery plan

Most people stay in the hospital for 1 to 3 days after surgery. Your care team will help you safely meet the goals of your plan so you can recover at home. We will help you while you use your new knee and heal your body from surgery. You will need to set up your home ahead of time and plan for people to help and support you there. Someone must be with you 24 hours a day for the first few days after you leave the hospital. Make sure this plan is in place **before** you have surgery.

During your hospital stay you will work toward several goals, such as getting in and out of bed safely and walking with your walker, crutches or cane. For a complete list of these goals, see pages 40 to 41.

Your care team will review your needs and discuss a recovery plan. Most people will be able to go home and recover with the support of family and friends. Patients returning home often have the best recoveries. You should plan to recover at home. We will do everything possible so that your surgery and hospital stay goes well. Home services are available, even if you live alone, such as therapies, home nursing visits, cleaning and meal services. A social worker is available to you during the hospital stay to assist with your safe return home. If you have concerns about your ability to safely return home after surgery, you should speak to your surgeon before having the surgery.



#### **Remember to . . .**

Arrange for someone to take you home from the hospital. Even before you have surgery, your care team can tell you which day you will most likely return home.

## Going home with support from your coach and other helpers

You can go home after leaving the hospital if you can:

- Get in and out of bed and a chair by yourself or with a little help from a caregiver.
- Walk with your walker, crutches or cane.
- Walk the distance from your bedroom to your bathroom and kitchen.
- Get on and off the toilet safely by yourself or with a little help.
- Go up and down the stairs safely (if needed for your home).

You will likely have less energy than usual. Plan for someone to stay overnight with you for the first 2 to 3 days, then arrange for some help during the day for a few more days. Try to choose one person who can be with you through most of your recovery. That person will be your “coach.”

Your coach is someone who will support you in your recovery, both physically and emotionally. He or she may be a spouse, family member or close friend. You will find a to-do list for you and your coach at the end of each chapter.



### Expert tip . . .

When choosing a coach to help you after surgery, think about these questions:

- Will the person be available 24 hours a day for the first 2 to 3 days?
- Is the person strong enough to help you get in and out of the car and out of bed, if needed?
- Do you both feel comfortable working together on personal tasks, such as dressing, bathing and using the toilet?

## Going home with home health services

If you can go home but will need extra help, you may qualify for home health services. In this case, nurses, home health aides, physical therapists or occupational therapists will visit you at home until you can go to a clinic for your medical care and therapies.



**Remember to . . .**

Before your surgery, call your insurance company and ask about your coverage for extra care and medical equipment after leaving the hospital.

## **Preparing your home**

Expect to have less energy for the first few weeks after your surgery. You will not be able to do as much for yourself as you could just before surgery. You will need to arrange for extra help.

### **If you live alone**

- Plan out meals before surgery. Make and freeze meals that can be easily prepared in the oven or microwave.
- Stop your mail and newspaper for the time you expect to be away from home.
- You will need to arrange for someone to:
  - Stay with you 24 hours a day for the first few days after surgery. Or, ask a friend or family member to let you recover with them in their home. Have this plan in place before you have surgery.
  - Care for your pets while you are away and during the first couple of weeks after surgery.
  - Do your outdoor work (lawn mowing, snow shoveling) while you are healing.
  - Drive you to appointments, grocery shopping, family events, religious services and other activities.

If you do not have people who can help, our social workers and care coordinators can help you get in touch with resources in your area.

## Changes to your home

Your home should be safe and easy to get around in during your recovery.



### Expert tip . . .

Keep a list of everyone who offers to help. One by one, ask each of them to do you a favor. It feels good to help others, so let people help you!

In the first couple of weeks after surgery, you won't be able to kneel down, stoop or use a low toilet or low furniture. It may be hard to do things you take for granted. Even something as simple as watching TV requires thought: Where should you keep the remote? Will you have to bend down to use a DVD player? (If so, move it now so you won't have to bend low during your recovery.)

Before surgery, make your home as accessible as possible. Use the Home Preparation Checklist on the next page. You should also look for the helpful equipment on pages 65 to 69. You do not need to buy or borrow these items now, but it's good to be familiar with them. Many people will benefit from a front-wheeled walker or crutches, a raised toilet seat and a shower chair.

Install railings on any staircases that you will need to access in your home. These may be located to get in and out of your house or between floors. Ramps are also helpful to safely get in and out of your house.

Stock up on basic groceries and meals that are quick and easy to make. It's a good idea to prepare some meals in advance and freeze them. Casseroles and soups can be reheated and served easily. They're gentle on your stomach, too.



### Expert tip . . .

Set up a "recovery station" where you will spend most of your time. In this handy spot, keep the things you use most—phone, medicine, the TV remote, laptop computer, books, magazines, reading glasses, tissues, wastebasket, drinking water and a glass.

## Home preparation

# Checklist

---

### General tasks

- Leave your home clean and tidy so you won't have to clean it when you return.
- Keep a phone near your bed and your main living area. Post emergency numbers on or near your phones. Consider a cordless or cell phone to keep nearby whenever you are home alone after surgery.
- What items do you use most often? Move them to arm level so you won't have to reach up or bend down.
- Remove small rugs. Tape down edges of larger area rugs.
- Remove clutter from hallways so the path is wide enough for a walker or crutches. Clear walkways of furniture and electrical and phone cords.
- If you have stairs, make sure there is a secure handrail. If you add a rail, it should extend a few inches beyond the end of the staircase.
- Make sure your home is well lit wherever you will be walking, both inside and outside. Add nightlights in bedrooms, bathrooms and hallways.
- Have your newspaper and mail delivered to your door. Have packages placed on a bench or chair beside your door rather than on the floor.
- Meal planning

### Bedroom

- Use a regular bed with a box spring and mattress. If your bed is upstairs, consider moving it to the main floor while you recover.
- Leave extra space around your bed so you can more easily get in and out while using a cane or walker.
- Keep a flashlight next to your bed.

## Bathroom

- Think about using a raised toilet seat.
- Use a rubber mat or put non-skid tape strips in the bathtub or shower. This helps prevent falls.
- Think about using a commode or portable toilet if your bathroom is located on a different floor.
- Think about putting grab bars in the bathtub or shower. You may also want them by the toilet.
- A hand-held showerhead can make bathing easier.
- Liquid soap may be easier to use than bar soap, which can slip away.

## Kitchen

- Use a cart to move heavy or hot items.
- Place utensils where you can reach them without bending or stretching.
- Use a dish drainer in the sink or on the counter. (A dishwasher may be hard to use.)
- Plan to use a microwave oven for cooking. If you use the stove, leave pans on the stove or at stovetop height.

## Step 5: Preparing your body for surgery

Before you have major surgery, you want to be in your best health. If you have any sign of illness, uncontrolled diabetes or high blood pressure, alcohol or drug abuse, or other problems, we may need to change the date of your surgery.

You will want to strengthen your upper-body and leg muscles before surgery. You should also learn and practice your breathing exercises. All of these will help you recover and reduce your risk of problems after surgery.

### Your health matters

The better your general health, the less likely you are to have problems during or after surgery. To stay in good health:

- **If you smoke, stop.** If you quit smoking, even the week before surgery, it will lower your risks from surgery. You are not allowed to smoke in the hospital. If you need help quitting, talk to your surgeon or primary care provider about your options.
- **If you often drink large amounts of alcohol, you should stop or greatly reduce your drinking.** Talk to your primary care provider about your alcohol use and make a plan to quit. Alcohol withdrawal is uncomfortable and can be dangerous.
- **Stay active.** Exercise improves your heart and lungs and boosts your immune system. But staying active when your knee hurts can be tough. Try swimming and water exercises—these won't put stress on your knees.
- **Eat a healthy diet.** Good nutrition can help you heal and lower the chance of infection. A healthy diet includes plenty of fruits and vegetables and is low in fat and sugar. If you have questions or concerns about your diet, ask to speak with a nurse or dietitian.
- **Take care of your teeth.** When teeth or gums get infected, bacteria (germs) can travel to the new knee joint. This can lead to more surgery. You will have to wait 3 months to have your first cleaning after surgery. If your routine checkup will fall within those 3 months, try to have it before your surgery.

## Strengthening and flexibility exercises

You have likely become less active because of the pain and stiffness in your knee. When muscles are not used, they become weak and less flexible.

After surgery, the joint problem will be fixed, but your muscles will still be weak and tight. To make them stronger, you will follow a regular exercise program.

**Start your strength-building exercises now, before surgery.** You will add flexibility exercises later. Most of these exercises can be done lying down, face up. Your bed is a good place—not the floor.

