

# Guidebook for Knees







# Guidebook for Knees

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# Guidebook for Knees

## Section One: Preparing For Surgery

### Welcome!

We are pleased you have chosen Summit Healthcare Regional Medical Center to have joint replacement surgery.

The goal of surgery is to:

- Relieve pain.
- Restore independence.
- Return to an active lifestyle.

### How to Use This Guidebook

The Guidebook will assist you with:

- What to expect.
- What you need to do.
- How to care for your new joint.

Your doctor, nurse, or therapist may add or change any of the recommendations. Always use their recommendations first and ask questions if you are unsure.

### Why Surveys Are Important

You will be asked to complete some surveys. Initially, the purpose is to enable your care team to better understand how much your pain has affected your ability to manage your everyday activities. After your surgery, we will ask you to complete the survey again to measure how well you are recovering.

In addition, the information we receive from this survey will be used for improving health services and informing potential patients and healthcare providers of outcomes our patients have achieved. Your responses will only be shared with your surgeon and your hospital. When shared publicly, your information will be grouped with other patients' information and will NEVER be shared in a manner in which your identity can be known. This survey is compliant with the HIPAA Security Rule which sets national standards for the security of electronic protected health information.

Please answer each section by selecting ONE CHOICE that most applies to you. We realize that you may feel that more than one statement may relate to you, but please just select the one response which closely describes your problem right now. Thank you in advance for your participation!

# Guidebook for Knees

## Joint Center Overview

We offer a unique program to encourage discharge from the hospital very soon after surgery. Program features include:

- Nurses and therapists trained to work with patients after joint replacement.
- Casual clothes.
- Family and friends as “coaches.”
- Joint care team who coordinate preoperative care and discharge planning.
- Patient Guidebook.

**We strive to enable patients to walk the day of surgery and resume normal activity in six to 12 weeks.**

## Your Joint Care Team

**Orthopaedic Surgeon** - will perform the procedure to repair your damaged joint.

**Registered Nurse (RN)** - will ensure orders by your doctor are completed.

**Physical Therapist (PT)** - will guide you through functional daily activities and teach you exercises to regain your strength/motion.

**Occupational Therapist (OT)** - will guide you on performing tasks such as bathing/dressing and-demonstrate home equipment use.

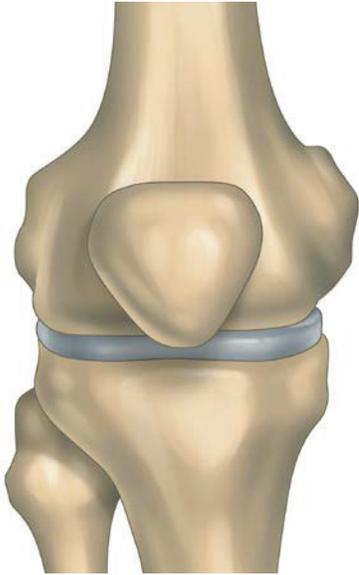
**Orthopedic Program Manager (OPM) will:**

- Facilitate plan for anesthesia and medical clearance for surgery.
- Coordinate discharge plan.
- Act as your advocate throughout treatment.
- Answer questions and coordinate hospital care.



# Guidebook for Knees

## Knee Anatomy and Arthritis



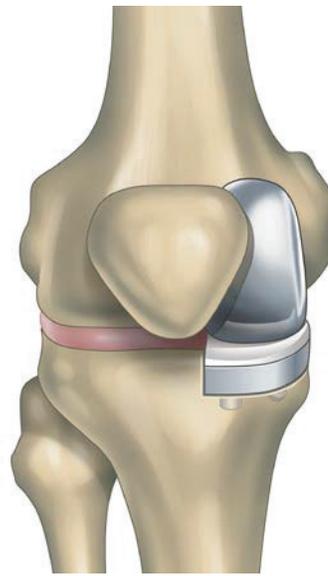
Healthy Knee



Arthritic Knee



Total Knee Replacement



Partial Knee Replacement

# Guidebook for Knees

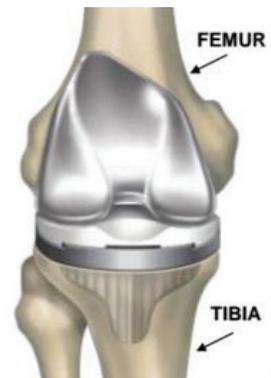
## Frequently Asked Total and Partial Knee Questions

### What is osteoarthritis and why does my knee hurt?

Osteoarthritis, the most common form of arthritis, is a wear and tear condition that destroys joint cartilage. Joint cartilage is durable, smooth tissue that covers the ends of bones where joints are located. It cushions the bones during movement, and because it is smooth and slippery, it allows for motion with minimal friction. Trauma, repetitive movement, or for no apparent reason, the cartilage wears down exposing the bone ends. Over time, cartilage destruction can result in painful bone-on-bone contact, swelling, and loss of motion.

### What is total knee replacement?

The term total knee replacement is misleading. The knee is not replaced, but rather an implant is used to re-cap the worn ends of the bone. This is done with a metal alloy on the femur (bone between the hip and knee) and a plastic spacer on the tibia (large bone between your knee and ankle) and patella (kneecap). This creates a new, smooth cushion and a functional joint that can reduce or eliminate pain



### What is partial knee replacement?

During a partial knee replacement, the deteriorated cartilage between the tibia and femur is replaced. Patients who have disease restricted to one side of the knee are typically candidates for the procedure. Because a partial knee implant is smaller than a total knee implant, the surgical incision can be significantly smaller. A partial knee implant consists of a metal component that is attached to the femur, and a plastic cap that covers the worn area of the tibia. This creates a new, smooth cushion and a functional joint that can reduce or eliminate pain.



### How long will my new knee last and can a second replacement be done?

All implants have a limited life depending on an individual's age, weight, activity level, and medical condition(s). How long a joint implant lasts will vary by patient. An implant is a medical device subject to wear that may lead to mechanical failure. There is no guarantee that your implant will last for any specified length of time.

### What are the major risks?

Most surgeries go well, without complications. However, infection and blood clots are two serious complications. To avoid these complications, your surgeon may use antibiotics and blood thinners.

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## What happens during knee surgery?

Typically, the hospital will reserve approximately one to two hours for surgery. Some of the time will be taken by operating room staff to prepare you for surgery. Some patients may receive a spinal or epidural anesthetic – which numbs the legs and does not require you to be asleep. You may receive general anesthetic – “being put to sleep.” The choice is between you, your surgeon, and the anesthesiologist.



## Will surgery be painful?

You will have discomfort following surgery, but we keep you comfortable with appropriate medication. Most patients will receive oral pain medication and may receive some additional IV medication for “breakthrough” pain if needed.

## How long and where will my scar be?

Surgical scars will vary in length, but most surgeons make it as small as possible. It will be straight down center of your knee, unless you have previous scars, in which case your surgeon may use an existing scar. There may be lasting numbness around the scar.

## Will I need a walker or a cane?

You will progress at your own rate. Often patients use a walker immediately after surgery. A member of your care team can arrange for equipment as needed.



## How long will I be in the hospital?

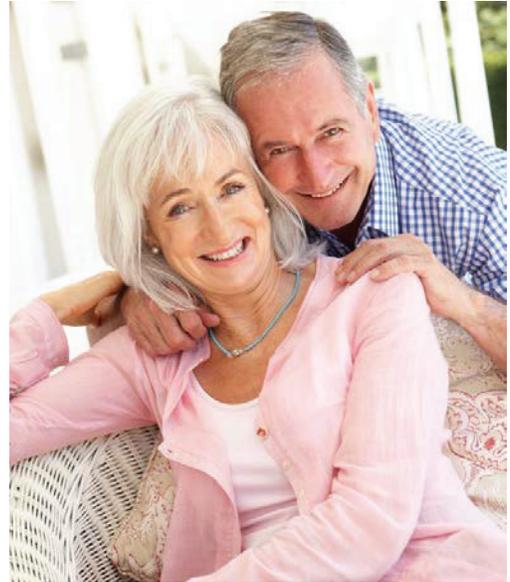
Patients are generally discharged to home once they are able to sit, stand, and walk safely with a walker or other assistive device. Most patients will be out of bed the day of surgery. The next morning most patients get up, sit in a chair, and should be walking with a walker.

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## Include Your Personal Coach

Your coach should plan to come with you to attend the preoperative class, visit during your hospital stay, provide support during physical therapy, and keep you focused on healing. They will also be a valuable extra set of eyes and ears to help keep you on track with all of the information you will be receiving over the next several weeks.

**Involving a friend or relative as your coach is very important.**



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## Attend a Preoperative Class

Preoperative education class helps you and your coach prepare for your upcoming surgery and postoperative needs. The class provides an understanding of what will happen before, during and after surgery, provides an opportunity to meet the staff that will be caring for you, and allows an opportunity for questions and answers. It is important all patients and their coach attend a class 2-3 weeks prior to surgery.

### Class Outline:

- Joint Disease
- What to Expect from Coach/Caregiver
- Meet the Joint Care Team
- Tour the Joint Replacement Center
- Learn Breathing Exercises
- Review Preoperative Exercises
- Learn About Assistive Devices and Joint Protection
- Discharge Planning/Insurance/Equipment
- Complete Preoperative Forms



**Attend a class for joint surgery patients. Bring your coach.  
If you cannot attend, inform the Joint Care Team.**



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## Put Your Health Care Decisions in Writing

Advance Medical Directives are printed instructions that communicate your wishes regarding healthcare. As there are different directives, it is a good idea to consult your attorney concerning the legal implications of each. For example:

- A Living Will explains your wishes if you have a terminal condition, irreversible coma, and are unable to communicate.
- Appointment of a Healthcare Agent (sometimes called a Medical Power of Attorney) lets you name a person (your agent) to make medical decisions if you become unable to do so.
- Healthcare Instructions are your choices regarding use of life-sustaining equipment, hydration, nutrition, and pain medications.
- If you have an Advance Medical Directive, please bring a copy of the document with you to the hospital.



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## Eating Right For Recovery

How you treat your body the weeks before and after surgery can have a direct effect on how well and how quickly you will heal. Now is the time to take a proactive approach and give your body the building blocks it needs for the best possible recovery. A little preparation now can make a big difference in your recuperation later. Rather than waiting until after your surgery, start the healing now! Simple steps you can take include:

- Begin your healthy eating plan at least 2 weeks prior to surgery and consider making it a lifetime commitment.
- Eat a well-balanced diet rich in iron, Vitamin C and calcium.
- Avoid alcohol especially in the 48 hours prior to surgery.

