

Knee Replacement Guide

Patient Guide to Surgery and Recovery

Ann Arbor • Brighton • Chelsea • Livingston





A team of health care providers is ready to help you during your hospitalization. **An important member of this team is the nurse navigator.** The navigator is your point of contact for any questions or concerns you have before or after your surgery.

- **Ann Arbor Orthopedic Nurse Navigator:** 734-712-2392
- **Brighton/Livingston Orthopedic Nurse Navigator:** 810-844-7614
- **Chelsea Nurse Navigator:** 734-593-5811

This handbook will help you better understand hip replacement surgery. It will also help you to know how to prepare for your surgery, what to expect during your hospitalization and how to care for yourself when you go home.

What is Enhanced Recovery?

Enhanced Recovery is a program for surgical recovery based on the most current research findings. The program focuses on providing patients with tools to ensure they are prepared for their surgery and actively involved in their recovery.

Goals of Enhanced Recovery

- Prepare you physically and emotionally for surgery
- Provide better pain control with fewer side effects
- Help to increase early movement after surgery
- Shorten hospital stay and quicker return to normal activities

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The Ortho Edge

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're sitting or lying down.

If medications, changing your activity level, and using walking supports are no longer helpful, you may want to consider total knee replacement surgery. By resurfacing your knee's damaged and worn surfaces, total knee replacement surgery can relieve your pain, correct your leg deformity, and help you resume your normal activities.

The knee replacement was first performed in 1968. Improvements in surgical materials and techniques since then have greatly increased its effectiveness. More than 500,000 knee replacements are performed each year in the United States.

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

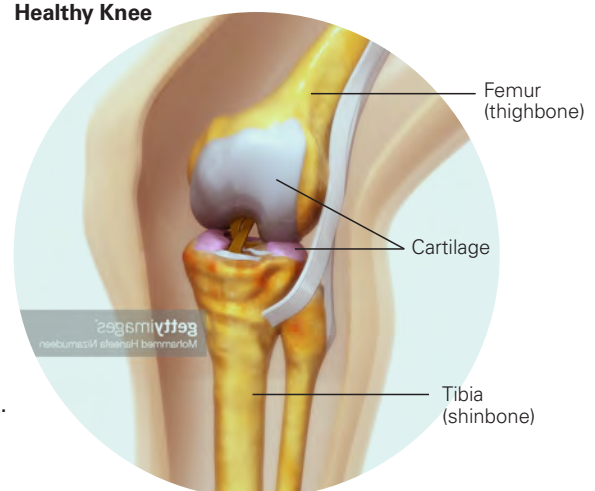
How the Normal Knee Works

The knee is the largest joint in the body. Nearly normal knee function is needed to perform routine everyday activities. The knee is made up of the lower end of the thighbone (femur), which rotates on the upper end of the shinbone (tibia), and the kneecap (patella), which slides in a groove on the end of the femur. Large ligaments attach to the femur and tibia to provide stability. The long thigh muscles give the knee strength.

The joint surfaces where these three bones touch are covered with articular cartilage, a smooth substance that cushions the bones and enables them to move easily. All remaining surfaces of the knee are covered by a thin, smooth tissue liner called the synovial membrane. This membrane releases a special fluid that lubricates the knee and reduces 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 less function.

Healthy Knee



Is Knee Replacement Surgery For You?

The decision whether to have knee replacement surgery should be a cooperative one between you, your family, your primary care doctor and your orthopedic surgeon. The process of making this decision typically begins with a referral by your doctor to an orthopedic surgeon for an initial evaluation.

Although many patients who undergo knee replacement surgery are age 60 to 80, orthopedic surgeons evaluate patients individually. Recommendations for surgery are based on the extent of your pain, disability and general health status, not solely on age.

You may benefit from knee replacement surgery if:

- Knee pain limits your everyday activities, such as walking or bending.
- Knee pain continues while resting, either day or night.
- Stiffness in a knee limits your ability to move or lift your leg.
- You have little pain relief from anti-inflammatory drugs or glucosamine sulfate.
- You have harmful or unpleasant side effects from your knee medications.
- Other treatments, such as physical therapy or injectables, such as cortisone or the use of a cane, don't relieve knee pain.



Realistic Expectations About Knee Replacement Surgery

An important factor in deciding whether to have knee replacement surgery is understanding what the procedure can and can't do.