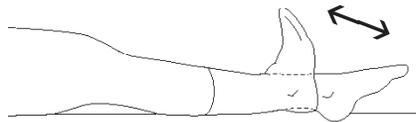
### Strengthening exercises

Before surgery, exercise your sore leg every day as shown. This way, your exercises should be easier to do after surgery. You can also exercise your healthier leg, so it is more prepared to take on the extra work required during recovery. Getting stronger now will speed your recovery.

How do these exercises help? You will strengthen the muscles in your legs and buttocks. These will support your new knee joint. It's a good idea to strengthen your upper-body muscles, too. These will help you push yourself up from a chair, sit up and move around in bed. Strong arms will also help you use your crutches or walker. After surgery, a physical therapist will help you add these exercises to your daily routine.

#### Ankle pumps:

Slowly flex your feet toward you, then away from you.



#### Thigh presses:

Lying flat, press the back of one knee into the bed. At the same time, tighten your thigh on that side. Hold for 5 seconds. Switch legs.



### **Buttocks squeezes:**

Tighten your buttock muscles by squeezing them together. Hold for 5 seconds.



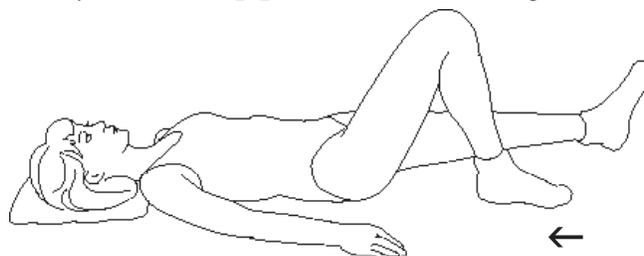
### **Hamstring squeezes:**

Slightly bend your knee. Tighten the muscle at the back of your thigh (your hamstring) by pressing your heel into the bed. Hold for 5 seconds.



### **Heel slides:**

Lying flat, slide your heel toward your buttocks, bending your knee. Keep your heel on the bed and your kneecap pointed to the ceiling.



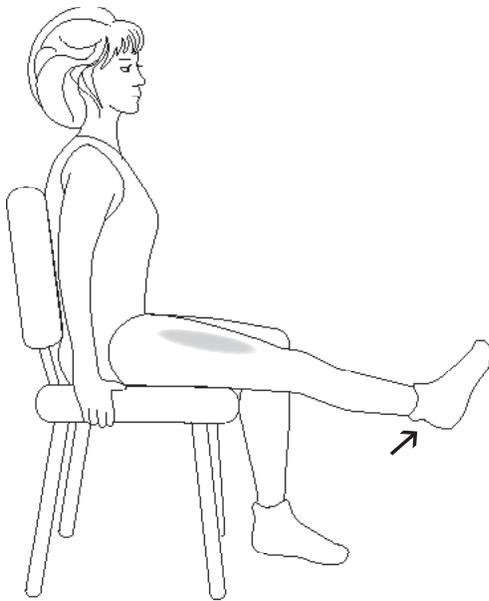
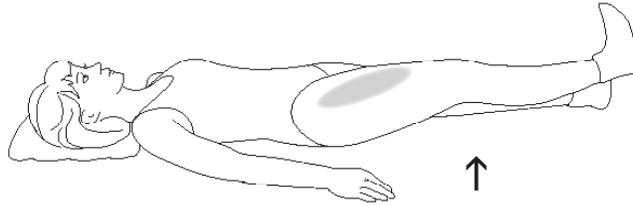
### **Lying kicks:**

Lie on your back. Place a rolled-up blanket or a large can under your knee. Straighten the knee, keeping the back of your knee on the blanket the whole time. Hold for 5 seconds.



### **Straight leg lifts:**

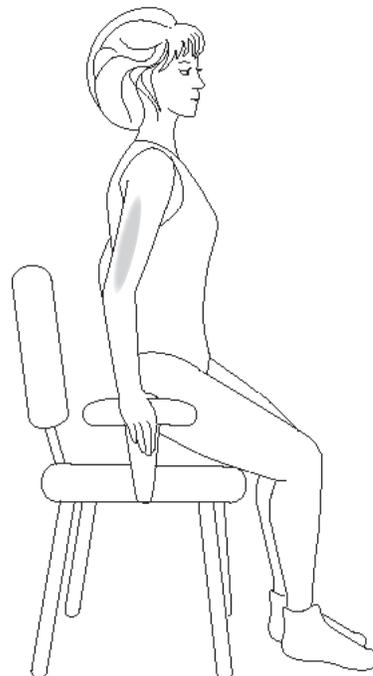
Lie flat on your back. With your knee straight, tighten your thigh muscle and lift your leg several inches off the bed. Keep your leg straight. Hold for 5 seconds, then slowly lower your leg. To protect your back, you may bend your other knee and place that foot flat on the bed.



slowly straighten the knee of one leg as  
1 your leg up for 5 seconds. Switch legs.

### **Chair push-ups:**

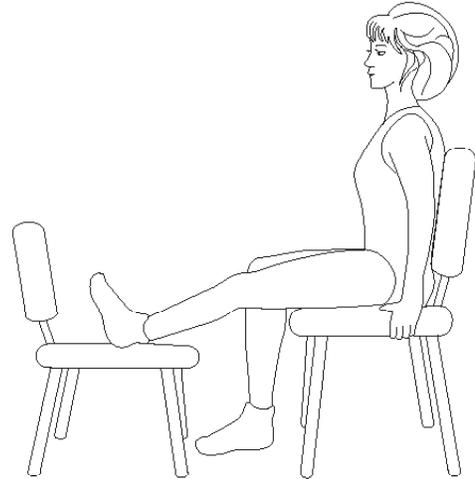
Sit in a sturdy chair with arms, or in a wheelchair with the wheels locked. Place your hands on the arms of the chair. Push down on the chair arms and straighten your elbows. Push yourself up off the chair as much as you can, then slowly lower yourself back down.



## Flexibility exercises

### Knee straightening:

Sit on a chair. Place one foot on a second chair, ottoman or coffee table and let your knee straighten. You should feel a stretch at the back of your knee. Hold this for 10 to 15 seconds. Bend the knee, allowing it to relax, then slowly straighten it again. Work up to holding the stretch for 30 seconds.

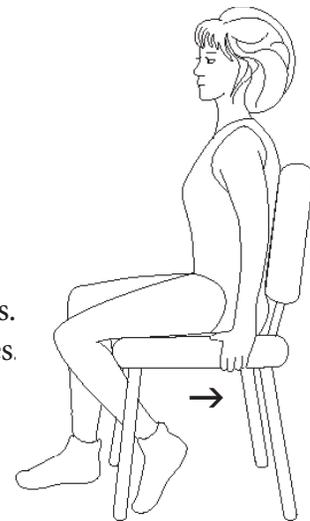


You may also do this exercise lying down: Place a rolled-up blanket or a large can under your ankle, letting your knee straighten.

### Knee bends:

Sit on a chair. Pull your foot back under the chair as far as you can. You will feel the stretch in your knee. Return to the starting position and relax. (For more of a stretch, scoot forward on the chair.)

Now do the stretch again and hold it for 10 to 15 seconds. Return to the starting position and relax. Repeat 10 times. Work up to holding the stretch for 30 seconds. The longer you hold it, the better the stretch.



### Expert tip . . .

If your surgeon wants you to do physical therapy after you return home from your knee replacement, call at least 1 week before your surgery to schedule your first couple of visits. The first visit should be scheduled for 5 to 7 days after surgery.

## **Breathing exercises**

After surgery, we will ask you to do breathing exercises. These exercises help prevent pneumonia and other lung problems. They include deep breathing and coughing. Practice them every day for at least a week before surgery.

### **Deep breathing:**

Deep breathing helps fill your lungs completely. When you're doing it right, you use your stomach muscles as well as your chest muscles.

1. Breathe in through your nose as deeply as you can. Hold for several seconds. Your stomach should go out (expand) as you breathe in.
2. Let your breath out through your mouth, slowly, so that all the breath goes out. Let your out-breath last about twice as long as your in-breath. Purse your lips as you breathe out, as if you were blowing out a candle. Your stomach should go in as you do this.

Repeat 10 times.

### **Coughing:**

Coughing helps keep your lungs clear. Follow these steps.

1. Breathe in through your nose slowly and deeply, fully expanding your chest and back.
2. Breathe out through your mouth. Feel your chest sink downward and inward.
3. Breathe in and out again in the same way.
4. Take a third breath. This time, hold your breath for a moment and then cough hard. As you cough, force all the air out of your chest.

Repeat this exercise 2 more times.

## **Preparing to manage your pain**

Practice choosing words to describe your pain, like achy, burning, mild, moderate, sharp or throbbing. With this practice, you will be better able to express your needs in the hospital and during your recovery.

The exercises on pages 19 to 23 will help with your pain before and after surgery, so this is another great reason to be familiar with them.

## The day before surgery

Remember these important points.

