Total Knee Replacement

University Hospital
Ahuja Medical Center

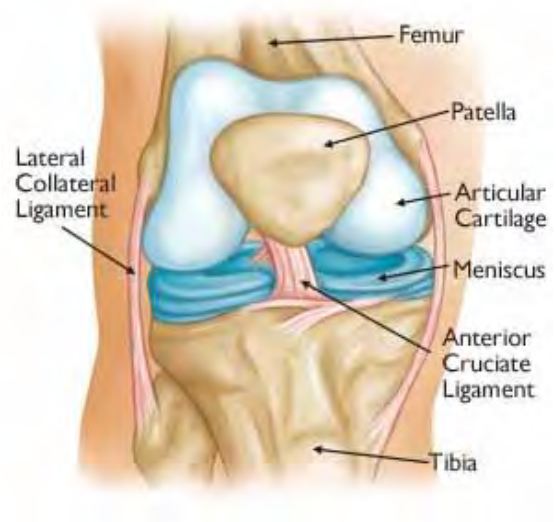
Total Knee Replacement

If your knee is severely damaged by arthritis or injury, it may be hard for you to perform simple activities, such as walking or climbing stairs. You may even begin to feel pain while you are sitting or lying down.

If nonsurgical treatments like medications, physical therapy, injections, and using walking supports are no longer helpful, you may want to consider total knee replacement surgery. Joint replacement surgery is a safe and effective procedure to relieve pain, correct leg deformity, and help you resume normal activities.

Whether you have just begun exploring treatment options or have already decided to have total knee replacement surgery, this article will help you understand more about this valuable procedure.

Anatomy



The knee is the largest joint in the body and having healthy knees is required to perform most everyday activities.

The knee is made up of the lower end of the thighbone (femur), the upper end of the shinbone (tibia), and the kneecap (patella). The ends of these three bones where they touch are covered with articular cartilage, a smooth substance that protects the bones and enables them to move easily.

The menisci are located between the femur and tibia. These C-shaped wedges act as "shock absorbers" that cushion the joint.

Large ligaments hold the femur and tibia together and provide stability. The long thigh muscles give the knee strength.

All remaining surfaces of the knee are covered by a thin lining called the synovial membrane. This membrane releases a fluid that lubricates the cartilage, reducing friction to nearly zero in a healthy knee.

Normally, all of these components work in harmony. But disease or injury can disrupt this harmony, resulting in pain, muscle weakness, and reduced function.

Cause

The most common cause of chronic knee pain and disability is arthritis. Although there are many types of arthritis, most knee pain is caused by just three types: osteoarthritis, rheumatoid arthritis, and post-traumatic arthritis.

- **Osteoarthritis.** This is an age-related "wear and tear" type of arthritis. It usually occurs in people 50 years of age and older, but may occur in younger people, too. The cartilage that cushions the bones of the knee softens and wears away. The bones then rub against one another, causing knee pain and stiffness.
- **Rheumatoid arthritis.** This is a disease in which the synovial membrane that surrounds the joint becomes inflamed and thickened. This chronic inflammation can damage the cartilage and eventually cause cartilage loss, pain, and stiffness. Rheumatoid arthritis is the most common form of a group of disorders termed "inflammatory arthritis."
- **Post-traumatic arthritis.** This can follow a serious knee injury. Fractures of the bones surrounding the knee or tears of the knee ligaments may damage the articular cartilage over time, causing knee pain and limiting knee function.

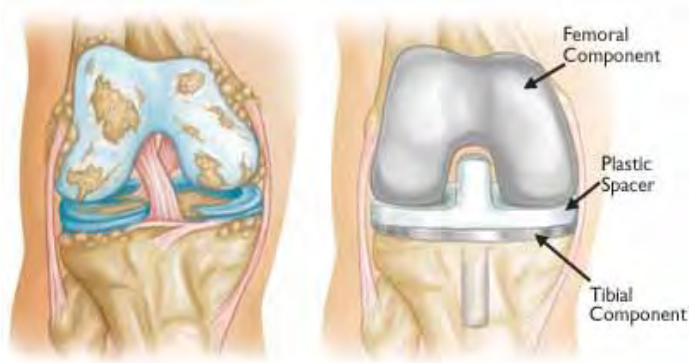
Osteoarthritis often results in bone rubbing on bone. Bone spurs are a common feature of this form of arthritis.