**IMPORTANT NOTE: If you are diabetic or on any type of restricted diet, you should consult your doctor prior to starting any diet.**

### Why Iron and Vitamin C Are Important

Iron is needed to build healthy red blood cells. Vitamin C improves the absorption of iron – in other words, Vitamin C makes it easier for the iron to get into the body and work more efficiently.

During surgery, some blood loss is expected. Ample levels of iron and Vitamin C in your body prior to surgery will help in the replacement of red blood cells that are lost during your operation. Your surgeon may even prescribe iron supplements.



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Here is a list of iron and Vitamin C rich foods you may want to add to your diet:

IRON RICH FOODS	Iron Content mg/serving	Serving Size	VITAMIN C RICH FOODS	Vitamin C Content mg/serving	Serving Size
<i>Beef, lean</i>	7	3 oz	<i>Green Peppers</i>	65	½ cup
<i>Spinach</i>	6	1 cup	<i>Strawberries</i>	95	1 cup
<i>Lima beans</i>	2	½ cup	<i>Cantaloupe</i>	60	½ melon
<i>Dried Peaches</i>	3	½ cup	<i>Kiwi</i>	75	1 whole
<i>Navy Beans</i>	3	½ cup	<i>Grapefruit</i>	40	½ whole
<i>Soy Beans</i>	5	½ cup	<i>Broccoli</i>	60	½ cup
<i>Bran Flakes</i>	20	3 oz	<i>Brussels Sprouts</i>	50	½ cup
<i>Prune Juice</i>	3	1 cup	<i>Tomato Juice</i>	35	¾ cup
<i>Baked Potato</i>	3	1 medium	<i>Spinach</i>	28	1 cup
<i>Cashews</i>	6	3 oz	<i>Kale</i>	120	½ cup
<i>Poultry (dark)</i>	2	3 oz	<i>Cabbage (raw)</i>	50	½ cup
<i>Eggs</i>	1	1 medium	<i>Oranges</i>	70	1 whole

## Why Calcium is Important

Calcium is an important mineral needed for building new bone as well as maintain existing bone strength. During joint replacement surgery, bone is removed and an implant is put in its place. Eventually, new bone will grow around parts of the implant and help make it more stable. A diet rich in calcium can help with this process.

Below is a list of calcium rich foods you may want to add to your diet.

CALCIUM RICH FOODS	Calcium Content mg/serving	Serving Size
<i>Yogurt (non-fat)</i>	452	1 cup
<i>Yogurt (low-fat)</i>	415	1 cup
<i>Cereal (fortified)</i>	300	1 cup
<i>Cheese - Swiss</i>	408	1 oz
<i>Cheese - Cheddar</i>	306	1 oz
<i>Tofu w/ calcium</i>	434	1 cup
<i>Almonds</i>	150	2 oz
<i>Waffle (fortified)</i>	150	1 each
<i>Orange Juice w/ calcium</i>	300	1 cup
<i>Milk – 2%</i>	297	1 cup
<i>Milk - Skim</i>	302	1 cup
<i>Broccoli</i>	89	1 cup
<i>Sardines</i>	321	3 oz

### IMPORTANT NOTE:

A sudden increase in your diet of green leafy vegetables can interact with certain blood thinning medications such as Coumadin (warfarin) and Plavix (clopidogrel). If green leafy foods such as spinach, broccoli and brussel sprouts are a normal part of your diet, it is important to eat a consistent amount from week to week.

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## Stop Smoking Before Surgery

Smoking and vaping can affect your body's ability to heal by reducing the amount of oxygen circulating in your blood. Because oxygen is vital for healing, it is crucial that you quit smoking today!

### Smoking<sup>1</sup> and Vaping:

- Delay your healing process.
- Reduce the size of blood vessels and decreases the amount of oxygen circulating in your blood.
- Can increase clotting which can cause heart problems.
- Increase blood pressure and heart rate.

If you quit smoking before surgery, you will improve your ability to heal. If you need help quitting, please ask about hospital resources.

### When you are ready:

- Decide to quit.
- Choose the date.
- Limit the area where you smoke; don't smoke at home.
- Throw away all cigarettes, electronic cigarettes and ashtrays.
- Don't put yourself in situations where others smoke.
- Reward yourself for each day without cigarettes.
- Remind yourself that this can be done – be positive!
- Take it one day at a time – if you slip, get back to your decision to quit.
- Check with your doctor if you need products like chewing gum, patches or prescription aids.



<sup>1</sup>Smoking Threatens Orthopedic Outcomes. Negative effects should prompt orthopedists to address the issue with patients. S. Terry Canale, MD; Frank B. Kelly, MD; and Kaye Daugherty

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## Practice Breathing Exercises

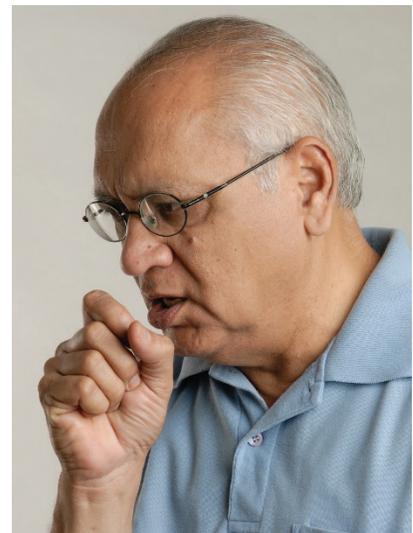
To help prevent problems such as pneumonia, it's important to practice breathing exercises using the muscles of your abdomen and chest. Techniques such as deep breathing, coughing, and using an Incentive Spirometer may help prevent respiratory complications after surgery. Practice your breathing exercises as directed by your surgeon or nurse.

### Deep Breathing

- Breathe in through your nose as deep as you can.
- Hold your breath for five to 10 seconds.
- Breathe out as if you were blowing out a candle. Notice your stomach going in. Breathe out for 10 to 20 seconds.
- Take a break and then repeat the exercise 10 times.

### Coughing

- Take a slow deep breath. Breathe in through your nose and fill your lungs completely.
- Breathe out through your mouth and concentrate on your chest emptying.
- Repeat.
- Take another breath, but hold your breath and then cough hard. When you cough, focus on emptying your lungs.
- Repeat all steps twice.



Techniques such as deep breathing, coughing, and using an Incentive Spirometer may help prevent respiratory complications after surgery.

# Guidebook for Knees

## Prepare Your Home

Make sure everything you need is easy to get to and on the same floor where you will spend most of your time.

- Have a bed that is low enough so that your feet touch the floor when you sit on the edge of the bed.
- Set up your bed on the first floor if you can.
- Have a bathroom or a portable commode on the same floor where you will spend most of your day.
- Stock up on canned or frozen food, toilet paper, shampoo, and other personal items.
- Either buy or make single meals that can be frozen and reheated.
- Make sure you can reach everything you need without getting on your tiptoes or bending down low.
- Put food and other supplies in a cupboard that is between your waist and shoulder level.
- Place glasses, your teapot, and other items you use a lot on the kitchen counter.
- Place a chair with a firm back in the kitchen, bedroom, bathroom, and other rooms you will use. This way, you can sit when you do your daily tasks.
- If you will be using a walker, attach a sturdy bag or a small basket to it to hold your phone, a notepad, a pen, and any other things you will need to have close by.



Other items that may help:

- Shower sponge with a long handle
- Shoehorn with a long handle
- Walker or other assistive device, such as a cane
- Reacher to help you pick up things from the floor, put on your pants, and take off your socks
- Sock aid to help you put on your socks
- Handle bars in the bathroom to allow you to steady yourself

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## Avoiding Falls

Reduce tripping hazards in your home.

- Remove loose wires or cords from areas you walk through to get from one room to another.
- Make a path wide enough for a walker to fit through.
- Pick up throw rugs and tack down loose carpeting.
- Cover slippery surfaces with carpets, be sure they are firmly attached to the floor or have non-skid backs.
- Fix any uneven flooring in doorways. Use good lighting.
- Have night lights placed in hallways and rooms that can be dark.

Pets that are small or move around may cause you to trip. For the first few weeks you are home, consider having your pet stay elsewhere (with a friend, in a kennel, or in the yard).

DO NOT carry anything when you are walking around. You may need your hands to help you balance.

## Bathroom Set-up

Raising the toilet seat height will keep you from bending your knee too much. You can do this by adding a seat cover, elevated toilet seat or a toilet safety frame. You can also use a commode chair instead of a toilet.

You may need to have safety bars in your bathroom. Grab bars should be secured vertically or horizontally to the wall, not diagonally.

- DO NOT use towel racks as grab bars. They cannot support your weight.
- You will need two grab bars. One helps you get in and out of the tub. The other helps you stand from a sitting position.

You can make several changes to protect yourself when you take a bath or shower:

- Put non-slip suction mats or rubber silicone decals in the tub to prevent falls.
- Use a non-skid bath mat outside the tub for firm footing.
- Keep the floor outside the tub or shower dry.
- Place soap and shampoo where you do not need to stand up, reach, or twist.
- Sit on a bath or shower chair when taking a shower:
- Make sure it has rubber tips on the bottom.
- Buy a seat without arms if it is placed in a bathtub.



# Guidebook for Knees

Practice using a cane or walker. It is especially important to practice the correct ways to:

- Get in and out of the shower
- Use the shower chair
- Go up and down stairs
- Sit down to use the toilet and stand up after using the toilet



## References:

Cabrera JA, Cabrera AL. Total hip replacement. In: Frontera, WR, Silver JK, Rizzo TD, eds. Essentials of Physical Medicine and Rehabilitation. 3rd ed. Philadelphia, PA: Elsevier Saunders; 2015: chap 61.

Niska JA, Petrigliano FA, McAllister DR. Anterior cruciate ligament injuries (Including Revision). In: Miller MD, Thompson SR, eds. DeLee and Drez's Orthopaedic Sports Medicine. 4th ed. Philadelphia, PA: Elsevier Saunders; 2015: chap 98.

Weinlein JC. Fractures and dislocations of the hip In: Canale ST, Beaty JH, eds. Campbell's Operative Orthopaedics. 12th ed. Philadelphia, PA: Elsevier Mosby; 2012: chap 55.

# Guidebook for Knees

## Tone Up Before Knee Surgery

It is important to be as flexible and strong as possible before having knee surgery.