- **Eating and drinking.** For your safety, your surgeon will ask you to stop eating, drinking and chewing gum at a certain time before surgery. **If you don't follow these orders, we may need to move your surgery to another date.**
- **Bathing.** We will tell you when and how to bathe or shower before surgery. Or, please see [www.fvfiles.com/521780.pdf](http://www.fvfiles.com/521780.pdf). Use Hibiclens or Exidine. These soaps are available at Fairview and other pharmacies. They help kill germs and prevent infection.
- **Changes in health.** Call your surgeon if there is any change in your health. Examples include a sore throat, runny nose, cough, fever, dental problems, urinating (peeing) problems or skin problems such as a rash, scrape or cut. **For your safety, we may need to postpone your surgery.**
- **Other requirements. DO NOT smoke or drink alcohol. Do not take over-the-counter medicine** (unless your surgeon tells you to).

If you have any questions about your surgery or how to get ready, call your surgeon's office.

- ! **Remember to . . .**
  - Read your Fairview brochure, *Before Your Surgery*, for more details on how to prepare. If you need a copy, ask your care team or go to [www.fvfiles.com/193169.pdf](http://www.fvfiles.com/193169.pdf).

## Getting ready for surgery:

### A to-do list for you and your coach

---

You will need several weeks to plan your recovery and get ready for surgery. While everyone's needs are different, this list outlines the basic steps you should take. Your coach can help with some of the tasks below.

#### 3 weeks or more before surgery

- Do your strengthening and flexibility exercises (pages 19 to 22).
- Eat a well-balanced, healthy diet (page 18).
- See your primary care provider within 30 days of your surgery date. Be sure to:
  - Ask which medicines to stop taking before surgery** (page 10).
  - Ask what other tests or appointments you will need before surgery.
  - If you smoke, ask about ways to quit.
- Sign up for a Joint Replacement Class (page 11).
- Arrange for the help you will need during your recovery:
  - One person to be your personal coach (page 13).
  - One or more people to be with you 24 hours a day for the first 2 to 3 days
  - Drivers for clinic visits and other trips for up to 6 weeks
- If you live alone, arrange for extra help as described on page 14.
- Call your insurance company to review your coverage** (page 9).
- Arrange time off from work, volunteer and caretaking duties for the 6 weeks after your surgery.
- Write a health care directive if you do not already have one. Make a copy to bring to the hospital the day of surgery (page 9).

## 2 to 3 weeks before surgery

- Keep doing your strengthening and flexibility exercises.
- Know which medicines to stop taking and when. Follow your primary care provider's orders. **Some medicines must be stopped 2 weeks before surgery.**
- Get your home ready for your recovery (pages 14 to 17).
- Set up a recovery station—the place where you will spend the most time after surgery. Keep the things you will use most within easy reach. (See the expert tip on page 15.)

## 1 week before surgery

- Read *Before Your Surgery*, the Fairview brochure your surgeon gave you.
- Keep doing your strengthening and flexibility exercises.
- Each day, practice the breathing exercises you'll do after surgery (page 23).
- If you and your surgeon talked about scheduling physical therapy: Schedule your first visit for 5 to 7 days after your surgery date.
- Leave your home clean and tidy so you won't have to clean it when you return.
- Arrange for a ride home from the hospital.
- Plan for meals.

## 1 day before surgery

- Pack a bag to bring to the hospital. Include the items listed in the brochure *Before Your Surgery*, plus these items:
  - Tennis shoes, loosest fitting pair you own with good soles
  - Loose-fitting, casual clothes, such as shorts and T-shirts
  - This book.
- Follow your surgeon's rules for bathing and diet before surgery.
- Don't smoke or drink alcohol before surgery.



# Chapter **2**

## Your Hospital Stay

In this chapter you'll learn what to expect during your hospital stay. You'll also learn what you'll need to do to have a safe surgery with the best outcome.

**Please read the brochure *Before Your Surgery* for more information.**

If you did not receive a copy of this brochure, call your surgeon or go to [www.fvfiles.com/193169.pdf](http://www.fvfiles.com/193169.pdf).

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Step 7. Surgery day— starting your recovery	page 32
Step 8. First day after surgery	page 42
Step 9. Second day after surgery	page 44
Step 10. Last day in the hospital	page 45

# Step 6: Final preparations for surgery

## “Prepping” for surgery

After you check in at the hospital, we will ask you to sign one or more consent forms. These forms state that you know the risks and benefits of surgery. When you sign the forms, you give us permission to do the surgery. **Do not sign them unless you understand what will happen during and after your surgery.** Be sure to ask questions—and keep asking—if you don’t understand something.

Next you will go to the pre-surgery area, where we will “prep” (prepare) you for surgery. Together, you and your surgeon will mark the leg that will receive the new knee. A friend or family member can stay with you there. While you’re in surgery, your family can stay in the waiting area. After your surgery, while you are in the recovery room, your surgeon will come to the waiting area to tell them how you’re doing.

How long does the surgery last? It depends on your situation and your surgeon’s methods. With the “prep” time and wake-up time, you could be in the operating room and recovery room for 2 to 3 hours.

## Anesthesia

After you check in, you will meet with your anesthesia provider. He or she will suggest what kind of anesthesia (medicine) should be used. Together, you will decide your best option. This medicine will keep you comfortable during surgery.

You will have either **general** or **regional anesthesia**. The choice depends on the type of surgery you’re having, your health history and your current health.

**General anesthesia** will make you sleep through the surgery. We give this medicine through a small needle in the vein, called an IV (intravenous) tube. If you have this type of medicine, you will also have a breathing tube to help you breathe during the surgery. Some people have minor side effects from the medicine or breathing tube, such as a sore throat, headache, hoarse voice, nausea (feeling sick to the stomach) and feeling sleepy.

With **regional anesthesia** you will feel numb from your lower back to your toes. We give this medicine through a shot in the lower back (called spinal anesthesia). If you have this medicine, you will also receive IV medicine to make you sleep through your surgery. Common side effects include minor headaches that can last for a few days and trouble passing urine (peeing) when using the toilet.



**Expert tip . . .**

If you have questions about your anesthesia, you can discuss them before your surgery. Call your surgeon or primary care provider before coming to the hospital. We want you to be as comfortable and confident as possible before your surgery.

# Step 7: Surgery day—starting your recovery

## The recovery room

In the recovery room, your care team will watch over and care for you. They will check your blood pressure, pulse and breathing to ensure your safety.

After surgery, some people have blurred vision, a dry mouth or an upset stomach. Some people also feel confused, sleepy, dizzy or weak. These are common side effects after anesthesia. Please tell your nurse what you are feeling so we can help you be more comfortable.

When you wake up:

- You will receive oxygen if your body needs it for healing. A clip on your finger or toe will tell us when you no longer need the extra oxygen.
- You will likely feel some pain. **Tell your nurse about any pain or discomfort.**
- Your legs may feel heavy, tingly or numb.
- A large bandage will cover your knee area to keep it clean. Beneath the bandage, stitches or staples will hold the skin together as it heals. You may have a drainage tube to remove extra fluid from the knee.
- You may have a tube in your bladder to remove urine. This tube is called a catheter (KATH-uh-tur).

When you are ready to leave the recovery room, we will move you to your hospital room. Your family and friends can visit you there.

## **Working together to manage your pain**

Treating pain is important for your comfort and recovery. Your care team will work together to ease your pain. Remember, **YOU** are the most important member of the care team! **To help us do our best job, please tell us about your pain. Be as accurate as you can.**

**Tell us right away if your pain is getting worse.** The sooner you tell us, the easier it will be to get you back on track.

Other parts of your life can also affect your pain. For example, worries about your job, money or family can cause stress and make your pain worse. Share your worries with your care team. We can help you deal with the issues that add to your stress and pain.

### **Pain control**

Everyone feels pain differently. We will ask you to describe your pain.

Tell your care team:

- Where you feel pain, and how much
- What makes your pain better or worse
- Which pain medicines have worked for you in the past

There are many ways to relieve pain. We can help you decide what works best for you. The right treatment will make you more comfortable so you can get back to your normal routines.

Even if you have some pain, it is important for you to participate in your therapies. This will help you get the best result from your new joint. Your pain will get better each day.

## Pain medicine

After surgery we will give you medicines for your pain. These might be strong medicines called opioids (narcotics like morphine, Dilaudid and codeine). They tend to work well, but they might make you sleepy, itchy or sick to your stomach. If we give you opioid pills, try to take them with food.



### Expert tip . . .

Medicines don't work the same for everyone. If yours isn't working, tell your nurse. We can try other medicines to ease your pain.

We will watch for side effects from the medicines. If you feel sick, "off" or uncomfortable after taking medicine, tell your nurse.