Most people who undergo knee replacement surgery experience a dramatic reduction of knee pain and a significant improvement in their ability to perform the common activities of daily living. However, knee replacement surgery will not enable you to do more than you could before your knee problem developed. Following surgery, you may be advised to avoid certain activities, including jogging and high-impact sports, for the rest of your life.

Even with normal use and activities, an artificial joint (prosthesis) develops some wear over time. If you participate in high-impact activities or are overweight, this wear may accelerate and cause the prosthesis to loosen and become painful, or to wear out.

Lower Your Risk, Improve Your Outcome

Certain health conditions/risk factors increase your chance of complications from surgery. Total Joint replacement is an elective surgery, therefore we want you in the best health possible for the best outcome.

- A risk factor is something that increases your chance of having complications from surgery. The more risk factors you have, the greater your chance of complications.
- Some risk factors are modifiable, because you can do something about them by making changes in your lifestyle.
- Your orthopedic surgeon may delay scheduling your surgery while you work on modifying any risk factors you have. We may ask you to return to your primary care physician (PCP) or other provider for assistance before your surgery is scheduled.



Possible Complications After Surgery

Serious complications, such as infection, occur in less than two percent of patients. Major medical complications, such as heart attack or stroke, occur even less frequently. However, chronic illnesses or obesity may increase the risk for complications.

Blood clots. Blood clots in the leg veins or pelvis are the most common complication of knee replacement surgery. Your orthopedic surgeon will prescribe one or more measures to prevent blood clots from forming in your leg veins or becoming symptomatic. These measures may include inflatable leg coverings, ankle pump exercises and blood thinners.

Leg-length inequality. A sensation of leg length and inequality is common. Your orthopedic surgeon will take this into account, in addition to other issues, including the stability and biomechanics of the knee.

Implant problems. Although increasingly uncommon with new materials and techniques, over time, the knee prosthesis may wear out or loosen.

Other complications. Nerve and blood vessel injury, bleeding and fracture. In a small number of patients, some pain can continue, or new pain can occur after surgery.



Strategies to help reduce your risk of complications

De-stress

Research has shown a daily practice of ten minutes of a relaxing activity can improve your healing and help you recover more quickly. Choose whatever calms you. For some, this could be listening to soothing music. For others, it could be reading a novel.

Increase activity

Please follow the exercises and recommendations on pages 18 - 20 to help you increase your activity. Slowly increase your activity every day leading up to your day of surgery. This may include walking by increasing the number of steps you take every day.



What is MARCQI?

Your surgeon is a member of the Michigan Arthroplasty Collaborative Quality Initiative (MARCQI). MARCQI is a physician led statewide group of orthopedic surgeons, hospitals and ambulatory surgery centers working together to improve the safety and quality of care of hip and knee joint replacement surgeries in Michigan.

How does this affect me?

As part of the MARCQI program, we track your progress and improvement over time. While your surgeon can assess the clinical outcome of the surgery, only you as the patient can convey how much you have improved after surgery. All patients who are having hip or knee joint replacement surgery will be asked to complete a questionnaire about how their health and lifestyle have been affected by hip/knee pain and/or stiffness before surgery, 2-16 weeks after surgery and 1, 2, 5 and 10 years after surgery.

How do I complete the questionnaire?

If you provided your email address, you will receive an automated, do-not-reply email from marcqi@mail.ortechsystems.com with instructions and a link to complete the questionnaire. The link will be sent to you at each time interval. You will also be given the questionnaire in your surgeon's office at your scheduled appointments, and at your preprocedural appointment. The questionnaires take approximately three to five minutes to complete.

What happens to the information in the questionnaires?

Questionnaire answers will be put into a secure registry. MARCQI surgeons will use this information to learn from each other about which approaches to surgery are most effective—best possible patient outcomes and fewest complications.

What about my privacy?

Your privacy is important to us and your personal information is kept confidential and secure.

Who pays for MARCQI?

Support for MARCQI is provided by Blue Cross and Blue Shield of Michigan and Blue Care Network as part of the BCBSM Value Partnerships program. To learn more about Value Partnerships, visit valuepartnerships.com. Learn more about MARCQI at marcqi.org.

✔ Pre-Surgery Checklist

Your surgery may be cancelled if these steps are not completed:

○ Register for pre-operative class as soon as possible.