### Start Preoperative Exercise

Many patients with arthritis of the knee avoid using their painful leg. Muscles become weaker, making recovery slower and more difficult. Beginning an exercise program before surgery can help make recovery faster and easier. To get the best benefit start your exercises now.

### Exercising Before Surgery

Consult your doctor before starting preoperative exercises. A number of exercises are listed below that your doctor may instruct you to start doing and continue until your surgery. Take 20 to 30 minutes, twice a day to do your exercises. Perform exercises on both legs. It is also important to strengthen your entire body, not just your legs before surgery. Strengthen your arms by doing chair push-ups because you will be relying on your arms when walking with the walker; getting in/out of bed and chairs; and on/off the toilet. Perform light endurance activities for your heart and lungs such as walking for 10 to 15 minutes each day.

### Preoperative Knee Exercises

(Do not do any exercise that is too painful.)

1. Ankle Pumps
2. Quad Sets
3. Gluteal Sets
4. Outward Heel Slides
5. Hip Flexion Heel Slides
6. Short Arc Quads
7. Hamstring Stretch
8. Straight Leg Raise
9. Armchair Pushups
10. Seated Knee Flexion
11. Knee Extension Stretch

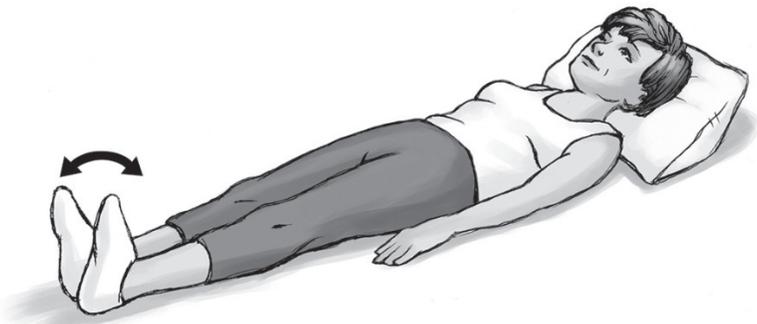
### 1. Ankle Pumps

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## Instructions:

Gently point toes up towards your nose and down towards the surface. Do both ankles at the same time or alternating feet. Perform slowly.

**Perform 20 times.**



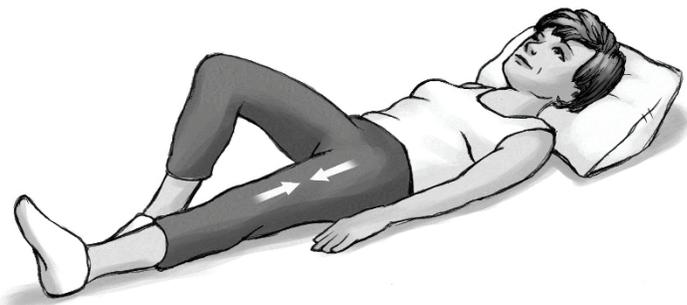
## 2. Quad Sets

### Instructions:

Lie on your back, press knees into mat by tightening muscles on the front of the thigh (quadriceps). Hold for a 5 count. Do NOT hold breath.

**Perform 20 times.**

***Coach's Note:*** Look and feel for the muscle above the knee to contract. Done correctly, the heel should come slightly off the surface. Be sure patients are not holding their breath during this and all other exercises.



## 3. Gluteal Sets

### Instructions:

Squeeze bottom together. Hold for a 5 count. Do NOT hold breath.

**Perform 20 times.**

***Coach's Note:*** Patient can place hands on right and left gluteal (buttocks) area and feel for equal muscle contractions. Be sure patients are not holding their breath during this and all other exercises.



# Guidebook for Knees

## 4. Outward Heel Slides

### Instructions:

Lie on your back with toes pointing toward the ceiling and knees straight. Tighten quad muscles and slide leg out to side and back to starting position. **Perform 20 times.**

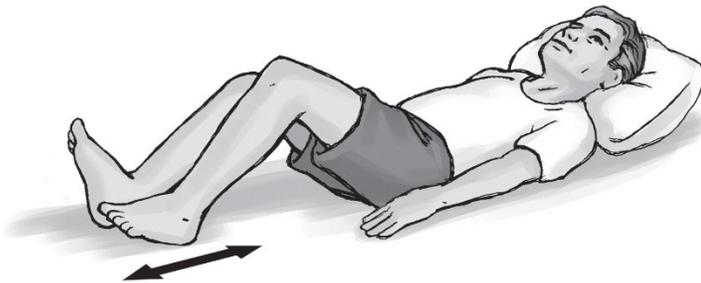


## 5. Hip Flexion Heel Slides

### Instructions:

Lie on your back and actively pull the heel up as far as possible. Once they have gone as far as they can, use a strap to assist with more knee bend. **Perform 20 times.**

***Coach's Note:*** Patient should actively pull the heel up. Assist slide with strap.

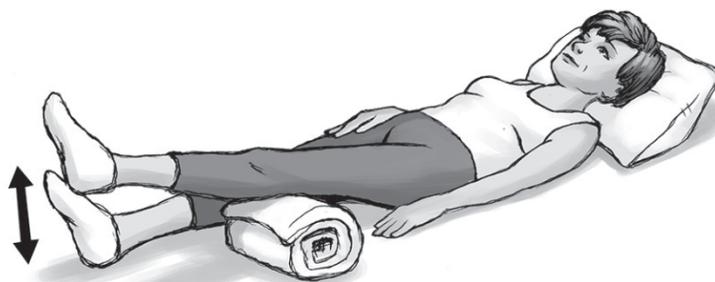


## 6. Short Arc Quads

### Instructions:

Lie on your back and place a 6-8 inch rolled towel under knee. Lift foot from surface, straightening knee as far as possible. Do not raise thigh off rolled towel. **Perform 20 times.**

***Coach's Note:*** Work for full extension (straightening) of the knee. Assist with band or hand if needed to get full terminal extension.



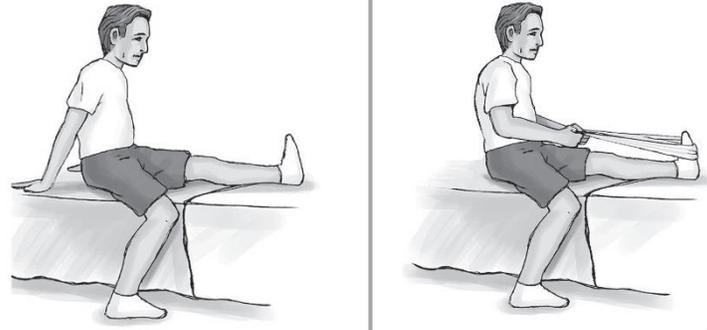
# Guidebook for Knees

## 7. Hamstring Stretch

### Instructions:

Sit on couch or bed with exercised leg extended and other leg dangling off side. Keeping exercised knee straight, gently lean forward until slight stretch is felt in back of thigh. As you become more flexible, use strap to pull up on foot. Hold for 20 to 30 seconds.

**Perform 5 times.**

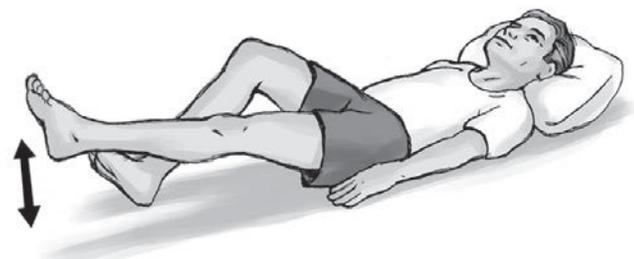


## 8. Straight Leg Raise

### Instructions:

Lie on your back with unaffected knee bent and foot flat, tighten quad on affected leg and lift leg 12 inches from surface. Keep knee straight and toes pointed toward your head. **Perform 20 times.**

***Coach's Note:*** If able, the patient can add a small ankle weight to their leg to increase their strength prior to surgery.

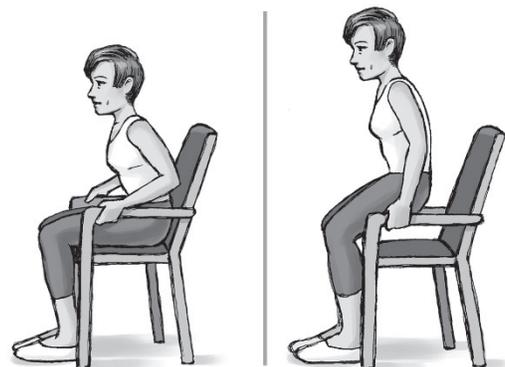


## 9. Armchair Push-ups

### Instructions:

Sitting in sturdy armchair with feet flat on floor, scoot to front of seat and place hands on armrests. Straighten arms raising bottom up from seat as far as possible. Use legs as needed to lift. Progress to using only arms and unaffected leg to perform push-up. Do not hold breath or strain too hard.

**Perform 20 times.**



## 10. Seated Knee Flexion

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## Instructions:

Sitting in straight-back chair, bend affected leg as far as possible under chair (can use opposite foot to help). When maximum bend is reached, plant foot and slide hips forward further bending knee. Hold for 20 to 30 seconds.

**Perform 20 times.**

***Coach's Note:*** Each time bend until a stretch is felt and then a little more, if possible. The patient can use their non-surgical leg to apply some overpressure to increase the stretch in their surgical leg. Be sure hips remain flat on the chair.



## 11. Knee Extension Stretch

### Instructions:

Sitting in comfortable chair, prop affected foot on chair or stool. Place towel roll under ankle so calf is unsupported, and apply an ice pack and 3 to 5 pound weight (or bag of rice) on top of knee. **Hold position for 15 minutes.**



# Guidebook for Knees

## Plan For the Day Before Surgery

### Find Out Your Arrival Time at the Hospital

You will receive a call the day before surgery (or Friday if surgery is Monday) and will be given instructions, what time your procedure is scheduled, what time to arrive at the hospital, and where to come the day of surgery.

Learn about what you need to do the day before surgery.

### Pack Your Bag - What to Bring to the Hospital

- Personal hygiene items such as your toothbrush, deodorant, and so on
- Loose fitting clothes (shorts, tops)
- Flat shoes or tennis shoes with closed back
- Copy of Advance Medical Directives (if you have one)
- Insurance card, driver's license, or photo I.D.