### Expert tip . . .

Pain medicines often cause constipation (hard, dry bowel movements). The easiest way to prevent this is to be active and drink clear fluids, such as apple juice or water. Eating foods high in fiber, such as bran muffins, can also help prevent constipation. Tell your nurse if you are still having trouble. We can give you medicine to soften your stools (poops).

## Managing your pain: options to try

Keep in mind that medicine won't take away all of your pain. Try other ways to relax and ease pain, too.

### Walking

Surprisingly, getting up and walking often helps reduce pain. Many patients say they feel less stiff after walking. The muscles get a chance to contract, pumping in fresh blood and pumping out irritating fluids. You should expect to be active in your therapies.

### Position

Try moving from your bed into a chair, or just change the position of your leg in bed. Our joints are made to move. They don't like to be still for too long.

### Ice and massage

Ice packs and self-massage can help with pain. We will gladly give you ice or cold packs to use. Do not massage the incision or the area around your incision.

### Relaxation

You can use your mind to reduce pain.

- Visualize. Picture yourself in a nice place where you feel good: maybe at a beach, in a park or at home.
- Distract yourself. Do something to take your mind off the pain. For example, talk with a friend or play a game.
- Listen to music. Calming music helps many people feel better.
- Breathe slowly. If you focus on your breathing and let other thoughts leave your mind, your pain may slip away for a while.

### Other methods

Your care team may have other ideas for easing your pain. Work together with your care team to explore several options.

## Beginning your recovery

### Care equipment

Everyone has unique medical needs. Surgery methods differ, and people heal differently, too. Your care team will decide if you need any equipment while you recover. You might need some or all of the items listed here.

#### **Breathing device, or incentive spirometer (in-SEN-tihv sper-AHM-eh-ter):**

This tool helps you do your deep breathing exercises during your recovery.

#### **Pneumatic compression (new-MAT-ik kum-PRESH-un) device:**

To help prevent blood clots, we place the feet or legs in a device that inflates. When filled with air, it puts pressure on the limbs and prevents blood from pooling in the veins.

#### **Elastic stockings:**

These tight-fitting socks are known as TED stockings. They help reduce leg swelling after surgery.

#### **Continuous passive motion (CPM) machine:**

This machine gently bends and straightens your knee while you lie in bed. It keeps the joint moving and can reduce swelling. If your surgeon wants you to use a CPM machine, we will adjust it to fit your knee.



#### **Expert tip . . .**

You may feel some discomfort at first. When using the machine, keep the center of your kneecap at the bend of the machine. If you feel any change in your leg (such as numbness, burning or itching), tell your nurse right away.

#### **Knee immobilizer (knee brace):**

This keeps your leg straight and supports your knee the first couple of times you walk after surgery.

## **How to use your breathing device (incentive spirometer)**

The incentive spirometer is a tool to help you breathe deeply. When you breathe deeply and cough, you help keep your lungs clear.

You should take 10 breaths with your spirometer every hour you are awake.

Follow the steps below. Back at home, continue using your incentive spirometer until your two-week follow up visit with your surgeon. Most people no longer need it after they have returned to their normal activities.

1. Your nurse will prepare the spirometer. He or she will tell you how much air you should try to breathe in.
2. Take a deep breath in (inhale). Then breathe out (exhale) completely.
3. Place the mouthpiece in your mouth with your lips tightly around it.
4. Breathe in through your mouth slowly and deeply to raise the piston inside the chamber. Keep inhaling as you try to raise the piston to your target level.
5. When you've fully inhaled, remove the mouthpiece from your mouth. Try to hold your breath for 3 to 5 seconds, then exhale normally.
6. Let the piston drop to the bottom of the chamber. Rest, then repeat the exercise 9 more times.
7. Take one last deep breath and cough as deeply as you can.

## Activity

At first you may not feel like doing anything at all, but **movement and exercise are key to recovery**. Studies have shown that the earlier you get up and move after surgery, the better your joint will heal. For this reason, you will be getting up and moving on the same day as your surgery. You will possibly take a few steps, if you are able, with the help of nurses and physical therapists. We will show you how to safely move your knee and how to use a walker or crutches.

Soon you will start doing exercises with the help of your care team. But for now, remember:

- If you want to get out of bed, ask for help. **Do not get out of bed by yourself. Remember: Call, don't fall!**
- Some people have a sore back after surgery. Changing positions in bed once in a while will help.

### Top 10 reasons to get out of bed and keep moving after surgery

1. Reduces your risk of lung problems, such as pneumonia or a blood clot.
2. Reduces your risk of getting a blood clot in your leg.
3. Helps you have normal stools (poops) so you can return to a full diet.
4. Helps reduce constipation (hard, dry stools).
5. Helps restore your strength and motion.
6. Reduces pain and stiffness in the knee.
7. Reduces other aches and pains you may get when being less active.
8. Improves your mental outlook.
9. Increases your energy and endurance.
10. Reduces your risk of pressure ulcers (bedsores).

## Diet

Your diet will start with ice chips and liquids. You will begin eating your normal meals as your body is able—when your stomach growls and you can pass gas. Tell your nurse if you'd like to meet with a dietitian.



### **Remember to . . .**

Drink 6 to 8 glasses of clear fluids each day to help prevent constipation (hard stools). Having a bowel movement is a good sign: it shows that your body functions are returning to normal. Tell your nurse if you feel sick to your stomach and can't drink water.

## Therapy

**Therapy is very important to your recovery.**

- With physical therapy, you focus on getting your range of motion back (how far you can bend and straighten your knee). Your therapist will help you do exercises to strengthen the muscles around your knee joint. You can see pictures of these exercises on pages 19 to 22. He or she will also teach you how to walk and move safely with your new knee.
- Occupational therapy teaches you how to safely do everyday activities, such as bathing, getting dressed, cooking and cleaning. The therapist may suggest some equipment to make these tasks easier. You can see pictures of the equipment on pages 66 to 69.

You will start therapy on the day of your surgery or the next morning. Each day of your hospital stay, you will do more exercises and walk a little more. You will work toward fully straightening and bending your knee. Over time, you will be able to comfortably put more and more weight on your sore leg.

Before you leave the hospital, you will receive exercise instructions just for you. You will follow these instructions until you begin your next stage of therapy (or until your surgeon says you can stop).

## What is ROM?

ROM stands for range of motion. Your physical therapist and surgeon will measure how much your knee can bend. For most people, the goal is to have 90 degrees of flexion (bending) by the time they leave the hospital.

How much bending is needed for everyday activities?

Walk on a flat surface:	65 to 70 degrees
Go up stairs:	85 to 90 degrees
Go down stairs:	90 to 100 degrees
Get up from a low chair:	105 degrees

You'll also need to restore your knee's full extension (straightening). A knee that straightens will help your muscles work well and reduce stress on other tissues.

## Care plan

Your care plan describes what will happen while you are in the hospital. It explains your treatment and the goals you and your care team will work on before you go home. Your care plan may change depending on your needs. Feel free to ask questions of your care team during your hospital stay.

**Before you go home, you should be able to do these things, either on your own or with a little help from your coach:**

- Know your plan for leaving the hospital. During your hospital stay, care coordinators or social workers are able to help with your plan.
- Understand the medicines you will take after you leave. These might include blood thinners and pain relievers.
- Know how to care for your surgical incision (the cut or wound on your knee)—and know the signs and symptoms of infection. See pages 52 to 53.
- Manage your pain.
- Walk safely with a walker or crutches.

- Get in and out of a bed, chair and car.
- Do everyday self-care such as bathing, dressing and using the toilet.
- Eat a well-balanced diet to help your body heal.
- Understand your home exercises and be able to do them.

If you or your family would like an update on your progress toward these goals, please ask your care team.

### **Preventing problems**

Every major surgery has risks, but knee replacement surgery is less risky than most.

Still, problems can occur. The most common are infections, blood clots, knee stiffness (which may require more surgery), pneumonia and loosening of the joint.

How can you help reduce these risks? Please do the following:

- Follow your surgeon's directions for bathing and showering.
- Use your incentive spirometer (breathing device) every hour that you are awake. (See page 37.)
- Do ankle pumps while you are in bed. (See page 19.) Do at least 10 with both feet every hour.
- Walk often. Once you return home, never sit or lie down for more than 2 hours at a time, even while watching TV. Get up and use that new knee! (Sleeping through the night is fine.)
- Do your exercises twice a day until told otherwise by your surgeon or physical therapist.
- Know what problems to watch for and when to call your primary care provider or surgeon. (See page 53.)

## Step 8: First day after surgery

This day is also called “Post-op Day 1.” In the morning, you may still feel groggy. By evening, you will have more energy. We will likely remove any IV, bladder tube (catheter) or drain system you may have had.

You may feel eager to return home, too. We know you’re in the hospital because you are fixing a sore knee, not because you’re sick. We want you to return to your active lifestyle as soon as possible.