Register for class at the location of your surgery by scanning the QR code or visiting: trinityhealthmichigan.org/ortho-help and review the information on this website.

Scan the QR Code to register for class.



○ Choose a coach.

A coach is a person who can help support you in your recovery both in the hospital and at home. Your coach is someone who will help you stay motivated and succeed.

○ Perform the preoperative exercises on pages 18 - 20, twice a day.

○ Sign up for the **Twistle App**. This is secure patient engagement app that gives you the ability to contact your care team and it provides education throughout your journey. Follow the instructions on page 10 to sign up.

○ Create a post-operative plan for your recovery:

- Prepare your home following the guidelines discussed in class (e.g. remove throw rugs).
- Arrange to have assistance at home (24 hour assistance is not required).
- Arrange for a driver for your appointments and discharge from the hospital.

○ Attend your history and physical appointment (Pre-admission testing).

This appointment is mandatory. If you are unable to attend, you must cancel 48 hours prior to the appointment time, by calling 734-712-1313 to reschedule.

Date _____

○ Complete the **MARCQI** pre-operative PRO Survey (patient reported outcomes). This may be completed on paper in your surgeon's office or through the email link you will receive from marcqi.ortechsystems.com. You will also be asked to complete these surveys postoperatively at 5-13 weeks, 1, 2, 5 and 10 years after surgery.

○ Please follow the infection prevention guidelines given to you regarding the body wipes, washing your bed linen, changing your pajamas and the restrictions on pets on page 23.

How to install Twistle® on your phone/tablet

What is Twistle?

Twistle is a secure app provided to you free of charge. It helps you communicate directly with your care team. With Twistle, your care team will share important information and check in on your progress using quick, easy to use surveys when necessary. Your Twistle responses will help your care team better tailor your care.



If you would like to use the Twistle phone app, you will need to provide us with the following information:

- name
- date of birth
- surgery date
- type of surgery
- cell phone number
- surgeon's name
- surgery location

Email this information to: twistlesignup@trinity-health.org.

How to install Twistle on your phone or tablet:

- You will receive a text message invitation from an 833 area code.
- Tap on the link in the text message, the link will take you to your app store or google play store. Download the Twistle app and open the app.
- Enter your cell phone number including area code, then tap the white circle with the arrow.
- You will receive a text message from Twistle with the same phone number as the original text message.
- Tap on the link in the text message and it will take you into the Twistle app.
- Add a photo of yourself on the first page that opens.
- Tap on the **"I agree & finish"** box and allow notifications, if asked.

You will receive messages from Twistle to help you prepare before your surgery and recover after your surgery. These messages will start 35 days before your surgery.

Twistle is not for an emergency or an urgent situation. You cannot request prescription refills in Twistle, please call your surgeons office if you need a medication refill.

Surgery Locations

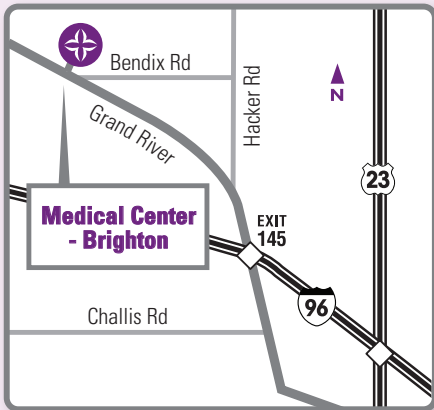


Trinity Health Ann Arbor Hospital

Main Surgery Center

5301 McAuley Drive, Ypsilanti, MI 48197
734-712-3622

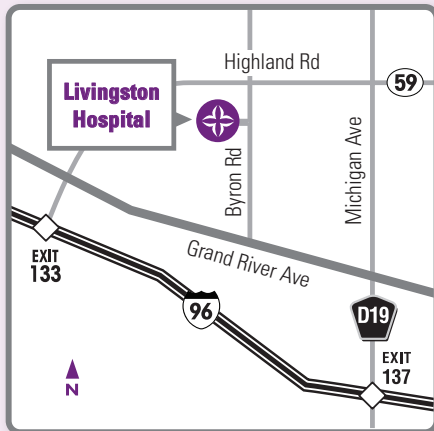
**Check-In at Guest Services
Main Hospital Entrance**



Trinity Health Medical Center - Brighton

7575 Grand River, Brighton, MI 48114
810-844-7705

**Check-In Second Floor
Suite 200**



Trinity Health Livingston Hospital

620 Byron Road, Howell, MI 48843
517-545-6323

**Check-In Second Floor
Waiting Room**

Preparing for Surgery

Tests. Several tests such as blood samples, an electrocardiogram, chest X-rays and urine samples may be needed to help plan your surgery.