### Special Instructions

- Leave jewelry, valuables, and large amounts of money at home.
- Remove makeup before your procedure.
- Do not use deodorant, body lotion or essential oils.



# Guidebook for Knees

## Plan For Leaving the Hospital

Your care team will work with you and your family to develop a discharge plan that meets your needs.

**You should expect to go directly home to recover in the privacy and comfort of your own surroundings.**



### Going Directly Home

- Have someone pick you up.
- Receive discharge instructions concerning medications, physical therapy, activity, etc.
- Confirm equipment delivery; a member of your care team will make arrangements.
- Most patients going home will begin therapy at an outpatient PT facility.
- If Home Health services are needed, a member of your care team will make arrangements for you.

### Going to a Nursing Home

- Someone needs to drive you or you can ask a member of your care team to arrange for transportation. You may incur a fee from the transportation company if not covered by insurance.
- Transfer papers will be completed by nursing staff.
- Your doctor or a doctor from the nursing home or rehab center will care for you in consultation with your surgeon.
- Nursing home or rehab center stays must be approved by your insurance company. In order to transfer to one of these settings, you must meet admission criteria established by the facility.

#### **IMPORTANT NOTE:**

**If the nursing home or rehab stay is not approved, you may still choose to go there; however, you will need to pay privately.**





# Guidebook for Knees

## Section Two: At the Hospital Anesthesia Options

### **Anesthesiologist/Nurse Anesthetist**

The Operating Room, Post Anesthesia Care Unit (PACU), and Intensive Care Unit at the hospital are staffed by board certified and board eligible anesthesiologists and/or anesthetists.

### **Types of Anesthesia**

- **Regional anesthesia** - involves the injection of a local anesthetic providing numbness, loss of pain, or loss of sensation to the body.
- **General anesthesia** - produces temporary unconsciousness.

### **Side Effects**

Your anesthesiologist / nurse anesthetist will discuss the risks and benefits associated with each anesthetic option, as well as complications or side effects that can occur.

You will be given medications to treat nausea and vomiting which sometimes occurs with the anesthesia. The amount of discomfort you experience will depend on several factors, especially the type of surgery. Your discomfort should be minimal, but do not expect to be totally pain free. Staff will teach you the pain scale to assess your pain level.



# Guidebook for Knees

## Why Group Exercise?

Mobility is very important after Joint Replacement to help ensure a successful recovery. Typically, patients receive two Physical Therapy sessions each day in the hospital immediately after surgery. At our Joint Replacement Center, we have developed a program to encourage mobility, and make it an even more effective and enjoyable experience for our patients!

“Group Exercise Class” is offered twice daily and allows us to bring all our Joint Patients and their Coaches together for each session. Instead of being alone in your hospital room, you will be an active part of this important and fun part of your recovery experience. We will have members of our Physical Therapy Department leading each class and helping you learn and perform your exercises. In addition, we encourage your “Coach” to participate, as well. This will make them more comfortable and better able to help you continue progress after you return to your own home.

We believe the group experience is important for several other reasons. Sharing your first exercise and mobility experiences with other patients helps create an atmosphere of support and camaraderie. Seeing other patients and their families experience these first few steps in the recovery process will give you confidence that “you can do it, too!”

The group experience is also a great way to enhance learning. Other patients may ask questions during the session, that you had not considered; and, so the entire group benefits from the conversation. Group Exercise Class is a stimulating social experience, as well. You will be able to meet fellow patients and their families from the community while sharing this important activity in your rehabilitation and recovery. Hopefully, you will even make new friends and stay in touch after you leave the hospital.

Group Exercise Class is a great way to provide important therapy and exercise in a unique and enjoyable atmosphere. Our goal is to increase your mobility, while making you an informed and well-prepared patient. We are looking forward to meeting you!

# Guidebook for Knees

## Ways to Manage Pain

Pain control during and after surgery is likely to be one of the most common concerns of joint replacement patients. With today's medications and pain management techniques, you should remain relatively comfortable throughout your recovery.

Your doctor will choose the method right for you based upon your medical history, the amount of pain you are having and your phase of recovery.

Along with your surgeon, anesthesiologist or nurse anesthetist and your nursing staff, you are a key member of your pain management team. Be sure to review "Understanding the Pain Scale" and the information that follows. Regardless of the pain management protocol being used, it is important for you to communicate with your care team if the pain medication is not sufficient, if you are feeling nauseous, or if you are not as alert as you feel you should be. Adjustments can be made to make your pain management program as effective as possible

### Prevent the Pain Cycle

Pain has a cycle. It begins and increases until medication interrupts it. The aim of good pain control is to stop pain before it becomes intolerable. It's especially important to request additional medication 30-45 minutes prior to an exercise session so that you can achieve your goals more comfortably.

### Other Methods to Decrease Pain

It is important to try to relax after your surgery and one way that may help is to listen to your favorite relaxing music. Frequent position changes and applying ice or cold for 15-20 minutes at a time on a regular schedule can also help in minimizing your discomfort.



# Guidebook for Knees

## Using the Pain Scale

Using a number to rate your pain level can help your care team understand and help manage it.

<b>0</b>	<b>No Pain</b>	
<b>1</b>	<b>Minimal</b>	Pain is hardly noticeable
<b>2</b>	<b>Mild</b>	Low level of pain
<b>3</b>	<b>Uncomfortable</b>	Pain bothers me but I can ignore it
<b>4</b>	<b>Moderate</b>	Aware of pain but can continue most activities
<b>5</b>	<b>Distracting</b>	Think about the pain most of the time and it interferes with some activities
<b>6</b>	<b>Distressing</b>	Think about the pain all the time and had to give up many activities
<b>7</b>	<b>Unmanageable</b>	In pain all the time, keeps from most activities
<b>8</b>	<b>Intense</b>	So severe can think of hardly anything else, talking and listening are difficult
<b>9</b>	<b>Severe</b>	Can barely talk or move because of the pain
<b>10</b>	<b>Unable to Move</b>	In bed, can't move due to the pain, need to go to the emergency room

Your physicians, nurses and therapists will be frequently asking you for your pain level and with good communication, the team can make adjustments to make you more comfortable.

# Guidebook for Knees

## Mobility Instructions

This is a good time to review some of the things you learned during your hospital stay.

### Walking and Using Stairs

#### Using Your Walker

- Move your walker forward.
- Step forward placing the foot of your surgical leg in the middle of the walker area.
- Step forward with your non-surgical leg. Do NOT step past the front wheels or feet of the walker.

#### Reminders:

- Take small steps. Keep the walker in contact with the floor, pushing it forward like a shopping cart.
- If using a rolling walker, advance from basic technique to a normal walking pattern. Holding onto the walker, step forward with your surgical leg, pushing the walker as you go. Try to alternate with an equal step forward using your non-surgical leg. Continue to push your walker forward. When you first start, this may not be possible, but you will find this gets easier. Make sure that your foot does not go past the front of the walker when taking a step. Ideally, the foot should land in the center of the walker.



#### Using Stairs

A simple way to remember the correct sequence for stair climbing is “up with the good, down with the bad.”

What this means is that when you are climbing up the stairs, you lead with your unaffected leg, followed by the operative leg. To descend, begin down with your operative leg, followed by the unaffected leg. And always hold on to the railing!

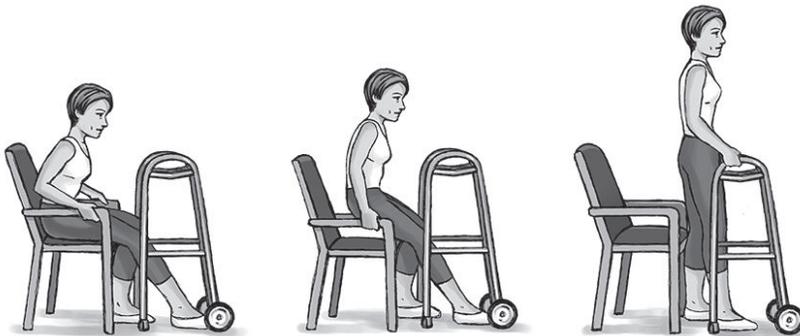
# Guidebook for Knees

## Getting In and Out of a Chair

### Standing up from a chair

Do NOT pull up on your walker to stand! Choose to sit in chairs with armrests.

1. Extended your surgical leg so your knee is lower than your hips.
2. Scoot your hips to the front edge of the chair.
3. Push up with both hands on the armrests. If a chair doesn't have an armrest, place one hand on the walker while pushing off the side of chair with the other hand. Balance yourself before grabbing for the walker.



### Sitting down

1. Back up to center of chair until you feel the chair on back of your legs.
2. Slide the foot of your surgical leg out, keeping your stronger leg close to chair for sitting.
3. Reach back for the armrests one at a time.
4. Slowly lower your body to the chair, keeping your surgical leg forward as you sit.



**Out**

**Getting into bed**

**Getting In and  
of Bed**

# Guidebook for Knees

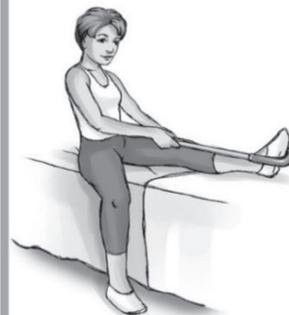
1. Back up to the bed until you feel it on the back of your legs (you need to be midway between the foot and the head of bed).
2. Reaching back with both hands, sit down on the edge of the bed and scoot back towards the center of the mattress. (Silk pajama bottoms, satin sheets, or sitting on plastic bag may make it easier.)
3. Move your walker out of way, but keep it within reach.
4. Scoot your hips around so you are facing the foot of the bed.
5. Lift your leg into bed while scooting around (if this is your surgical leg, you may use your other leg, a cane, rolled bed sheet, belt, or elastic band to assist with lifting the leg into bed).
6. Keep scooting and lift your other leg into bed.
7. Scoot hips toward center of bed.



Back up until you feel your leg on the bed.



Stay in a sitting position.



Scoot back on the bed lifting your leg onto the bed.

# Guidebook for Knees

## Getting out of bed

1. Scoot your hips to the edge of the bed.
2. Sit up while lowering your non-surgical leg to the floor.
3. If necessary, use a leg-lifter to lower your surgical leg to the floor.
4. Scoot to the edge of the bed.
5. Use both hands to push off the bed. If your bed is low, place one hand in the center of the walker while pushing off the bed with your other hand.
6. Balance yourself before reaching for your walker.