For some people, the first or second day after surgery may be their last day in the hospital. To learn what you can expect on the last day of your stay, see page 45.

### What to expect each day in the hospital

- We will check your blood pressure, pulse, temperature, breathing and oxygen levels. Your nurse will also check the feeling, movement and color of your legs and feet. Your lungs and belly area will be checked as well.
- You will have physical therapy twice a day. Each day, you will be able to do more exercises and walk farther. You will talk about your pain with your therapist. If pain prevents you from fully taking part in your therapy, we will explore options to help manage your pain. (See page 35.)



#### **Remember to . . .**

- Work with your care team to plan to take your pain medicine at least 30 to 45 minutes before physical therapy or other activities.
- If you have an upset stomach, we can help in various ways, including medicine, aromatherapy and wrist bands. (Anti-nausea wrist bands put pressure on a certain point on your wrist. This pressure point can help relieve stomach upset.)
- We will give you medicine to prevent blood clots. For some medicines, we may need to do blood tests.
- Your care team will help you change into your own clothes as soon as you are able.

- We will remind you to:
  - Do your breathing exercises. You should cough, take deep breaths and use your breathing device every hour you're awake. (See pages 23 and 37.)
  - Do at least 10 ankle pumps with each foot every hour.
  - Avoid putting a pillow under your knees.
  - Ask for an ice pack to help lessen pain and swelling.

## **What else to expect on Day 1**

- We may give you fluids, medicine and blood through an IV in your arm.
- You will likely start eating regular foods and taking your pain medicine as pills.
- We will change the bandage over the knee area, if needed.
- Your nurse or therapist will help you stand up and sit in a chair. With help, you will start walking and exercising, if you haven't started already.
- You may start occupational therapy. This therapist will teach you how to do personal care (dressing, bathing) while you are healing from surgery.
- Ask your coach to bring your walker, crutches or cane to the hospital. Your therapist will make sure that your walking aids are safe to use.
- If you do not have a walker or crutches, you can buy them through the hospital on your last day.

## Step 9: Second day after surgery

You will improve quickly, especially with walking. Often a person who could walk only 10 feet the morning after surgery can walk over 60 feet the next afternoon.

With more activity, you may need to adjust how you manage your pain and energy. **Please keep telling us, honestly and promptly, about any pain you feel.** This will increase both your comfort and the benefits of your surgery.

### What to expect on Day 2

- You will walk and exercise at least 3 times with your physical therapist and nurses.
- You'll bend your knee a bit more. If you are using a CPM machine, we will adjust its motion to meet your goals.
- A social worker or care coordinator may confirm your plans for after your hospital stay. We will help arrange for the care you may need in your next stage of recovery.
- We will remove the drain in your knee, if we have not yet done so.
- We will change your bandages as needed.
- The nurses will ask you about your normal toilet habits. If you do not have a bowel movement today, you may need a laxative (medicine to help you go to the toilet).

# Step 10: Last day in the hospital

For most people, their last day in the hospital is either the second or third day after surgery. Before you leave, you will have met all or most of the goals on pages 40 and 41.

You will receive lots of information during your hospital stay. We want you and your coach to feel prepared for the next stage of your recovery. **If you have any questions or concerns, please tell us.** The sooner we can answer your concerns, the sooner you can return to your recovery.

## What to expect on your last day

- You will walk longer distances, and you'll bend your knee more. You will have more energy and will feel comfortable being out of bed for longer periods of time.
- Your physical therapist will teach you how to get in and out of a car and climb stairs. The therapist will also give you a home exercise program. (Please bring this book to your therapy session.)
- **Have a family member or your coach come to your last therapy session.** The therapists will review important tips for easier and safer activity.

## Getting ready to leave the hospital

Your care team will let you know when you can leave the hospital. Before you leave, we will review guidelines for:

- Knee safety
- Diet and activity
- Home exercises
- Bathing and wound care
- Medicines
- Preventing falls
- Problems to watch for
- Equipment
- Elastic stockings, if you are using them
- Follow-up visits

Some of these guidelines are discussed in the next chapter, but many will be unique to your needs. Your nurse will review specific details with you and your coach.

## **Your hospital stay:**

### **A to-do list for you and your coach**

---

#### **Starting the day of surgery**

- Talk regularly with your nurse.** Tell about any feelings of pain, discomfort, upset stomach, anxiety or nervousness.
- Every hour you are awake:
  - Do 10 ankle pumps with each foot.
  - Take 10 deep breaths with your breathing device (incentive spirometer).
- Drink 6 to 8 glasses of water a day.

#### **Starting the day after surgery**

- Follow the steps above. Do your exercises as shown by your therapist.
- Walk at least three times a day with the help of a nurse or therapist.
- Spend more time out of bed.**
- Talk to your social worker or care coordinator about your plans for after you leave the hospital.

#### **Your coach should:**

- Go to a physical therapy session.
- Bring any walking aids (cane, walker or crutches) that you may use. The therapist will check these aids for safety and help with sizing if needed.

## Two or more days after surgery

- Follow all the steps above.
- Try to dress in your own clothes with the help of your occupational therapist.
- Make sure you know how to care for your new knee once you return home.**
- Your care team will help you coordinate any equipment or services you may need once you leave the hospital.

### Your coach should:

- Go to your therapy session to learn how to help with movement and exercises.
- Bring any assistive devices to the hospital to have your therapy team assess and fit the equipment for you.
- Learn how to support you with:
  - Medicines
  - Bandage changes
  - Bathing
  - Exercises, activity and equipment
  - Knowing the signs of infection and blood clots



### Did you know . . .

A leading knee surgeon found that patients reduce their knee stiffness by walking at least 150 feet at a time. He urges his patients to walk 250 feet by the time they leave the hospital. If you can walk this distance, you should be able to make simple trips—like visiting a friend or going to therapy—as soon as you go home.



# Chapter **3**

## **Living with Your New Knee**

Congratulations! You have made it through the most challenging stage of knee replacement. To get the full benefits of your new knee, you need to continue the hard work of actively recovering to your usual activities.

It is normal to feel anxious about returning home. This chapter includes information that will help ease your mind. And remember, you have a list of health care experts you can call if you have questions or concerns.

Step 11: Your at-home care team— you and your coach	page 51
Step 12: Increasing your activity	page 58
Step 13: Choosing helpful equipment	page 65
Step 14: Three months after surgery and beyond	page 70

# Milestones in healing

Your health care team wants to do everything possible to give you a comfortable, working knee. But don't forget, you play a key role in the success of your new knee. You will have a smoother recovery if you **do your exercises every day, follow your safety rules, watch for problems and keep a positive attitude.**

As the days go by, you will feel stronger, move more easily and have more energy. Then you can enjoy your new knee and the freedom it brings.

Although everyone heals at a different rate, these are some milestones to aim for:

## **About 2 to 2½ weeks after surgery:**

- No longer need additional care services
- At least 90 degrees of knee bending

## **About 4 to 6 weeks after surgery:**

- No longer needing prescribed pain medicine
- No longer needing a walking aid
- Return to driving
- Return to sex

## **About 8 to 12 weeks:**

- Return to most activities you were able to do just before your surgery
- Keep working to restore your strength and balance

# Step 11: Your at-home care team— you and your coach

Expect your first two weeks at home to be the most challenging. You may still have pain, low energy and concerns about how to safely do even the basics of daily life. But your energy and strength will improve every day. For these reasons, preparing and setting up your home for your return will be very helpful.

On some days you may feel that you are going backward. This is most likely to happen after a very busy or active day. Don't worry—this is normal as you begin to explore your new abilities. You will quickly catch up to where you once were.

You and your coach will work hard to ensure your progress. Read further to learn what to expect and what you will need to do.

## Follow-up visits

At your first follow-up visit with your surgeon, the surgeon will do an exam and make sure the wound is healing well. You may also have X-rays taken of your knee.

You will have more follow-up visits during the year. After the first year, most surgeons require fewer visits.

- Remember to . . .**
  - Keep seeing your primary care provider for any medical needs not related to your new knee.

## Medicines

At home, you may take medicine to prevent blood clots, such as warfarin (Coumadin), enoxaparin (Lovenox) or aspirin. Another drug to prevent clots is called heparin. This is taken as a shot. If you will take this medicine, we will teach you or a family member how to give a shot.

You may have regular blood tests to make sure these medicines are working safely.

Your surgeon will also prescribe pain pills. These can make therapy and knee exercises more comfortable. Let us know if you have trouble controlling pain. Most people stop needing prescribed pain medicine after a few weeks.

Your surgeon may also give you medicine to help you sleep or to relax your muscles, if needed to aid your recovery.



### Expert tip . . .

Your medicines may affect your memory. To ensure that you take them on time, use a pillbox, set a timer or ask your coach to remind you.

## Caring for your incision

You must keep the area around your incision (wound) clean while it heals.