Description

A knee replacement (also called knee arthroplasty) might be more accurately termed a knee "resurfacing" because only the surface of the bones are actually replaced.

There are four basic steps to a knee replacement procedure.

- **Prepare the bone.** The damaged cartilage surfaces at the ends of the femur and tibia are removed along with a small amount of underlying bone.
- **Position the metal implants.** The removed cartilage and bone is replaced with metal components that recreate the surface of the joint. These metal parts are cemented in place.
- **Resurface the patella.** The undersurface of the patella (kneecap) is cut and resurfaced with a plastic button. Some surgeons do not resurface the patella, depending upon the case.
- **Insert a spacer.** A medical-grade plastic spacer is inserted between the metal components to create a smooth gliding surface.



(Left) Severe osteoarthritis. **(Right)** The arthritic cartilage and underlying bone has been removed and resurfaced with metal implants on the femur and tibia. A plastic spacer has been placed in between the implants. The patellar component is not shown for clarity.

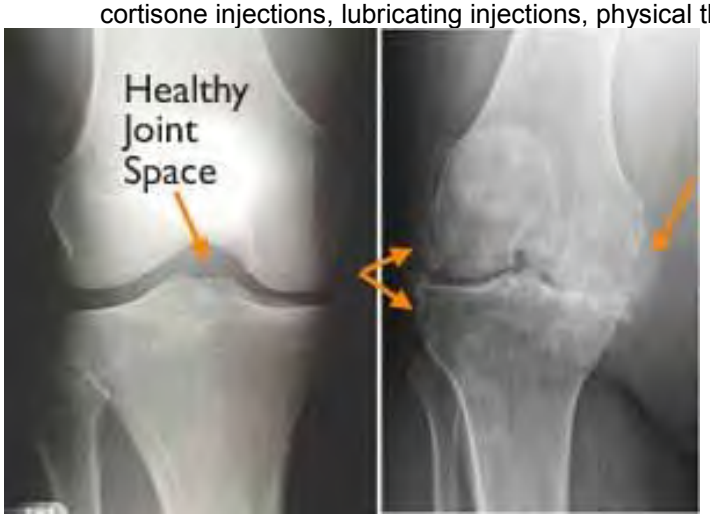
Is Total Knee Replacement for You?

The decision to have total knee replacement surgery should be a cooperative one between you, your family, your family physician, and your orthopedic surgeon. Your physician may refer you to an orthopedic surgeon for a thorough evaluation to determine if you might benefit from this surgery.

When Surgery Is Recommended

There are several reasons why your doctor may recommend knee replacement surgery. People who benefit from total knee replacement often have:

- Severe knee pain or stiffness that limits your everyday activities, including walking, climbing stairs, and getting in and out of chairs. You may find it hard to walk more than a few blocks without significant pain and you may need to use a cane or walker
- Moderate or severe knee pain while resting, either day or night
- Chronic knee inflammation and swelling that does not improve with rest or medications
- Knee deformity — a bowing in or out of your knee
- Failure to substantially improve with other treatments such as anti-inflammatory medications, cortisone injections, lubricating injections, physical therapy, or other surgeries



(Left) In this x-ray of a normal knee, the space between the bones indicates healthy cartilage (arrow). **(Right)** This x-ray of an arthritic knee shows severe loss of joint space and bone spurs (arrows).

Deciding to Have Knee Replacement Surgery

Realistic Expectations

An important factor in deciding whether or not to have total knee replacement surgery is understanding what the procedure can and cannot do.

More than 90% of people who have total knee replacement surgery experience a dramatic reduction of knee pain and a significant improvement in the ability to perform common activities of daily living. But total knee replacement will not allow you to do more than you could before you developed arthritis.