Medications. Tell your orthopedic surgeon about the medications you are taking. There are some medications you may need to stop taking prior to your surgery. You will receive more information about this at your pre-operative testing visit.

Additional strategies to help reduce your risk of complications, include:

- **Dental evaluation.** Although infections after hip replacement are not common, an infection can occur if bacteria enters your bloodstream. Because bacteria can enter the bloodstream during dental procedures, you should get any needed dental work completed prior to one week before your hip replacement surgery. Dental work should be delayed for three months after surgery. Your surgeon may want you to take antibiotics prior to any dental work after your surgery. Please discuss with your surgeon.
- **De-stress.** Research has shown a daily practice of 10 minutes of a relaxing activity can improve your healing and help you recover more quickly. Choose whatever calms you. For some, this could be listening to soothing music or reading a book. Be sure to bring something with you on the day of surgery to help you relax during your hospital stay.
- **Diabetes.** If you have diabetes, be sure that your blood sugar is well controlled. Talk with your primary care doctor, endocrinologist or surgeon if you have concerns.
- **Improve nutritional status.** Many times people have poor nutrition going in to surgery. If you can improve your nutrition even a small amount, it will help with recovery after surgery. We encourage increasing your lean protein intake before surgery. Examples of lean protein are Greek yogurt, chicken, fish, eggs and lean beef. You may also drink high protein supplements such as Ensure or Boost (*see pages 16-17*).
- **Ensure pre-surgery** is a supplement that you can purchase before your surgery to drink on the morning of your surgery. It can be purchased at Trinity Health Ann Arbor Hospital: Reichert Medical Center pharmacy or Joe's Java, main hospital; Trinity Health Medical Center - Brighton: Joe's Java or Genoa Medical Center Pharmacy; Trinity Health Livingston Hospital, Joe's Java or Chelsea Hospital, Joe's Java. Do not purchase this if you take insulin for diabetes (*see page 24 for further instructions*).



Patient financial services (registration, scheduling and billing)

Registration information, including medical insurance information, will be obtained by phone before your surgery. If a patient financial services representative is unable to reach you by phone, please call **877-791-2051** or **toll-free 800-676-0437** prior to your 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.
- **Exercise/Activity.** Continue any particular exercise or activity you have been doing. Working out, golfing, walking, stationary bike, swimming, etc., are all valuable. Even just a few simple exercises can make your recovery better.
- **Keep as active as you can.** Continue getting out, shopping, social activities as you are able. Both the physical activity and the social connections help you adjust to post-op recovery. Interrupt your sedentary activities. (Long periods of sitting or lying down increases your health risks.) When sitting, take a short walking break every hour or so.
- **Skin preparation.** You will be given specific instructions in how to care for your skin prior to surgery. This is important to reduce your risk of an infection. After showering and using the skin prep, it is important that you lie on clean sheets, clean nightclothes and not with your pets. Please take the time to plan for that. It is also important that you wear clean clothing to come to the hospital the following day (*see page 23, "Preoperative Skin Preparation Instructions"*).
- **Stop smoking.** This is one of the most important steps you can take to improve your post-op recovery. Numerous studies have shown that smokers have a significantly higher risk of complications and poor outcomes. Talk to your primary care doctor about starting nicotine patches. We can order the patches while you are in the hospital.
- **Manicure/Pedicure.** Do not get a manicure or pedicure during the week prior to your surgery and do not apply any nail polish prior to surgery.

Home Planning

Home modifications can make your return home easier during your recovery.

- You will need some help for several weeks with tasks such as cooking, shopping, bathing and laundry.
- You will also need someone to drive for you for a few weeks.
- Make sure you have a phone available in case you need to contact anyone.
- Plan in advance, make sure you have enough groceries or ready made meals for after surgery.
- Clean up clutter around your home to help prevent falls after surgery.
- Arrange your home so you can get around safely without navigating stairs, if possible.
- Think about how you would be most comfortable sleeping. Some patients prefer to sleep in a recliner chair.
- Have a night light in your bathroom or hallway.
- Place things you use often on a surface that is easy to reach.
- Install grab bars in the shower and have a non slip bath mat available.
- Think about what chair you plan to sit in after surgery, practice getting in and out of the chair using only your non surgical leg and arms.