- Look at it every day. Call your surgeon if you see any redness, swelling or fluid draining from the wound, or if it feels warm or more painful.
- Change your bandage as shown by your care team. Do not use any cream or ointment on the wound.
- If Steri-Strips (strips of tape) were used on the incision, they will fall off as it heals. You don't need to replace them. Do not pull them off.
- If you have stitches or staples that need to be removed, this will be done by a home health nurse or at your next surgeon visit.



### Expert tip . . .

To prevent infection, always wash your hands well before touching the area around your wound.

## Preventing problems

After knee surgery, you need to watch for infections and other problems. You might notice some of these problems soon after surgery, but others might not show up until months or even years later.

### **Call your surgeon right away if:**

- You feel numbness or tingling in your leg.
- You get a fever of 101°F (38°C) or higher, taken under the tongue.
- You have chills.
- The area around the wound becomes more swollen, warm, red or painful.
- Colored fluid, pus or bright red blood comes out of the wound. (It is normal to see clear fluid coming from your wound for 1 to 2 weeks after surgery.)
- You have increasing pain that is not helped by medicine, rest or ice packs.
- You notice a burning feeling or foul odor when you urinate (pee).
- You have to urinate more often than usual.
- Your gums bleed a lot (and you are still taking blood-thinning medicine).

### **Call 911 right away if:**

- You have chest pain.
- You are short of breath.
- You notice sudden, severe pain or swelling anywhere in the leg. This does not improve when you put your legs up. Pain is more severe when you put weight on the leg.
- Your leg is cool to the touch and your toes are a gray color. Warmth and color do not return when you put your legs up.

## Normal changes

As your knee heals, you may notice some of the symptoms listed below. These are normal and no cause for alarm.

- Clicking in your knee when you move it
- New numbness or “pins and needles” around your knee
- Swelling and warmth around your knee
- Bruising in your lower leg
- A change in the color of your incision—it may turn dark red

If you have any concerns about these changes, please call your surgeon.

## Exercise and therapy

After surgery, exercise can help prevent blood clots, pneumonia and other problems. It also builds your strength and eases your knee stiffness so you can get back to your normal routine.



### Remember to . . .

Take pain medicine 30 to 45 minutes before you exercise. It's easier to prevent pain than to treat it after it's started.

## Walking

Make time each day for walking. Walking is a good form of physical therapy and makes your leg muscles stronger. It also builds your endurance—in time, you will be able to do more without feeling as tired.

Start by walking around inside your home at least 4 times each day. **Trips to the bathroom or kitchen are not enough.** Keep using your walker or crutches until your surgeon or therapist tells you to stop. Later you can use a cane until you are steady enough to walk without one.

Work your way up to walking outdoors. At first, walk for 5 to 10 minutes a few times each day. As you become stronger, you may be able to walk for 20 to 30 minutes. After you have fully recovered, regular walks will help keep you strong.

## Exercises

Your therapist will show you what exercises to do at home and how to do them correctly. (These may include the exercises on pages 19 to 22.) After surgery, do your exercises 2 to 3 times a day for at least three months. Repeat each exercise until your muscle feels tired, or up to 20 times. You will judge how much you can do each day.

Work hard, but stay within your level of comfort. **Although your muscles may tire, these exercises should not increase the pain in your knee.** You may feel a slight burning or trembling in your muscles. This is a normal sign of a tired muscle that is stretching or working to gain strength. But if you feel a lot of pain or muscle ache, talk to your surgeon.

### Using ice at home

Ice can help reduce pain and swelling, symptoms that make it hard to move your knee. It is easier to heal when these symptoms are well controlled. **Do not use a heating pad on your knee, as this will increase swelling.**

Try crushed ice in a ziplock bag or a family-size bag of frozen vegetables. Make sure you have a thin towel or other cloth between the ice and your skin.

Ice your knee for 20 minutes each hour (or 30 minutes, if your large bandage is still in place). It may also help to use an ice pack after you exercise. At first the ice should feel cold, then you should feel burning, then achiness and finally numbness.

**Do not leave ice on your knee for longer than directed. If you do, it may damage your skin and nerves.**



#### **Expert tip . . .**

Place your frozen vegetables into a Ziploc bag, in case the package tears. Then slide it into an old pillowcase to protect your skin.

## **Working with a therapist**

You will need to keep doing your exercises at home, but your surgeon will decide if you need more physical therapy. A therapist may help you work on good balance, safe walking and muscle strength.

## **CPM machine**

Your surgeon may have you use a CPM machine at home. If so, be sure to discuss what goals you should be aiming for.

## **Elastic socks**

If we ask you to wear TED stockings (white elastic socks), wear them until your follow-up visit with your surgeon.

You can take the socks off twice a day for 15 minutes each time—ask someone to help you. It's fine to wash and dry them before you put them back on.

## **Managing your pain**

Now that you are more active, you may need to adjust how you are managing your pain. The same strategies that you used in the hospital will work well at home. (See page 35.)

## **Nutrition**

When you leave the hospital, go back to your normal diet as soon as you can. Do not skip meals. Eat breakfast, lunch and dinner.

A well-balanced diet will help you feel good and recover quickly. Choose a range of fruits, vegetables, grains, milk products and meat. Drink plenty of fluids, too. Be sure to include:

- **High-fiber foods.** Fiber helps keep your bowel movements regular and prevent constipation (hard stools). Good sources of fiber include whole grains, brown rice, cracked wheat (bulgur), oatmeal, popcorn, whole oats, rye and wheat. Fruits and vegetables are also great sources of fiber.

- **High-calcium foods.** Calcium helps build strong bones. Good sources of calcium include milk, yogurt, cheese, enriched soy milk, tofu, soups made with milk, and dark green, leafy vegetables (such as kale and collard greens).
- **Iron-rich foods.** This mineral helps your blood carry oxygen to every part of your body. Good sources of iron include lean meats, dark turkey meat, shellfish (such as shrimp), cooked dry beans or peas and whole grain breads.
- **Water.** Drink 8 to 10 glasses of clear fluid each day. Drinking water will help relieve constipation. You will have less trouble with constipation when you stop using prescribed pain medicines.

## Bathing

Before you leave the hospital, your nurse will tell you when you can shower and get your wound wet. Use a tub or shower chair for support until you can get around more easily. (See page 67.) You will find tips on getting in and out of the tub on page 62.

Do **not** soak in a bathtub until your surgeon says it's okay.



### Expert tip . . .

The first few times you shower, have someone nearby in case you need help. For your safety, you might ask this person to help you in and out of the shower or bathtub.

# Step 12: Increasing your activity

By the time you leave the hospital, you should be able to do some things on your own, such as walk with crutches or a walker, get in and out of a bed and a chair, and climb a few stairs. Walking and other light activities will help you further regain the use of your knee joint and muscles.

At this point, most people feel less pain than they have in a long time. You may find that you can do things you had avoided before your surgery. Still, you need to use your knee in safe ways until it heals. You also need to be careful when doing everyday tasks like getting out of bed, using the stairs, cooking and cleaning.

The following tips will help you do daily tasks without hurting your knee. **As a general rule, avoid movements or positions that greatly increase the pain or discomfort in your knee.**

## Using a walker or crutches

Use a walker or crutches until your care team tells you to stop. Your surgeon will tell you how much weight you can place on your leg.



### Expert tip . . .

You are ready to switch to a cane or one crutch when:

- You can stand and balance without your walker.
- Your weight is placed fully on both feet.
- You no longer lean on your hands when using your walker.
- Always use your cane on the side **opposite** your sore leg.

**To walk:**

1. Stand up straight, with your weight evenly balanced on the walker or crutches. Keep the walker flat on the floor.
2. Move the walker or crutches forward a little. Then step forward with your healing leg so that the heel of that foot touches the floor first.
3. Try to walk as smoothly as you can. Over time you will put more and more weight on your leg.
4. Do not twist or pivot on your healing leg. Take small steps and turn toward your strong leg.

**Sitting down and standing up****Using a chair (with armrests) or toilet****To sit:**

1. Back up until you feel the chair or toilet against the back of your good leg.
2. Slide your healing leg forward, then slowly lower yourself onto the chair or toilet. (Use the armrests on a chair. For a toilet, use grab bars or a raised toilet seat.)

**To stand:**

1. Scoot to the edge of the chair or toilet, keeping your healing leg out in front of you.
2. Use both arms to push yourself up to standing, then reach for your walker. (Don't use the walker to pull yourself up. In the bathroom, don't use the shower curtain or any item that isn't secured to the wall.)

## **Using an armless chair**

### **To sit:**

1. Approach the chair from the side.
2. Back up until you feel the chair against the back of your good leg. Slide your healing leg in front of you.
3. Holding the edge of the seat and the back of the chair, slowly sit down. Then turn to face forward in the chair.