With normal use and activity, every knee replacement implant begins to wear in its plastic spacer. Excessive activity or weight may speed up this normal wear and may cause the knee replacement to loosen and become painful. Therefore, most surgeons advise against high-impact activities such as running, jogging, jumping, or other high-impact sports for the rest of your life after surgery.

Realistic activities following total knee replacement include unlimited walking, swimming, golf, driving, light hiking, biking, ballroom dancing, and other low-impact sports.

With appropriate activity modification, knee replacements can last for many years.

Possible Complications of Surgery

The complication rate following total knee replacement is low. Serious complications, such as a knee joint infection, occur in about 1% of patients. Chronic illnesses may increase the potential for complications. Although uncommon, when these complications occur, they can prolong or limit full recovery.

Infection: Infection may occur in the wound or deep around the prosthesis. It may happen while in the hospital or after you go home. It may even occur years later. Minor infections in the wound area are generally treated with antibiotics. Major or deep infections may require more surgery and removal of the prosthesis. Any infection in your body can spread to your joint replacement.

Blood clots: Blood clots in the leg veins are the most common complication of knee replacement surgery. These clots can be life-threatening if they break free and travel to your lungs. Your orthopedic surgeon will outline a prevention program, which may include periodic elevation of your legs, lower leg exercises to increase circulation, support stockings, and medication to thin your blood.

Implant problems: Although implant designs and materials, as well as surgical techniques, continue to advance, implant surfaces may wear down and the components may loosen. Additionally, although an average of 115° of motion is generally anticipated after surgery, scarring of the knee can occasionally occur, and motion may be more limited, particularly in patients with limited motion before surgery.

Continued pain: A small number of patients continue to have pain after a knee replacement. This complication is rare, however, and the vast majority of patients experience excellent pain relief following knee replacement.

Preparing for Surgery

Pre-Surgical Evaluation

If you decide to have total knee replacement surgery, your orthopedic surgeon will ask you to schedule a complete physical examination through pre-admission testing a few weeks before the

operation. This is needed to make sure you are healthy enough to have the surgery and complete the recovery process. Many patients with chronic medical conditions, like heart disease, may also be evaluated by a specialist, such as a cardiologist, before the surgery.

Tests

Several tests, such as blood and urine samples, and an electrocardiogram, may be needed to help your orthopedic surgeon plan your surgery.

Medications

Please bring a list of all the medications you are currently taking to your pre-admission testing appointment. There will be some medications that you will need to stop prior to your surgery date and they will be able to advise you how to correctly do this. Discontinue the following medications 7-10 days before your surgery:

- Any aspirin products including baby aspirin **(unless you have been advised otherwise by your cardiologist or staff during your pre-admission testing appointment**).
- Non-Steroidal anti inflammatory medications (includes prescription and over the counter medications such as Motrin, Advil, Aleve, and Ibuprofen)
- All Herbal supplements
- Vitamin E
- If you are on warfarin or Plavix, you will receive specific instructions at your pre-admission testing appointment about when to discontinue these medications.

Dental Evaluation

Although the incidence of infection after knee replacement is very low, an infection can occur if bacteria enter your bloodstream. To reduce the risk of infection, major dental procedures (such as tooth extractions and periodontal work) should be completed **before** your total knee replacement surgery. Routine cleaning of your teeth should be delayed for **three months** after surgery.

Weight Loss

If you are overweight, your doctor may ask you to lose some weight before surgery to minimize the stress on your new hip and possibly decrease the risks of surgery. Being overweight can increase your complications after surgery. Any weight loss that can be achieved before or after surgery would be very beneficial in your recovery. Maintaining a healthy weight will put less stress on your joints, which in turn can cause less pain. You should look to maintain a **BMI of <40** before proceeding with joint replacement.

Losing weight can make a difference when it comes to joint pain. In fact, for every pound you lose, you remove about 4 pounds of stress from your major joints. Following a balanced diet while exercising regularly can help you lose weight and reduce stress on your joints.