Working Together for a Safe Discharge

The goal of the joint replacement team at Trinity Health is to provide you with a great experience and an excellent outcome with your surgery. We want to support your success and recovery from your joint replacement. The following information will help you to understand your role in making sure you have the best possible results from your surgery.

There is no place like home following your total joint replacement.

Your surgeon wants you to recover at home following your surgery. Advancements in joint replacement surgery make going home after your surgery a safe option.



Why?

- Data shows that patients do better when they get back to their own environment to heal.
- Being admitted to a skilled nursing facility increases your risk of having a complication such as infections, readmission, reoperation and unnecessary emergency room visits.
- There is no benefit or other improved outcomes by going to a skilled nursing facility(rehab). Recovery takes around six months, going to rehab does not speed up your recovery time.
- People with joint disease are resilient and have developed adaptive skills for negotiating their environment.

Patient Responsibilities

- Complete your Joint Replacement Pre-Surgery Checklist (**see page 9**).
- We expect you to plan ahead and find family/friends who are able to give assistance after surgery. Not all patients need someone at home 24 hours a day.
- Attend a Joint Replacement preoperative class to help prepare you for discharge going home and to help reduce the stress and anxiety which is common before and after surgery. Your coach is encouraged to attend.
- You must have someone available to drive you home, when you are ready for discharge. You may be ready to be discharged, later on the day of surgery or the next morning.



If you live alone

Living alone does not prevent you from recovering at home, but requires planning. It is not a reason for discharge to a rehab facility.

How we help you get home

- Home and outpatient rehabilitation has been shown to be as effective as if you were staying in a rehab facility. All patients are discharged home with a home exercise program.
- Home physical therapy is available if you and/or your care team feel this would be helpful to your recovery. Therapy in the home environment gives the therapist the opportunity to identify and address your unique needs in your own home. In addition, your family may feel more comfortable assisting with your care in a familiar setting.
- ~~Additional help at home is available with an out of pocket expense. CareLinx is a Trinity organization who can help with these arrangements: 855 444 9329 | carelinx.com/care4u~~
- Twistle is a secure smart phone app provided to you free of charge. It provides education information both before and after surgery. It helps you communicate directly with your care team.
See page 10 for more information.
- Our call center will contact you within two to five days of discharge to see how you are doing after your discharge home. Remember to save your questions so they can help.

Improve Your Nutritional Status

Excellent nutrition for at least two to four weeks leading up to your surgery can help improve healing and recovery time. It is very important to eat a healthy, balanced diet. Look for fresh, whole foods with minimal or no processing to fuel your body. Complex carbohydrates include whole grain pasta, brown and black rice, oatmeal, ancient grains, quinoa, couscous and whole grain bread. Make your noon time meal the largest meal of the day to help optimize your energy stores.



Water

Your body uses water in all its cells, organs and tissues to help regulate your temperature and maintain other bodily functions. Drink a minimum of 64 ounces of water or fluid daily unless your doctor has advised otherwise.

Protein

Eating more protein before surgery can help improve your recovery after surgery as your protein needs can double after surgery. Include protein with each meal. Protein is found in a variety of foods including fish, poultry, meat, eggs, dairy, Greek yogurt, cheese, beans, nuts (almonds, walnuts, nut butters) and seeds. If you are a vegetarian, you can meet your protein needs by eating plenty of vegetables, tofu, legumes, nuts, seeds and nut butters. If you prefer a nutrition bar, choose one that provides at least 10 grams of protein and less than 10 grams of sugar per bar.

Calories

To meet your high calorie needs after surgery, eat many small meals throughout the day. Choose foods packed with nutrients to help improve your intake.

Antioxidants

Antioxidants boost your immune system and remove harmful toxins from your body. Most fruits and vegetables are rich in antioxidants and can be identified by their bright red, yellow or orange colors. Apples, berries, broccoli, carrots, cranberries, red grapes, spinach, tomatoes and walnuts are rich in antioxidants.