## Lying in bed



Keep a pillow between your legs when lying on your back. Position your leg so that your toes are pointing to the ceiling – not inward or outward.



To roll from your back to your side, bend your knees slightly, and then place a pillow between your legs so that your surgical leg does not cross midline. Then simply roll onto your side.

# Guidebook for Knees

## Section Three: At Home After Surgery

### **Stay Positive!**

We hope that you find each day easier than the last, but it is helpful to realize that recovering from any surgery can be a little like “two steps forward and one step back.”

On those days when you feel things aren't coming along as well as you'd like, remember to concentrate on what IS improving rather than what symptoms remain. By focusing on the progress, you have already made and combining it with a constant effort to improve, you can maintain the positive attitude so essential for the best possible outcome!



# Guidebook for Knees

## Home Care Instructions/Transitioning Home

Things you need to know for safety, recovery and comfort as you return home.

### How to care for yourself at home after surgery.

#### Be Comfortable

- Take your pain medicine at least 30 minutes before physical therapy or exercise sessions.
- Taper yourself off prescription medication to non-prescription pain reliever.
- Change position frequently (every 45 minutes – 1 hour) to help prevent stiffness.
- Use ice for pain control 20-30 minutes at a time on a regular schedule. Use before and after your exercise or therapy sessions.
- Avoid napping during the day to help you sleep better at night.



#### Body Changes

- Your appetite may be poor initially, but your desire for solid food will return.
- Drink plenty of fluids.
- You may have difficulty sleeping for a short time after you return home – this is normal.
- Your energy level may be low, and this may last for up to four weeks.
- Pain medication that contains narcotics may make you constipated. Use stool softeners or laxatives, if necessary.

# Guidebook for Knees

## Sleep Problems

Having trouble sleeping since your surgery? You're certainly not alone. Many people complain of difficulty sleeping from the lingering effects of anesthesia, the body's stress response to the surgery, as well as changes in your daily routine. Here are a few tips for a better night's sleep:

- Avoid day-time naps, try to remain active, and exercise throughout the day.
- Avoid caffeine in the evenings (coffee, tea, chocolate, and colas).
- Listen to relaxing music in the evenings.
- Take a nice warm shower, if permitted.

**Your normal sleeping patterns should return within a few weeks, but please notify your doctor if:**

- You notice changes in your behavior.
- A lack of sleep is causing problems in your life.
- Normal sleeping patterns do not return within two to three weeks.

## Preventing Constipation

Having joint replacement surgery, or any surgery for that matter, can lead to constipation. Changes in daily routine, short-term reductions in appetite and mobility, as well as narcotic pain medication can contribute to an increased risk for constipation. The best approach is to take measures to prevent it before it becomes a problem:

- Eat fiber rich foods like whole grains, fresh fruits and vegetables to help keep your system moving. Consider a fiber additive.
- Drink plenty of water. This adds fluid to the colon and bulk to the stools, making bowel movements easier to pass. Stool softeners may also be helpful.
- Avoid caffeine – coffee and colas. Caffeine flushes your colon of fluids and causes dehydration making stools dryer and harder to pass.
- Avoid alcohol – it also causes dehydration.
- Keep up with your exercises – daily walks help to keep things moving.
- Wean yourself from narcotic pain medications as soon as possible.



**In the event that you do become constipated, start with a gentle laxative prior to trying a more aggressive measure, such as a suppository or an enema.**

# Guidebook for Knees

## Appetite Changes

After surgery, it's not unusual for your appetite to "disappear" for a while. Your favorite foods may not taste as good as usual, or you are just not hungry. Here are a few suggestions to try until your appetite returns:

- Eat 5-6 small meals a day. Rather than 3 larger meals, try eating smaller meals and snacks to make sure you get enough nutrition. Good snacks include cheese and crackers, glass of milk, cottage cheese, peanut butter on crackers or celery, or some of the protein shakes that are available.
- Some foods that may taste good during your recovery may not be the most nutritious. Try replacing them with foods that are higher in protein, vitamins and minerals.
- If you are experiencing taste changes, try a variety of foods to find out what works best for you. For example, you may find that cold foods with little odor work best. Cottage cheese, cereals, macaroni and cheese and chicken salad may be tastier than beef.



Rather than	Eat this
Broth	Vegetable beef soup
Plain Jell-O	Fruited Jell-O
Carbonated beverages	Milk, fruit smoothie, protein shake
Italian ice/popsicles	Frozen yogurt, frozen fruit bar

# Guidebook for Knees

## Symptoms to Watch For After Surgery

### Blood Clots

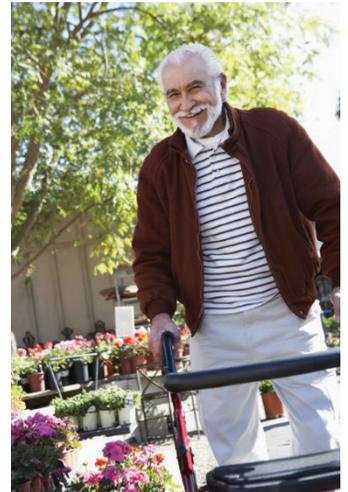
Surgery may cause the blood to slow and clot in veins of the legs. If a clot occurs, you may need to be admitted to the hospital to receive blood thinning medication.

### Signs

- Swelling in your thigh, calf, or ankle that does not go down with elevation.
- Pain, heat, and tenderness in your calf, back of your knee, or groin area.
- Blood clots can form in either of your legs.

### Prevention

- Adhere to your daily exercise routine and perform ankle pumps.
- Walk several times a day.
- Wear compression stockings, as directed by your doctor, remove daily to inspect your skin.
- Take an anticoagulant or blood thinning medication as directed by your doctor.



### Pulmonary Embolism

An unrecognized blood clot could break away from the vein and travel to the lungs. This is an emergency — CALL 911.



### Signs

- Sudden chest pain
- Difficult and/or rapid breathing
- Shortness of breath
- Sweating
- Confusion

# Guidebook for Knees

## Preventing Blood Clots – Working With Your Blood Thinner

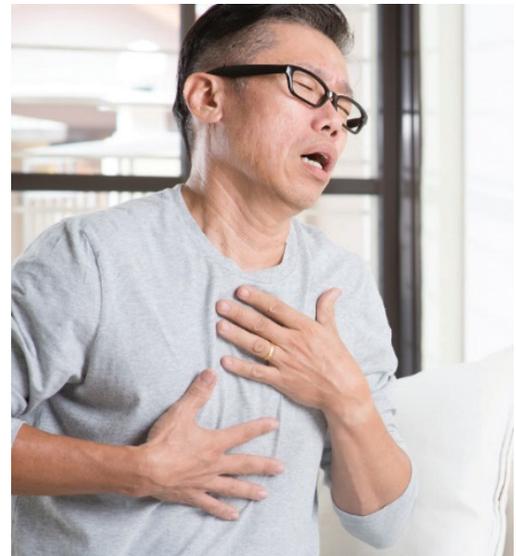
Blood clots after surgery can cause serious problems. However, there are steps that can be taken to help prevent them, as mentioned on the previous page.

There are many different types of blood thinning medications. Some are oral (by mouth) while others require injections. Your doctor will select the type of medication that is best for you.

When taken according to your surgeon's instructions, blood thinners are generally safe and effective. However, in some cases, there may be warning signs that prompt treatment is needed.

If you fall, have a traumatic injury, or if you experience any of the following, call your surgeon immediately. **DO NOT WAIT AND HOPE THE SYMPTOMS GO AWAY.**

- Bleeding or oozing from the surgical wound
- Nosebleeds
- Blood in your urine
- Coughing or vomiting blood
- Excessive bleeding when brushing your teeth
- Spontaneous bruising (a bruise not caused by a blow or any apparent reason)
- Dizziness, numbness or tingling
- Rapid or unusual heartbeat
- Chest pain or shortness of breath



**Report any anticoagulant-related side effects such as large amount of bleeding and/or bruising, immediately!**

# Guidebook for Knees

## Things to Avoid While on Blood Thinners

Certain medications, foods and activities can interfere with blood thinners. It is important to take proper steps to avoid any potential complications.

- Check with your surgeon before taking any over-the-counter drugs like aspirin, aspirin containing compounds, non-steroidal medications and even vitamins, except those prescribed when leaving the hospital. Your surgeon will provide additional information based on the specific blood thinner you will be taking.
- Be consistent in the amount of dark green leafy vegetables you eat each day – they are high in Vitamin K and this can counteract the action of some blood thinners.
- Avoid drinking alcohol while on blood thinners.
- Postpone any procedures that may cause bleeding such as dental work, minor or major surgical procedures etc. If it is not possible to postpone, be sure that the dentist or doctor is aware of the fact that you are taking blood thinners and that you have had a recent joint replacement.
- Avoid any activity that may result in injury such as hobbies that use power-tools or sharp instruments.



## Infection

### Signs

- Increased swelling and redness at your incision site
- Change in the color, amount, and odor of drainage
- Increased pain at your surgery site
- Fever greater than 100.5 degrees

### Prevention

- Take proper care of your incision. Wash your hands frequently, especially after using the bathroom and after contact with pets.



## Safety Tips and Fall Prevention

- Pick up throw rugs and tack down loose carpeting.



# Guidebook for Knees

- Cover slippery surfaces with carpets, be sure they are firmly attached to the floor or have non-skid backs.
- Be aware of floor hazards such as pets, small objects, or uneven surfaces.
- Provide good lighting throughout. Install nightlights in bathrooms, bedrooms, and hallways.
- Keep extension cords and telephone cords out of pathways. Do NOT run wires under rugs; this is a fire hazard.
- Do NOT wear open-toe slippers or shoes without backs. They do not provide adequate support and can lead to slips and falls.
- Sit in chairs with arms to make it easier to get up.
- Rise slowly from either sitting or lying position to avoid getting light-headed.
- Do not lift heavy objects for first three months and then only with surgeon's permission.

## Protecting Your Joints Around the House

### Around the house: saving energy and protecting your joints

- Do NOT get on your knees to scrub floors or your bathtub. Use a mop and long-handled brushes.
- Plan ahead! Gather all cooking supplies at one time. Sit to prepare your meal.
- Place frequently-used cooking supplies and utensils where they can be reached without much bending or stretching.
- To provide better working height, use a high stool or put cushions on a chair when preparing meals.



## Equipment to Help With Dressing

### Using a reacher:

A reacher or dressing stick can help remove pants from your feet and off the floor.