Staying active can help keep your joints flexible, reduce pain, and improve your ability to move. Low-impact activities like swimming or water aerobics can be good options because they put less stress on your joints. Stretching exercises, strength training, and aerobic exercise may also help to ease arthritis pain.

Discharge Planning

A social worker will work with you during your hospital stay to set up your discharge planning. The majority of patients will go home with home care services which typically includes physical therapy.

Your Surgery

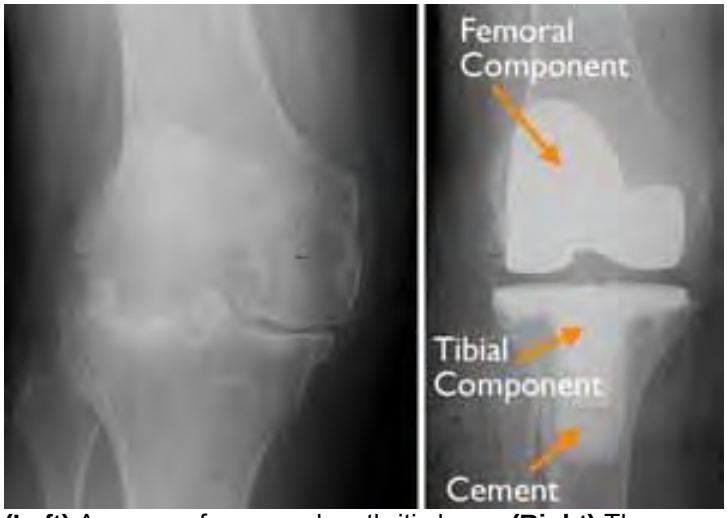
You will be admitted to the hospital on the morning of your surgery. You will be contacted the day before your surgery to confirm the time you need to be to be at the hospital.

Anesthesia

After admission, a member of the anesthesia team will evaluate you. The most common types of anesthesia are general anesthesia (you are put to sleep) or spinal, epidural, or regional nerve block anesthesia (you are awake but your body is numb from the waist down). The majority of patients will receive a spinal anesthetic for total knee replacement, but the anesthesia team, with your input, will determine which type of anesthesia will be best for you.

Procedure

The procedure itself takes approximately 1 hour. Your orthopedic surgeon will remove the damaged cartilage and bone, and then position the new metal and plastic implants to restore the alignment and function of your knee.



(Left) An x-ray of a severely arthritic knee. **(Right)** The x-ray appearance of a total knee replacement. Note that the plastic spacer between the bones does not show up in an x-ray.

Your Hospital Stay

Expect to stay in the hospital 1-2 nights.

Pain Management

After surgery, you will be in some pain, but your surgeon and nurses will provide medication to make you feel as comfortable as possible. Pain management is an important part of your recovery. Walking and knee movement will begin the same day of your surgery, and when you feel less pain, you can start moving more which will get your strength back more quickly. Talk with your surgeon if postoperative pain becomes a problem.

Blood Clot Prevention

Your orthopedic surgeon may prescribe one or more measures to prevent blood clots and decrease leg swelling. These may include special support hose, inflatable leg coverings (compression boots), and blood thinners (lovenox or aspirin). Foot and ankle movement also is

encouraged immediately following surgery to increase blood flow in your leg muscles to help prevent leg swelling and blood clots.

Physical Therapy
Physical therapy may begin as early as the day of surgery. A physical therapist will teach you specific exercises to strengthen your leg and restore knee movement to allow walking and other normal daily activities soon after your surgery.

Preventing Pneumonia
It is common for patients to have shallow breathing in the early postoperative period. This is usually due to the effects of anesthesia, pain medications, and increased time spent in bed. This shallow breathing can lead to a partial collapse of the lungs (termed "atelectasis"), which can make patients susceptible to pneumonia. To help prevent this, it is important to take frequent deep breaths. Your nurse may provide a simple breathing apparatus called a spirometer to encourage you to take deep breaths.