### **To stand:**

1. Turn your body so you are sitting sideways in the chair.
2. Slide your healing leg in front of you.
3. Push up from the chair with both hands. Place one hand on the back of the chair.
4. When your balance is steady, reach for your walker or crutches.

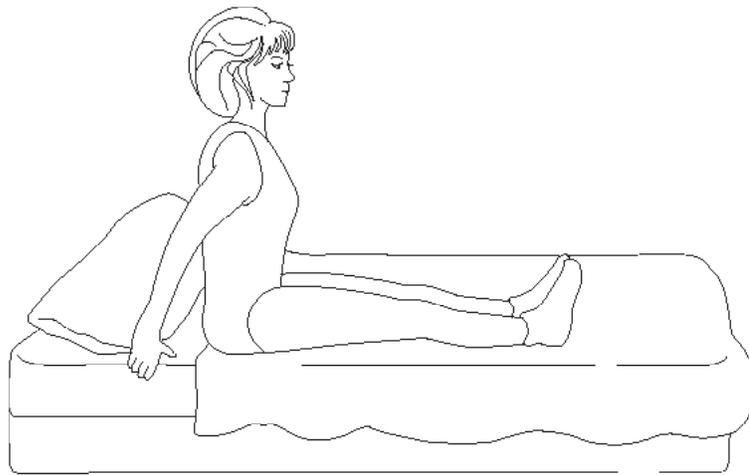
## **Getting into and out of bed**

### **To get into bed:**

1. Back up to the bed until you feel it against your good leg. Place your healing leg forward.
2. Reaching back with one hand at a time, slowly lower yourself onto the edge of the bed.
3. Scoot back until your thighs are supported by the edge of the bed.
4. Support your upper body with your arms, then bring your legs into the bed. To lift your healing leg, you may need to use a crutch, cane, belt or leg lifter (see page 69). Or ask someone for help.

### To get out of bed:

1. Sit up in the bed.
2. Turn your body and move your legs off the bed. To move your leg, you may need to use a crutch, cane, belt or leg lifter (see page 69). Or ask someone for help.
3. Keep your body in a straight line with your legs. Move to sit at the edge of the bed.
4. Place your healing leg forward.
5. Push off the bed and stand up.



Keep your body and legs in a straight line. You will need to bend your healing leg when getting out of bed.

## Bathing

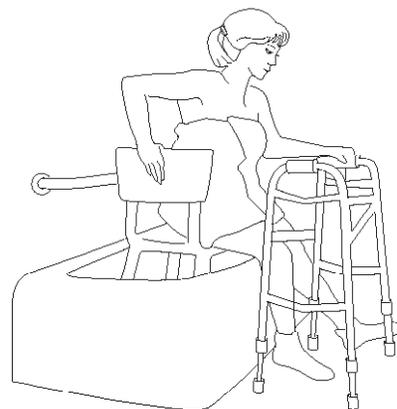
When you start taking baths and showers, it's a good idea to have handrails or grab bars in the tub. These will help with balance and support. You can also use a long-handled sponge and a hand-held showerhead.

If you use a bathtub, you will sit on a tub chair with your leg straight. (See below.) The heel should rest on the edge of the tub.

Your occupational therapist can give you tips to make bathing easier. The first few times you take a bath or shower, have someone nearby in case you need help.

### To bathe or shower:

1. Use a tub chair in the bathtub or shower. Do not sit on the floor of the bathtub.
2. Come up to the bathtub so that the tub chair is at your side. Place your healing leg forward.
3. Reach one hand to the back of the tub seat or handrail. Reach the other hand to the front edge of the tub seat. Then slowly turn and sit. Keep both hands on the tub handrail while you lower yourself.
4. Lift one leg into the tub at a time. Use a cane, crutch, belt or leg lifter to lift your healing leg. Or ask someone to help you.
5. To get out, use a cane, crutch or belt to lift your healing leg.
6. Push up from the chair with both hands, or use the handrails to pull yourself up.
7. When your balance is steady, reach for your walker or crutches.



Use a tub chair to get in or out of the bathtub or shower.



When bathing, sit on your tub chair with your heel resting on the tub's edge. A hand-held showerhead makes bathing easier.

## Getting into and out of a car

Move your car seat back as far as it goes to increase the legroom. When you are getting in or out of the car, have the driver park away from the curb and not on a hill.

### To get into a car:

1. Back up to the front seat until you feel it at the back of your legs. Slide your healing leg forward.
2. Reach back and find a stable place to hold on to, such as the dashboard and back of the seat. Slowly lower yourself onto the seat without twisting your body.
3. Scoot back onto the seat. You may want to recline the seat so you can scoot back further. (A plastic bag on the car seat may help you move more easily.)
4. Keeping your body in line with your legs, slowly turn your body and lift your legs into the car so you are facing forward. Ask someone to help you lift your healing leg, or use a cane or crutch to lift it yourself.



### To get out of a car:

1. Slowly turn your body as you move your legs out of the car. Keep your body in line with your legs. Use a cane or crutch to lift your healing leg, or ask someone to help you.
2. Scoot to the edge of the seat and put your feet on the street (not the curb).
3. Push with your arms and use your good leg to stand.
4. When your balance is steady, reach for your walker or crutches.



## Reaching, bending and carrying

You will need some help with laundry, cleaning and shopping when you get home. When you start doing housework, follow these tips:

- Use a long-handled reacher to turn on lights or grab things that are beyond arm's length. (See page 69.) Do not bend to reach into low cupboards.
- Do not carry or hold things in your hands while using a walker or crutches. Instead, carry things in an apron, pocket, fanny pack, backpack or walker basket.
- Do not reach too far when sliding items across a counter.
- Do not stand on tiptoes or chairs to reach high cupboards or storage areas.
- Use a rolling cart to carry hot, heavy or fragile items.
- Sit on a high stool (without wheels) when you cook or do dishes.

# Step 13: Choosing helpful equipment

## Tools that can help with everyday activities

You can buy or rent special equipment to make tasks easier. Besides a cane, walker or crutches, many people go home with a leg lifter, a raised toilet seat and a reacher.

How do you choose the most helpful tools for you? Your occupational therapist can advise you on what you will need right now and in the future. The therapist will show you how to get and use your equipment before you leave the hospital.

Health insurance may cover only the cost of a walking aid. Call your insurance company to find out if anything else is covered.



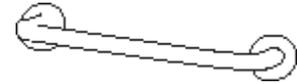
### **Expert tip . . .**

Before you come to the hospital, ask friends or family about borrowing some of these items. You may not want to buy them in advance—you may not need them, and they often cannot be returned (even if they were not used). You might look into renting items as well.

## Toileting help

### Grab bars:

Install grab bars to hold onto when getting on or off the toilet and in or out of the tub or shower.



### Raised toilet seat:

This makes it easier for you to get on and off the toilet.



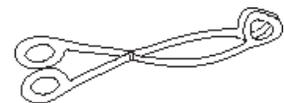
### Commode:

This is a portable toilet. It lets you stay on any floor of your home, even if you don't have a bathroom on that level.



### Toilet tongs:

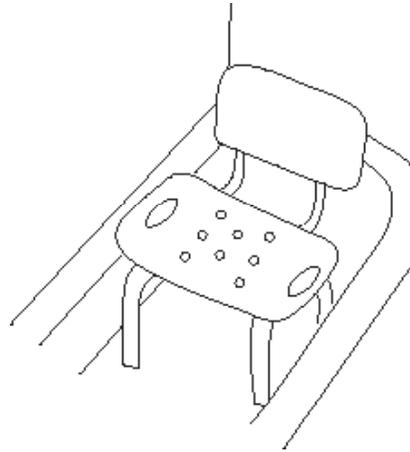
Tongs let you use toilet paper without twisting your body.



## Bathing help

### Tub or shower chair:

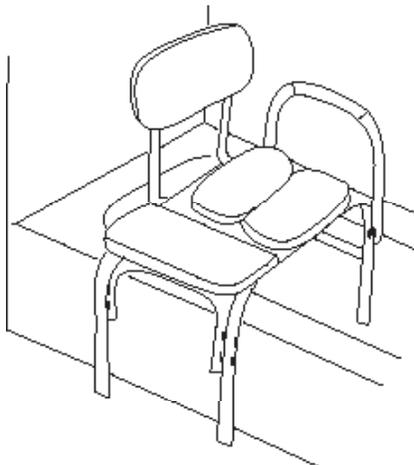
This is useful if you can't stand up long enough to shower, or if you have trouble getting into or out of the tub. It is often used with a hand-held showerhead.