### Putting on pants and underwear:



# Guidebook for Knees

1. Sit down and put your surgical leg in first, followed by your non-surgical leg. Use a reacher or dressing stick to guide your waistband over your foot.
2. Pull your pants up over your knees.
3. Stand with the walker in front to pull your pants up.

## **Taking off pants and underwear:**

1. Back up to a chair or bed.
2. Unfasten your pants and let them drop to the floor. Push your underwear down to your knees.
3. Lower yourself down, keeping your surgical leg out straight. Take your non-surgical leg out first followed by your surgical leg.

## **Using a sock aid:**

- Slide your sock onto the sock aid.
- Hold the cord and drop the sock aid in front of your foot. This is easier to do if your knee is bent.
- Slip your foot into the sock aid.
- Straighten your knee, point your toe, and pull the sock on. Keep pulling until the sock aid pulls itself out.



## **Using a long-handled shoehorn:**

1. Use your reacher, dressing stick, or long-handled shoehorn to slide your shoe in front of your foot.
2. Place the shoehorn inside your shoe and against the back of your heel.
3. Lean back as you lift your leg and place your toes into the shoe.
4. Step down into the shoe, sliding your heel down the shoehorn.

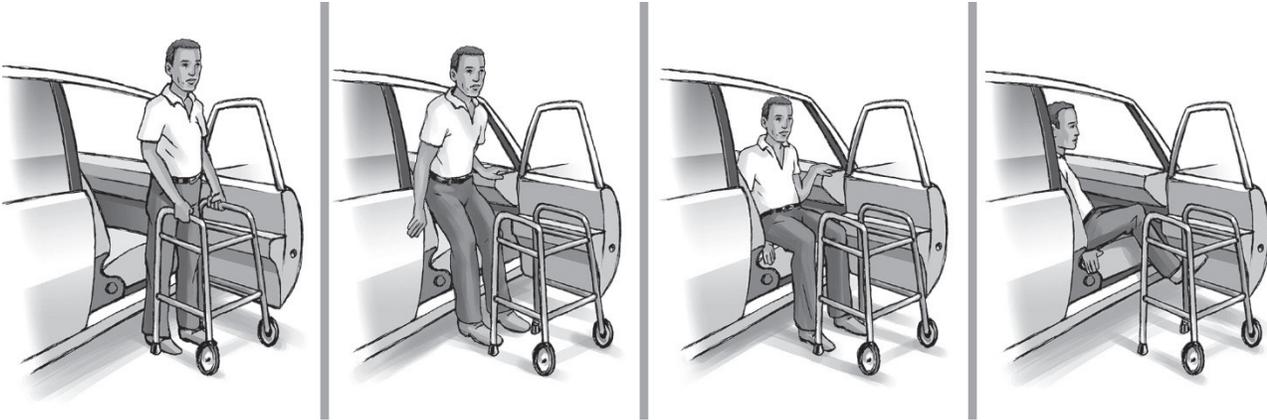
This can be performed sitting or standing. Wear sturdy slip-on shoes or shoes with Velcro closures or elastic shoelaces. Do NOT wear high-heeled shoes or shoes without backs.

## **Getting In and Out of the Car**

1. Move your car seat all the way back and recline the seat back to allow for adequate room to get in and out, but remember to always have it upright for travel.
2. Back up to the car until you feel it touch back of your leg.
3. Hold on to the car seat or dashboard and slide your surgical foot out straight. Watch your head as you sit down. Slowly lower yourself into the car seat.

# Guidebook for Knees

4. Lean back as you lift your surgical leg into the car. You may find it helpful to use a cane, leg lifter, or other device to assist.

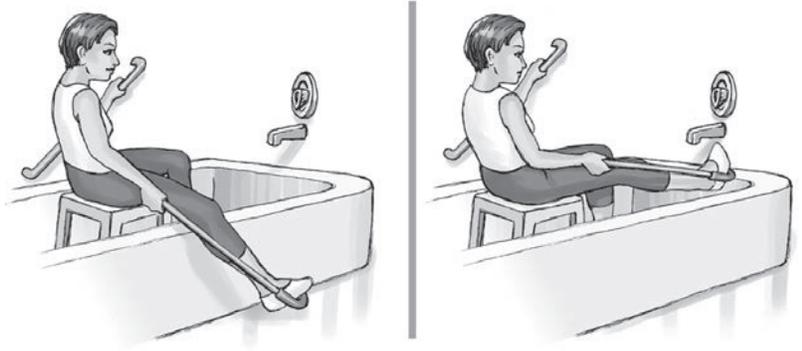


# Guidebook for Knees

## Bathing Tips

### Getting into the bathtub (using a bath seat)

1. Place the bath seat in tub facing the faucet.
2. Back up to tub until you feel it at back of your knees. Make sure you are in line with the bath seat.
3. Reach back with one hand for the bath seat. Keep other hand in center of walker.
4. Slowly lower yourself onto the bath seat, keeping your surgical leg out straight.
5. Move walker out of the way, but within reach.
6. Lift your legs over edge of tub, using a leg lifter for surgical leg, if necessary. Hold onto the shower seat or railing.



### Getting out of the bathtub (using a bath seat)

1. Lift your legs over outside of the tub.
2. Scoot to edge of the bath seat.
3. Push up with one hand on the back of bath seat while holding on to center of walker with your other hand.
4. Balance yourself before grabbing the walker.

### Tips

1. Although bath seats, grab bars, long-handled bath brushes, and hand-held showers make bathing easier and safer, they are typically not covered by insurance.
2. Use rubber mat or non-skid adhesive on bottom of tub or shower.
3. To keep soap within reach, make soap-on-a-rope by placing bar of soap in toe of old pair of pantyhose and attach it to bath seat.

# Guidebook for Knees

## Knee Recovery Goals – Weeks 1-2

Now that you are one to two weeks after your surgery, let's do a quick check up on your status. Our goal is for most patients to go directly home after a short stay in the hospital, but some patients may need to go to a nursing home or rehabilitation center for a short stay before this is possible. Most patients at this phase of their recovery should be able to:

- Continue with a walker unless you are otherwise instructed.
- Walk at least 300 feet with a walker or support.
- Climb and descend a small flight of stairs with a handrail, **once** a day.
- Straighten your knee completely.
- Sponge bathe or shower when approved by your surgeon, and get dressed.
- Gradually resume simple homemaking tasks.
- Do 20 minutes of your home exercises twice a day.

**Remember, all patients recover at different speeds, so don't be discouraged if you feel a little "behind" in the process. If you feel that you are seriously behind, or are experiencing other problems, don't hesitate to contact your physician with your concerns.**

## Continue Your Knee Exercises

Exercise is important to help you achieve the best results from your knee replacement. You will already have learned many of these exercises prior to your surgery or while you were in the hospital. These basic exercises can be done at home and will also be part of your recovery exercise program.

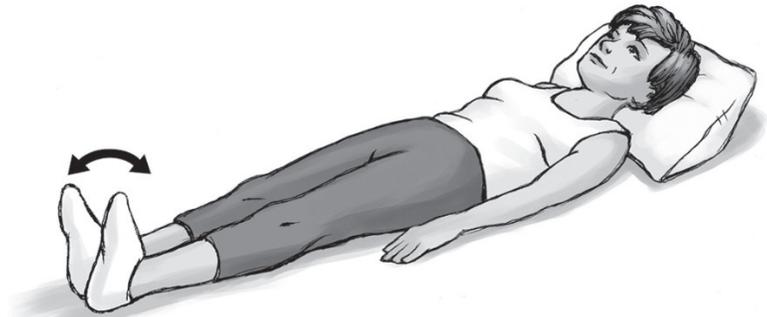
1. **Ankle Pumps**
2. **Quad Sets**
3. **Gluteal Sets**
4. **Outward Heel Slides**
5. **Hip Flexion Heel Slides**
6. **Short Arc Quads**
7. **Hamstring Stretch**
8. **Straight Leg Raise**
9. **Seated Knee Flexion**
10. **Armchair Pushups**
11. **Standing Knee Bends**
12. **Knee Extension Stretch**

### 1. Ankle Pumps

# Guidebook for Knees

## Instructions:

Gently point toes up towards your nose and down towards the surface. Do both ankles at the same time or alternating feet. Perform slowly.  
**Perform 20 times.**

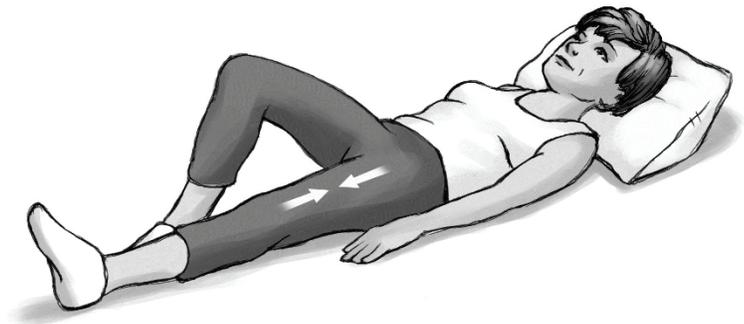


## 2. Quad Sets

### Instructions:

Lie on your back, press knees into mat by tightening muscles on the front of the thigh (quadriceps). Hold for a 5 count. Do NOT hold breath.  
**Perform 20 times.**

***Coach's Note:*** Look and feel for the muscle above the knee to contract. Done correctly, the heel should come slightly off the surface. Be sure patients are not holding their breath during this and all other exercises.



## 3. Gluteal Sets

### Instructions:

Squeeze bottom together. Hold for a 5 count. Do NOT hold breath.  
**Perform 20 times.**

***Coach's Note:*** Patient can place hands on right and left gluteal (buttocks) area and feel for equal muscle contractions. Be sure patients are not holding their breath during this and all other exercises.



## 4. Outward Heel Slides

# Guidebook for Knees

## Instructions:

Lie on your back with toes pointing toward the ceiling and knees straight. Tighten quad muscles and slide leg out to side and back to starting position.

**Perform 20 times.**



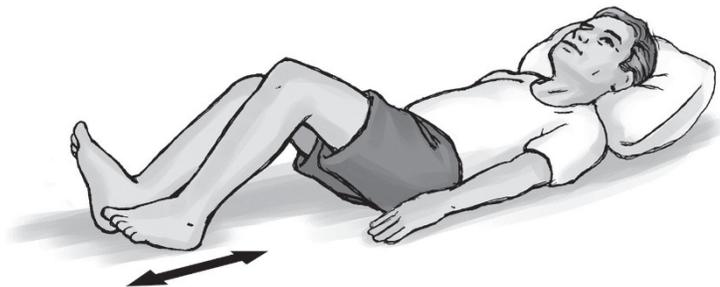
## 5. Hip Flexion Heel Slides

### Instructions:

Lie on your back and slide heel up a flat surface bending knee. Your therapist may have you use a strap around foot to assist gaining knee bend.