Your Recovery at Home
The success of your surgery will depend largely on how well you follow your orthopedic surgeon's instructions at home during the first few weeks after surgery.

Wound Care
You will have staples or sutures that run along your incision site. If staples are present, they will be removed 10-14 days after surgery. If sutures are present they will not require removal and will absorb on their own.

An Aquacel dressing will be applied to your incision site prior to discharge from the hospital. This dressing will stay in place for 7 days. You may shower with this dressing in place but do not soak in water. This dressing will be removed in Dr. Petersilge's office unless otherwise directed. You may keep an ace wrap over this dressing for comfort but it is not required.

Diet
Some loss of appetite is common for several weeks after surgery. A balanced diet, often with an iron supplement, is important to help your wound heal and to restore muscle strength.

Activity
Exercise is a critical component of home care, particularly during the first few weeks after surgery. You should be able to resume most normal activities of daily living within 3 to 6 weeks following surgery. Some pain with activity and at night is common for several weeks after surgery.

Your activity program should include:

- A graduated walking program to slowly increase your mobility, initially in your home and later outside
- Resuming other normal household activities, such as sitting, standing, and climbing stairs
- Specific exercises several times a day to restore movement and strengthen your knee. You probably will be able to perform the exercises without help, but you may have a physical therapist help you at home or in a therapy center the first few weeks after surgery.

You will most likely be able to resume driving 4-6 weeks after surgery.

Avoiding Problems After Surgery

Blood Clot Prevention

Follow your orthopedic surgeon's instructions carefully to reduce the risk of blood clots developing during the first several weeks of your recovery. He or she may recommend that you continue taking the blood thinning medication you started in the hospital. Notify your doctor immediately if you develop any of the following warning signs.

Warning signs of blood clots: The warning signs of possible blood clots in your leg include:

- Increasing pain or tenderness in your calf
- Increasing swelling in your calf, ankle, and foot

Warning signs of pulmonary embolism: The warning signs that a blood clot has traveled to your lung include:

- Sudden shortness of breath
- Sudden onset of chest pain
- Localized chest pain with coughing

Preventing Infection

A common cause of infection following total knee replacement surgery is from bacteria that enter the bloodstream during dental procedures, urinary tract infections, or skin infections. These bacteria can lodge around your knee replacement and cause an infection.

After your knee replacement, you must take preventive antibiotics before dental or surgical procedures that could allow bacteria to enter your bloodstream.

Warning signs of infection: Notify your doctor immediately if you develop any of the following signs of a possible knee replacement infection:

- Persistent fever (higher than 101°F orally)
- Shaking chills
- Increasing redness, tenderness, or swelling of the knee wound
- Drainage from your incision site that persists for more than 5 days after surgery
- Increasing knee pain with both activity and rest

Outcomes

How Your New Knee Is Different

Improvement of knee motion is a goal of total knee replacement, but restoration of full motion is uncommon. The motion of your knee replacement after surgery can be predicted by the range of motion you have in your knee before surgery. Most patients can expect to be able to almost fully straighten the replaced knee and to bend the knee sufficiently to climb stairs and get in and out of a car. Kneeling is sometimes uncomfortable, but it is not harmful.

Most people feel some numbness in the skin around your incision. You also may feel some stiffness, particularly with excessive bending activities.

Most people also feel or hear some clicking of the metal and plastic with knee bending or walking. This is a normal. These differences often diminish with time and most patients find them to be tolerable when compared with the pain and limited function they experienced prior to surgery.

Your new knee may activate metal detectors required for security in airports and some buildings. Tell the security agent about your knee replacement if the alarm is activated

Extending the Life of Your Knee Implant

Currently, more than 90% of total knee replacements are still functioning well 15-20 years after the surgery. Following your orthopedic surgeon's instructions after surgery and taking care to protect your knee replacement and your general health are important ways you can contribute to the final success of your surgery. Maintaining a healthy weight will also help to prolong the life of your implant.