### Tub transfer bench:

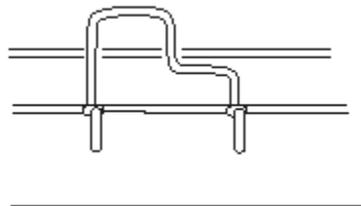
A bench keeps you from having to step over the edge of the bathtub. It is useful for people who cannot bear full weight on their leg (who have a "weight-bearing restriction"). It also helps those who are not yet confident of their strength or balance. To use the bench:

1. Come to the edge of the tub. Turn around so you feel the bench at the back of your knees.
2. Lower yourself onto the bench and turn toward the tub.
3. One at a time, lift your feet over the edge of the tub. Keep your healing leg straight.
4. To get out of the tub, reverse the process.



### Clamp-on tub rail:

You can hold onto this rail when getting in and out of the bathtub. It must be installed on the edge of your tub.



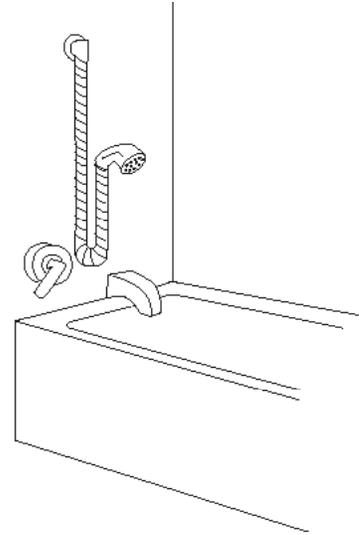
### Long-handled sponge:

Use this to wash your feet, legs and back without bending.



### **Hand-held showerhead:**

This lets you control the spray of water while sitting down in a tub or shower chair.



### **Help getting dressed**

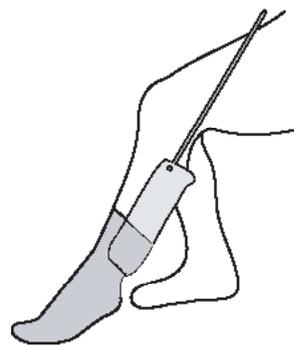
#### **Elastic laces:**

Elastic laces let you put on shoes that are already tied.



#### **Long-handled shoehorn:**

With the shoehorn, you can put your foot into a shoe without bending.



#### **Sock aid:**

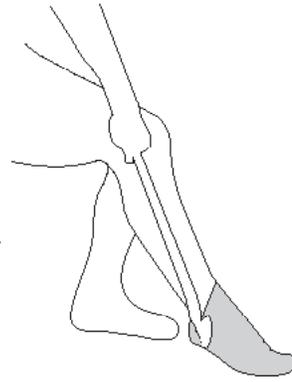
A sock aid helps you put on socks without bending.

### **Dressing stick:**

You can use a dressing stick to get dressed without bending. To remove socks, slide the dressing stick down into the sock, by the heel. Push the sock off.

To put on pants:

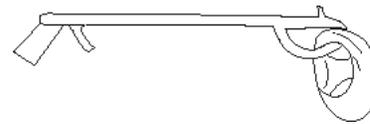
1. Hook the stick in the pants' belt loop at the front of the leg you are dressing first, near the zipper.
2. Lower the pants to the floor and put your foot in.
3. Use the stick to pull the pants up to where you can reach them with your hand.
4. Repeat with the other leg.



## **General help**

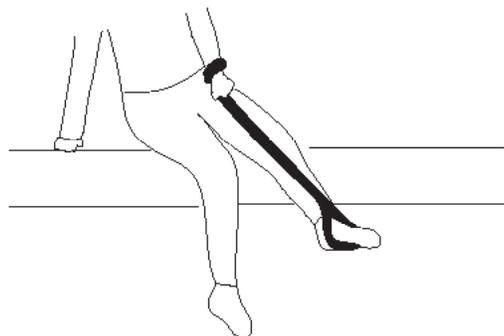
### **Reacher:**

A reacher helps you grab things that are too high or low. It can also help you put clothes on.



### **Leg lifter:**

Use a leg lifter to move your leg safely in and out of a bed, car or bathtub.



# Step 14: Three months after surgery and beyond

You are well on your way to returning to a healthy and active lifestyle! Although everyone is different, by now most people are getting back to the same activities they were doing before surgery. Through the rest of the year after your surgery, you will continue to build your strength and balance.

## Staying active

Some sports, such as basketball and running, are not good choices after knee replacement. But over time, most people are able to enjoy lighter activities, including golf, dancing and riding a bike.

**Good choices** for staying active include:

- Swimming
- Walking
- Water aerobics
- Riding a bike or stationary cycle
- Golf
- Dancing
- Cross-country skiing

These help you stay fit without too much wear on your new joint.

**Avoid these** unless you have your surgeon's approval:

- Jogging and running
- High-impact exercise such as aerobics
- Tennis and racquetball
- Jumping sports such as basketball
- Contact sports such as football
- Downhill skiing
- Hard hiking

These activities will increase the risk of problems.

## Preventing infection over a lifetime

If you get an infection caused by germs anywhere in your body, the germs could travel to your new knee. Though rare, an infection in your knee joint is a serious problem. The germs can settle around the new joint, and this may be hard to treat. Infection usually means you need more surgery.

## **To prevent infection, you need to be extra careful from now on.**

- If you get an illness, such as strep throat or pneumonia, tell your primary care provider right away. Your provider will give you medicine to stop the germs from spreading (called antibiotic medicine).
- **Tell all your care providers that you have had a joint replaced.** Dental work, surgery and other procedures may expose you to germs. You may need to take antibiotic medicine before having dental work or another procedure. Your surgeon and dentist will decide how long you need to take it.

Since an infection can develop in your knee joint many years after surgery, you will need to follow these rules at all times.

## **Follow-up visits**

You will have routine follow-up visits with your surgeon. For most people, this includes a visit 3 months and then one year after surgery. The schedule will vary based on your needs and your surgeon's requests.

After the first year, you will visit less often: around 3 years, 5 to 6 years and 8 to 10 years after your knee surgery.

## Living with your new knee:

### A to-do list for you and your coach

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- Do all your exercises as instructed until your surgeon or physical therapist tells you otherwise.
- Walk several times a day. At least one walk should be 20 minutes or longer.
- Balance rest and activity.
- Confirm follow-up appointments with your primary care provider, surgeon and physical therapist.
- Know when you should call your surgeon and primary care provider; review the symptoms on page 53.

## **Resources**

### **American Academy of Orthopaedic Surgeons**

Phone: 847-823-7186

[www.aaos.org](http://www.aaos.org)

### **American Association of Hip and Knee Surgeons**

Phone: 847-698-1200

[www.aahks.org](http://www.aahks.org)

### **American Physical Therapy Association**

Phone: 703-684-2782 or 800-999-2782

[www.apta.org](http://www.apta.org)

### **Arthritis Foundation**

Phone: 404-872-7100

[www.arthritis.org](http://www.arthritis.org)

### **National Institute of Arthritis and Musculoskeletal and Skin Diseases**

#### **NIAMS/National Institutes of Health**

Phone: 301-495-4484 or 877-22-NIAMS [226-4267]

TTY: 301-565-2966

[www.niams.nih.gov](http://www.niams.nih.gov)

## Glossary

**analgesic:** pain medicine

**anesthesia:** medicine to remove sensation from all of the body (general anesthesia) or part of it (regional anesthesia)

**antibiotics:** drugs that kill or stop the growth of bacteria (germs)

**anti-inflammatories:** drugs that reduce pain and swelling

**assistive device:** walker, dressing stick, raised toilet seat or other item to help you do daily activities

**catheter:** a flexible tube that is put into the body to bring in or take out fluids

**cement:** a product used to attach the artificial joint to your bone, working like cement between the bricks of a wall

**continuous passive motion (CPM) machine:** device that slowly moves your knee back and forth to exercise your new joint after surgery

**deep vein thrombosis (DVT):** a blood clot in the calf or thigh

**extension:** straightening of a joint

**flexion:** bending of a joint

**immobilizer:** brace that provides support for the knee

**incentive spirometer:** machine that helps you breathe deeply so you can exercise your lungs and keep them clear

**incision:** surgical cut or wound

**infection:** invasion of the body by harmful germs; common symptoms include pain, swelling and red, warm skin

**IV (intravenous) tube:** a tube for putting fluids into a vein

**loosening:** when the artificial joint becomes detached or wears away from the bone

**operated leg:** the leg that you had surgery on

**orthopedic surgeon:** a surgeon who treats disorders of the bones and joints

**OT:** occupational therapy; provides help with daily activities such as dressing, using the toilet, bathing and household tasks

**pneumatic compression device:** machine that reduces the risk of blood clots; it is used on the legs or feet while a patient is in bed

**prosthesis:** artificial joint

**PT:** physical therapy; helps with exercises and your ability to move and walk

**sutures:** surgical stitches

**TEDs:** white elastic stockings that help to reduce swelling

**weight-bearing status:** how much weight you can put on your operated leg

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