**Perform 20 times.**

***Coach's Note:*** Patient should actively pull the heel up as far as possible. Once they have gone as far as they can, use a strap to assist with more knee bend.



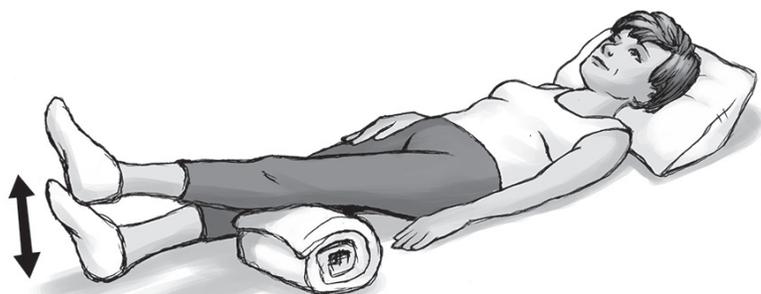
## 6. Short Arc Quads

### Instructions:

Lie on your back and place a 6-8 inch rolled towel under knee. Lift foot from surface, straightening knee as far as possible. Do not raise thigh off rolled towel.

**Perform 20 times.**

***Coach's Note:*** Work for full extension (straightening) of the knee. Assist with band or hand if needed to reach full terminal extension.



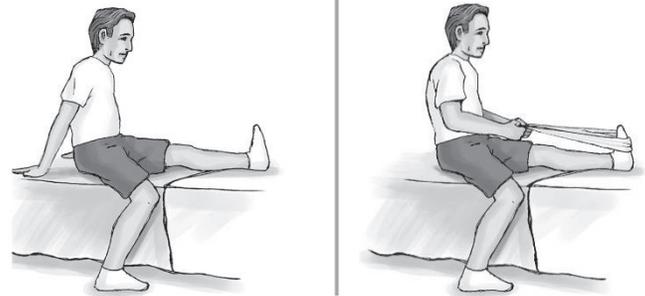
## 7. Hamstring Stretch

# Guidebook for Knees

## Instructions:

Sit on couch or bed with exercised leg extended and other leg dangling off side. Keeping exercised knee straight, gently lean forward until slight stretch is felt in back of thigh. As you become more flexible, use strap to pull up on foot. Hold for 20 to 30 seconds.

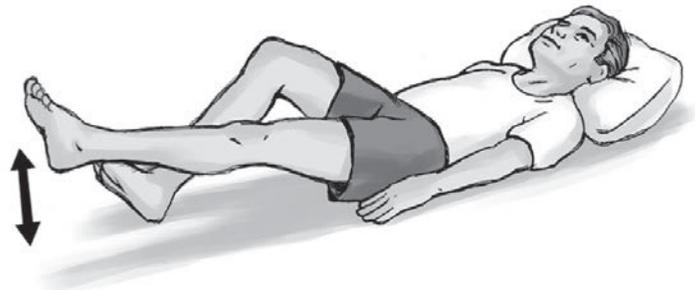
**Perform 5 times.**



## 8. Straight Leg Raise

### Instructions:

Lie on your back with unaffected knee bent and foot flat, tighten quad on affected leg and lift leg 12 inches from surface. Keep knee straight and toes pointed toward your head. Perform 20 times.



## 9. Seated Knee Flexion

### Instructions:

Sitting in straight-back chair, bend affected leg as far as possible under chair (can use opposite foot to help). When maximum bend is reached, plant foot and slide hips forward further bending knee. Hold for 20 to 30 seconds.

**Perform 20 times.**

***Coach's Note:*** Each time bend until a stretch is felt and then a little more, if possible. The patient can use their non-surgical leg to apply some overpressure to increase the stretch in their surgical leg. Be sure hips remain flat on the chair.



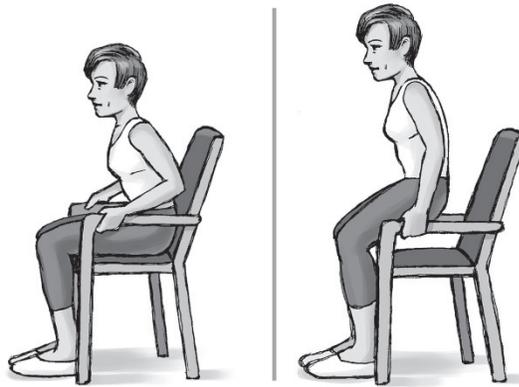
## 10. Armchair Push-ups

# Guidebook for Knees

## Instructions:

Sitting in sturdy armchair with feet flat on floor, scoot to front of seat and place hands on armrests. Straighten arms raising bottom up from seat as far as possible. Use legs as needed to lift. Progress to using only arms and unaffected leg to perform push-up. Do not hold breath or strain too hard.

**Perform 20 times**



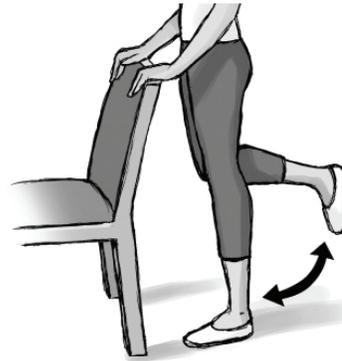
## 11. Standing Knee Bends

### Instructions:

Holding on to an immovable surface, bend the involved leg up behind you. Straighten to a full stand, with weight on both legs.

**Perform 20 times.**

***Coach's Note:*** The tendency is for the hip to come forward as the knee is bent. Encourage a straight line from the shoulder to knee.



## 12. Knee Extension Stretch

### Instructions:

Sitting in comfortable chair, prop affected foot on chair or stool. Place towel roll under ankle so calf is unsupported, and apply an ice pack and 3 to 5 pound weight (or bag of rice) on top of knee.

**Hold position for 15 minutes.**



## Knee Recovery Goals – Weeks 2-4

Congratulations! You are now almost one month after your surgery; hopefully you are making good progress at keeping up your home exercise program and achieving your recovery goals. This is very important in helping you gain independence and ensuring the best possible results. Most patients at this phase of their recovery:



# Guidebook for Knees

- Have been able to achieve most/all of their 1-2 week recovery goals.
- Advance from the walker to a cane, as instructed by your Physical Therapist.
- Are able to walk at least one-quarter mile.
- Climb and descend a flight of stairs twice. a day.
- Bend your knee more than 90 degrees
- Straighten your knee completely.
- Shower and dress.
- Resume homemaking tasks.
- Do 20 minutes of home exercises twice a day.
- Begin driving, if your “left” knee had surgery (with your Physician or Therapists approval).

## Advanced Postoperative Knee Exercises

As you progress with your recovery, more advanced exercises may be added to your routine. Your therapist or physician will advise you when you are ready.

1. **Bridge Exercise**
2. **Straight Leg Raise**
3. **Straight Leg Raise Sidelying**
4. **Straight Leg Raise Prone**
5. **Quad Stretch**
6. **Heel Toe Raise Chair**
7. **Mini Squats**
8. **Standing Knee Extension**
9. **Wall Slide**

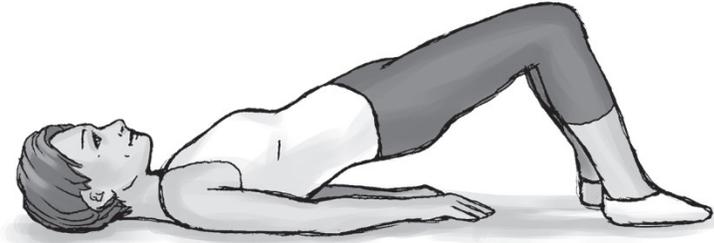
# Guidebook for Knees

## 1. Bridge Exercise

### Instructions:

Lie on your back with knees bent and feet flat on surface; push down on feet as you tighten buttocks and hamstring muscles and lift hips from surface. Concentrate on pushing equally through both feet. Hold for 5 count then return to start position

**Perform 20 times.**

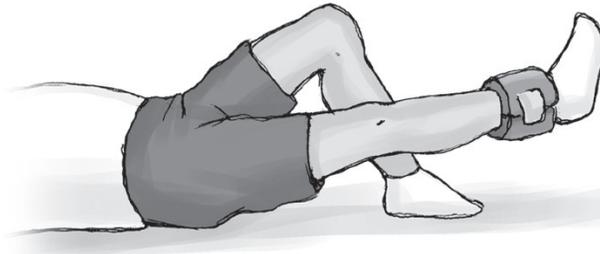


## 2. Straight Leg Raise

### Instructions:

Lie on your back with unaffected knee bent and foot flat, tighten quad on affected leg and lift leg 12 inches from surface. Keep knee straight and toes pointed toward your head. **Perform 20 times.**

***Coach's Note:*** If able, the patient can add a small ankle weight to their leg to progressively increase their strength

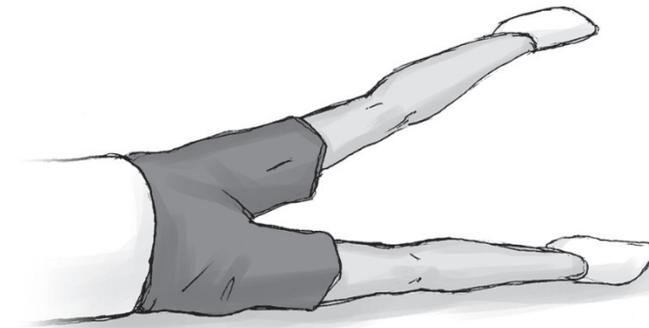


## 3. Straight Leg Raise Knees Sidelying

### Instructions:

Lie on your nonsurgical side. Lift your surgical leg toward the ceiling then slowly lower your leg to the starting position. Keep knee straight and toes pointed forwards. **Perform 20 times.**

***Coach's Note:*** If able, the patient can add a small ankle weight to their leg to progressively increase their strength.



## 4. Straight Leg Raise Knees Prone

# Guidebook for Knees

## Instructions:

Lie on your stomach and lift your surgical leg toward the ceiling then slowing lower your leg to the starting position. Perform 20 times.