Managing Pain With Medications After Total Knee Replacement

After surgery, your doctors and nurses will make every effort to control your pain. While you should expect to feel some discomfort, advancements in pain control now make it easier for your doctor to manage and relieve pain.

In order to effectively manage your pain, your surgeon will take into account several factors that are unique to you and your situation. That is why it is important for you to openly discuss your fears and expectations, as well as your past experiences with pain control, with your doctors and nurses.

Opioid Analgesics

Opioids are the most effective medicines for moderate to severe pain, especially for managing short-term pain after surgery.

Types of Opioids

Most patients will be started on some sort of opioid for pain control during their hospital stay. Most commonly, Percocet, Vicodin, and tramadol are used. You will also be sent home with a prescription for pain medication.

Possible side effects of these medications include:

- **Drowsiness**: You may feel drowsy or sleep more at first. Most people find that this side effect goes away in 2 to 3 days as the body adapts to the medicine and dosage. When you go home, you must be careful. You may not be allowed to drive or use heavy equipment.
- **Constipation**: This will likely happen when medicines are used on a steady basis. Drink plenty of fluids and eat a diet high in fiber. Take a laxative and/or stool softener each day.
- **Nausea**: You may have nausea at first. It may cause you to vomit. This side effect should pass in 2 to 3 days as your body adapts.

Medications

Your usual medications will be ordered after surgery. We will also order a number of medications that are standard after joint replacement surgery.

Antibiotics: You will receive a dose of antibiotics in your IV prior to the start of your surgery. You will also receive two doses of antibiotics after your surgery.

Multivitamin: Will be given daily. This supplement helps to boost your nutritional stores while you are recovering.

Iron Tablets: Will be given once a day. This helps to replace your iron stores that have been

lowered with surgery. Most patients remain on iron tablets for about 4 weeks after surgery. Some people may experience a stomachache or constipation with this medication.

Stool Softener: You will receive a stool softener capsule twice a day. After surgery, pain medication and a decrease in activities and diet may cause constipation. These can be purchased over the counter at any pharmacy at discharge, but a prescription will be provided if needed.

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Anticoagulation: If you were previously on a blood thinner prior to your surgery you will most likely be started back on that medication following surgery. If you were not on a blood thinner before surgery you will be started on Lovenox or aspirin after your surgery.

> **Lovenox**: Is started the day after your surgery and is continued for a total of **7** days once discharged. After this is finished, you will need to start 325mg of aspirin daily for **6** weeks.
>
> -or-
>
> **Aspirin**: 325mg of aspirin twice a day will be started the day after your surgery and continued for 6 weeks.

Home going Instructions

How do I care for my Incision?

- You will have an aquacel dressing in place. Unless gross drainage is noted please do not remove dressing until seen in the office. Once bandage is removed you may leave your incision site open to air.

When can I shower?

- You may shower with your aquacel dressing in place but do not soak in water.
- Do not soak in a tub for 4 weeks

What can I do about swelling?

- Some swelling is normal after surgery. The amount varies from patient to patient and can sometimes last for several months. The swelling may decrease if you:
    - Keep your legs propped up when you are sitting
    - Wear TED hose during the day
    - Do not site for long periods of time. If you are sitting for longer than 30 minutes, do your ankle pumps.

When can I travel?

- You may ride in the car as soon as you feel comfortable
- We suggest you start with short trips to places you are familiar with
- Most people resume driving 4-6 weeks from surgery

When do I see my doctor again?

- You should have a follow up appointment with your physician's office in one week. This appointment should be scheduled for you. If it is not, please call to schedule as soon as possible. 216-202-6300.

Total Joint Replacement Education

Ahuja Joint Replacement Class

- **What:** Pre-op teaching class that will include information from our nurses, physical therapists and other medical professionals
- **When:** Classes will be held on the **first and third Thursday** of every month
- **Time:** 2-4pm
- **Where:** The Rosenburg Conference Center, first floor of the Ahuja Medical Center
- **RSVP:** Please call **216-285-4068** to reserve a spot for the class

Total Joint Replacement Timeline

1. Schedule your surgery
2. Please obtain dental clearance as well as any other clearance necessary such as the cardiologist, pulmonologist etc.
3. Attend Pre-admission Testing
    a. Be sure to bring a list of all your medications to this appointment
    b. The PAT department should contact you within a couple weeks of your surgery to set up an appointment. If it is one week prior to your surgery and have not heard from them, please contact them directly.
4. Attend the joint replacement class. You will need to attend the class at the facility your having your procedure at.
5. If you need paperwork filled out prior to your surgery, please fax them to Dr. Petersilge's office at 844-785-6337
6. Someone will contact you the day before your surgery to let you know what time to be here the day of your surgery.
7. Surgery Day
8. Expect to stay in the hospital 1-2 nights.
9. During your hospital stay, the physical therapist and the social worker will work with you to arrange home care services.
10. After hospital discharge, if you need a medication refill, contact Dr. Petersilge's office directly (216-202-6300). Please allow a 48 hour notice for all medication refills.
11. Your first post op visit will be one week after surgery with Dr. Petersilge's physician assistant. This appointment should be scheduled for you.
12. Your second post op visit will be 6 weeks after surgery with Dr. Petersilge.

Total Knee Replacement Exercise Guide

Regular exercise to restore your knee mobility and strength and a gradual return to everyday activities are important for your full recovery. Your orthopedic surgeon and physical therapist may recommend that you exercise approximately 20 to 30 minutes two or three times a day and walk 30 minutes, two or three times a day during your early recovery.

Early Postoperative Exercises

Start the following exercises as soon as you are able. You can begin these in the recovery room shortly after surgery. You may feel uncomfortable at first, but these exercises will speed your recovery and actually diminish your postoperative pain.

Quadriceps Sets

Tighten your thigh muscle. Try to straighten your knee. Hold for 5 to 10 seconds. Repeat this exercise approximately 10 times during a two-minute period, rest one minute and repeat. Continue until your thigh feels fatigued.

Straight Leg Raises

Tighten the thigh muscle with your knee fully straightened on the bed, as with the Quad set. Lift your leg several inches. Hold for five to 10 seconds. Slowly lower.
Repeat until your thigh feels fatigued.

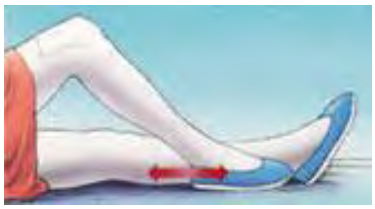
Ankle Pumps

Move your foot up and down rhythmically by contracting the calf and shin muscles. Perform this exercise periodically for two to three minutes, two or three times an hour in the recovery room. Continue this exercise until you are fully recovered and all ankle and lower-leg swelling has subsided.

Knee Straightening Exercises

Place a small rolled towel just above your heel so that it is not touching the bed. Tighten your thigh. Try to fully straighten your knee and to touch the back of your knee to the bed. Hold fully straightened for five to 10 seconds. Repeat until your thigh feels fatigued.

Bed-Supported Knee Bends



Bend your knee as much as possible while sliding your foot on the bed. Hold your knee in a maximally bent position for 5 to 10 seconds and then straighten.
Repeat several times until your leg feels fatigued or until you can completely bend your knee.

Sitting Supported Knee Bends

While sitting at bedside or in a chair with your thigh supported, place your foot behind the heel of your operated knee for support. Slowly bend your knee as far as you can. Hold your knee in this position for 5 to 10 seconds. Repeat several times until your leg feels fatigued or until you can completely bend your knee.

Sitting Unsupported Knee Bends

While sitting at bedside or in a chair with your thigh supported, bend your knee as far as you can until your foot rests on the floor. With your foot lightly resting on the floor, slide your upper body forward in the chair to increase your knee bend. Hold for 5 to 10 seconds. Straighten your knee fully. Repeat several times until your leg feels fatigued or until you can completely bend your knee.