**Coach's Note:** If able, the patient can add a small ankle weight to their leg to progressively increase their strength.

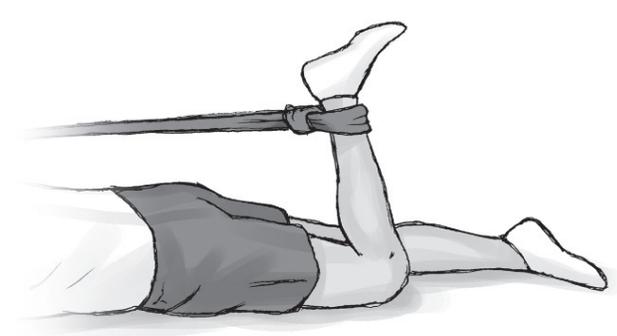


## 5. Quad Stretch

### Instructions:

Lie on your stomach. Bend up surgical knee, raising your foot from the bed as far up toward your buttocks as you can. If able, place a folded bed sheet or exercise band around your ankle and pull your foot toward your bottom until you feel a stretch. Hold for 20- 30 seconds. Lower foot back down to the bed. Repeat 5 times.

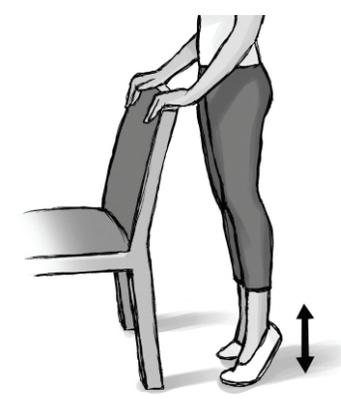
**Coach's Note:** Be sure the thigh stays flat on the bed or floor during this exercise.



## 6. Heel Toe Raise Chair

### Instructions:

Stand, with a firm hold on to a stationary object. Rise up on toes then back on heels. Stand as straight as possible. Perform 20 times.



## 7. Mini Squats

# Guidebook for Knees

## Instructions:

Stand, with feet shoulder width apart, and holding on to a stationary object. Keep heels on floor as you bend knees to slight squat. Make sure your knees do not go past your toes. Return to upright position tightening buttocks and quads. Keep body upright, heels on floor and do not squat past 90 degrees hip flexion.

**Perform 20 times.**



## 8. Standing Knee Extension

### Instructions:

Standing against wall, with feet about 4-6 inches out, place 6-8" ball behind knee. Push ball into wall by tightening hip and quadriceps muscle. Perform 20 times.



## 9. Wall Slide Knees

# Guidebook for Knees

**Instructions:**

With feet shoulder-width apart and back to wall, slide down wall as far as comfortable. Make sure your knees do not go past your toes. Your therapist will guide you on how far to slide down wall. Make sure you keep equal weight on both legs. Push back up equally through both legs and come to standing.

**Perform 20 times.**





# Guidebook for Knees

## Knee Recovery Goals – Weeks 4-6

Now that you are more than one month after your surgery, you should be moving closer to recovery and full independence. Keeping up with your home exercise program and achieving goals is even more important, since, unless ordered by your surgeon, you will likely receive less supervised therapy from this point forward. Most patients at this phase of their recovery:

- Have achieved most/all of their 1-4 week recovery goals.
- Are able to walk with a cane.
- Are able to walk one-quarter to one-half mile.
- Progress from one foot stair climbing to regular (foot-over-foot) stair climbing.
- Are able to actively bend their knee 110 degrees.
- Straighten their knee completely.
- Drive a car if your surgeon has approved.
- Do your home exercise program twice a day.

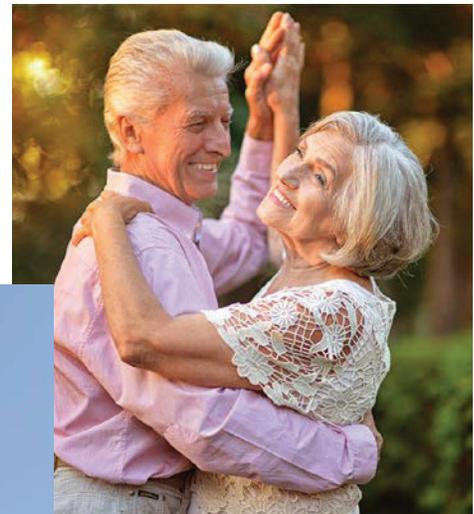
**Remember, all patients recover at different speeds, so don't be discouraged if you feel a little "behind" in the process. If you feel that you are seriously behind, or are experiencing other problems, don't hesitate to contact your physician with your concerns.**

# Guidebook for Knees

## Knee Recovery Goals – Weeks 6-12

Congratulations! You should be moving into the “home stretch” in your recovery process over the next few weeks. During this time, your goal should be to move towards resuming most or all of your regular activities. Most patients at this phase of their recovery:

- Have achieved most/all of their 1-6 week recovery goals.
- Are able to walk without a cane.
- Are able to climb and descend stairs in normal (foot-over-foot) fashion.
- Can walk one-half to one mile.
- Have regained at least 80% of their strength.
- Have resumed many fun activities like dancing, bowling and golf.



# Guidebook for Knees

## Advanced Knee Stair Exercises

Your physical therapist will instruct you on what step height with which to begin. These exercises are typically started 6-12 weeks after surgery.

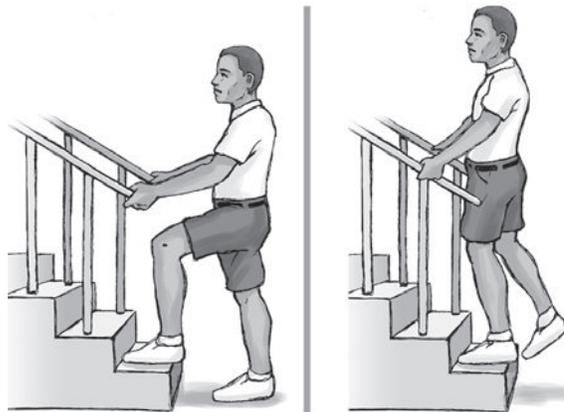
1. **Single Leg Forward Stairs**
2. **Single Leg Lateral Stairs**
3. **Heel Toe Raise Stairs**
4. **Standing Knee Bend**

### 1. Single Leg Forward Stairs

**Instructions:**

Hold onto stair railing – place affected foot on first step. Step up on stair with affected leg. Return to start position. May need to begin with 2-4” step (book/block) and progress to higher step as tolerated.

**Perform 20 times.**

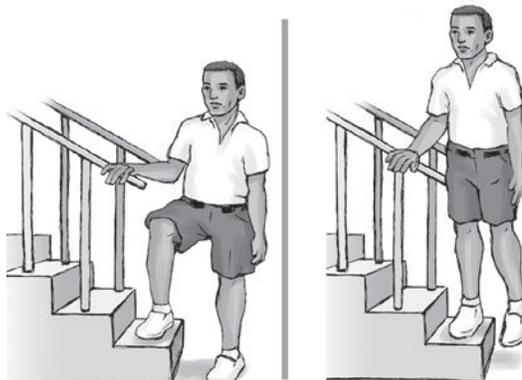


### 2. Single Leg Lateral Stairs

**Instructions:**

Face railing, with affected leg nearest step. Holding onto railing, place foot on step and slowly step up lifting unaffected leg from floor; slowly lower foot to start position. May need to begin with 2-4” step and progress to higher step as tolerated.

**Perform 20 times.**



### 3. Heel Toe Raise Stairs

# Guidebook for Knees

## Instructions:

Stand, holding onto railing, with toes on stair and over edge. Relax and let heels hang down. Hold for 20 seconds.

**Perform 5 times.**



## 4. Knee Heel Stretch

### Instructions:

Stand, holding onto railing and place surgical foot up on first or second step (Your therapist will instruct on which level to begin). Keeping non-surgical leg straight and on floor, stretch forward, bending surgical knee. Hold for 20 seconds.

**Repeat 5 times.**

**Then repeat with surgical foot on floor, and non-surgical foot on step.**

***Coach's Note: Both heels should be flat on floor and the toes pointed straight ahead.***



## Dental and Medical Procedures

- Notify your dentist or other doctor/surgeon in advance if you are having dental work or other invasive procedures such as a colonoscopy or dermatology procedure; as you may need to take preventative antibiotics.
- It is best not to have any kind of dental procedure for 6 months after your joint replacement.

# Guidebook for Knees



# Guidebook for Knees

## Preventing Infection After Surgery

Although risks are low for postoperative infections, the risk remains. A prosthetic joint could possibly attract bacteria from an infection located in another part of your body.

If you develop a fever of more than 100.5 degrees or sustain an injury such as a deep cut or puncture wound, you should clean it as best you can, put a dressing or adhesive bandage on it, and notify your doctor. The closer the injury is to your prosthesis, the greater the concern. Occasionally, antibiotics may be needed. Superficial scratches may be treated with topical antibiotic ointment. Notify your doctor if area is painful or reddened.



## Traveling After Surgery

When traveling, stop and change positions frequently to prevent your joint from getting stiff.

### Will my new joint set off security sensors when traveling?



Your joint replacement is made of metal alloy and may or may not be detected when going through some security devices. Inform the security agent you have a metal implant. The agent will direct you on the security screening procedure.

# Guidebook for Knees

## Long Term Exercise Guidelines

With permission from your surgeon and primary care doctor, you should be on a regular exercise program three to four times per week, lasting 20 to 30 minutes.

Impact activities such as running and singles tennis may put too much load on the joint and are generally not recommended.

High-risk activities such as downhill skiing are discouraged because of the risk of fractures around the prosthesis and damage to the prosthesis itself.

### Exercise Advice:

- Choose low impact activity.
- Attend recommended exercise classes.
- Follow the home program outlined by your care team.
- Walk one to three miles regularly.
- Use a home treadmill (for walking).
- Use a stationary bike.
- Complete regular aquatic exercises.
- Exercise regularly at a fitness center.
- Choose low-impact sports such as golf, bowling, gardening, dancing, swimming, etc.
- Consult your surgeon or physical therapist about specific sport activities.



# Guidebook for Knees

## Activities to Avoid:

- Do not run or engage in high-impact activities or activities that require a lot of starts, stops, turns, and twisting motions.
- Do not participate in high-risk activities such as contact sports.
- Do not take up sports requiring strength and agility until you discuss it with your surgeon or physical therapist.