Early Activity

Soon after your surgery, you will begin to walk short distances in your hospital room and perform everyday activities. This early activity aids your recovery and helps your knee regain its strength and movement.

Walking

Proper walking is the best way to help your knee recover. At first, you will walk with a walker or crutches. Your surgeon or therapist will tell you how much weight to put on your leg.

Stand comfortably and erect with your weight evenly balanced on your walker or crutches. Advance your walker or crutches a short distance; then reach forward with your operated leg with your knee straightened so the heel of your foot touches the floor first. As you move forward, your knee and ankle will bend and your entire foot will rest evenly on the floor. As you complete the step, your toe will lift off the floor and your knee and hip will bend so that you can reach forward for your next step. Remember, touch your heel first, then flatten your foot, then lift your toes off the floor.

Walk as rhythmically and smooth as you can. Don't hurry. Adjust the length of your step and speed as necessary to walk with an even pattern. As your muscle strength and endurance improve, you may spend more time walking. You will gradually put more weight on your leg. You may use a cane in the hand opposite your surgery and eventually walk without an aid.

When you can walk and stand for more than 10 minutes and your knee is strong enough so that you are not carrying any weight on your walker or crutches (often about two to three weeks after your surgery), you can begin using a single crutch or cane. Hold the aid in the hand opposite the side of your surgery. You should not limp or lean away from your operated knee.

Stair Climbing and Descending

The ability to go up and down stairs requires strength and flexibility. At first, you will need a handrail for support and will be able to go only one step at a time. Always lead up the stairs with your good knee and down the stairs with your operated knee. Remember, "up with the good" and "down with the bad." You may want to have someone help you until you have regained most of your strength and mobility.

Stair climbing is an excellent strengthening and endurance activity. Do not try to climb steps higher than the standard height (7 inches) and always use a handrail for balance. As you become stronger and more mobile, you can begin to climb stairs foot over foot.

Advanced Exercises and Activities

Once you have regained independence for short distances and a few steps, you may increase your activity. The pain of your knee problems before surgery and the pain and swelling after surgery have weakened your knee. A full recovery will take many months. The following exercises and activities will help you recover fully.

Standing Knee Bends

Standing erect with the aid of a walker or crutches, lift your thigh and bend your knee as much as you can. Hold for 5 to 10 seconds. Then straighten your knee, touching the floor with your heel first. Repeat several times until fatigued.

Assisted Knee Bends

Lying on your back, place a folded towel over your operated knee and drop the towel to your foot. Bend your knee and apply gentle pressure through the towel to increase the bend. Hold for 5 to 10 seconds; repeat several times until fatigued.

Knee Exercises with Resistance

You can place lightweights around your ankle and repeat any of the above exercises. These resistance exercises usually can begin four to six weeks after your surgery. Use one- to two-pound weights at first; gradually increase the weight as your strength returns. (Inexpensive wrap-around ankle weights with Velcro straps can be purchased at most sporting goods stores.)

Cycling

Cycling is an excellent activity to help you regain muscle strength and knee mobility. At first, adjust the seat height so that the bottom of your foot just touches the pedal with your knee almost straight. Peddle backward at first. Ride forward only after a comfortable cycling motion is possible backwards.

As you become stronger (at about four to six weeks) slowly increase the tension on the exercise bike. Cycling for 10 to 15 minutes twice a day, gradually build up to 20 to 30 minutes, three or four times a week.

You may experience knee pain or swelling after exercise or activity. You can relieve this by elevating your leg and applying ice wrapped in a towel. Exercise and activity should consistently improve your strength and mobility. If you have any questions or problems, contact your orthopedic surgeon or physical therapist.

Numbers You Need to Know:

Dr. Petersilge's Office:
Phone Number: 216-202-6300
Fax Number: 844-785-6337

Appointment Line: 216-202-6300

Ahuja Pre-admission Testing: 216-593-1595

Home Care: 216-844-4663

You can visit our website at www.williampetersilgemd.com