Foods to Avoid

Avoid foods that increase inflammation in your body, such as sugar and white flour; saturated fats from high fat meats and organ meats; trans fats from commercially baked goods; and alcohol. Limit processed foods and foods from a box. Focus on fresh foods, including fresh fruits, vegetables and nuts.

High Protein Snack Ideas

Read the label and aim for at least 7-10 grams of protein per serving. If you are following a special diet, consult with your registered dietitian for a custom list of high protein snacks.

- Greek yogurt (no sugar added)
- Cheese - string cheese, cottage cheese, cubed or sliced cheese
- Peanut/nut butter with apple slices, vegetables or crackers
- Sliced, lean deli meat and/or cheese with bread or crackers
- Nuts and seeds
- Hard boiled eggs
- Hummus with veggies or crackers
- Edamame
- Kefir, milk, protein supplements
- Meat Jerky
- Grains: quinoa, beans, lentils, faro, millet
- Soup, bone broth
- Canned tuna, salmon or sardines
- Protein bar - at least 10 grams of protein and less than 10 grams of sugar
- Protein powder - choose an organic grass fed protein powder without any artificial ingredients or flavorings



Preoperative Exercise

To help strengthen your body in preparation for surgery, we recommend you complete pre-operative exercises to the extent you can do so safely and comfortably. We have also included an exercise plan to help guide you.

Exercise and activity makes your body more resilient, meaning that it is able to handle the challenges of a surgery easier. By increasing your leg strength, it can reduce your risk of falling — both before and after surgery. Being active increases your confidence and can even improve your mood. If you have had a loss of activity because of pain and discomfort, know that even doing a little exercise is better than none at all. If exercising is new for you, do it safely by having someone with you.



In addition to your pre-operative exercises it is important that you try to stay as active as you can before your surgery. This could include walking, house work, gardening or sporting activities. You may want to purchase an activity tracker/pedometer to track how many steps you are taking each day. Your smart phone may also be able to track your steps.

If you have heart problems or other concerns, you are advised to check with your physician before starting any new exercise. Should you experience any chest pain, dizziness or heart palpitations, stop the exercise, find a safe place to rest and talk to your physician before you resume your activity.

- Do not strain or hold your breath while doing your exercises.
- Count aloud if you find yourself holding your breath.
- Be sure to try the exercises. You may think they look harder than they actually are.
- If it hurts too much or you are straining too hard, move on to the next exercise.
- Try to find a regular time of the day to focus on them.
- If you are taking pain medications, take them about one hour before starting your exercises.
- Keep track of how often you do the exercises by using the exercise log. It is a great motivator to see how much you have done. When you do these exercises after your surgery, you can compare and watch your improvement (**see pages 40-41 for the Preoperative Exercise Log**).

Preoperative Exercise Program

Before your surgery, these exercises will help prepare you for surgery and recovery. If an exercise is painful or you are unable to do it, just move on to the next exercise. Don't hold your breath while you do them. Continue any other exercise you have been doing as you are able (walking, swimming, stationary bike), since these will help with recovery.

Supine (lying flat on a bed)



Straight Leg Raise

- **strengthens the quads and the hip flexors**

Bend your opposite knee for stabilization; hold your knee as straight as you can; raise your leg up 12 inches. Relax.

Emphasis should be on your surgical leg, but there is benefit to doing both legs.



Quad Sets (both legs)

Press your knee down flat – hold for two seconds. Do them one at a time or both together. You should feel your thigh muscle (quads) tighten up.



Short Arc Quad

Have someone place a large towel roll under the knee. Straighten knee completely, hold for a count of two. Relax.

NOTE: This exercise can also be done by sitting, slightly reclined, with your legs dangling; then extend your knee.

Do exercises **1-2 times** a day. Start with **5 repetitions**, increase to **15 times**, as you are able.

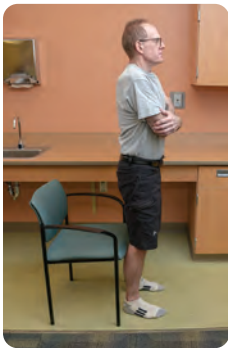
Standing



Heel Raise

- **strengthens your calf muscles and helps with balance**

Standing with your hands on a counter, rise up on the balls of your feet. Relax. As you are able, try to limit how much you lean on the counter with your hands.



Squatting

- **strengthens your legs & trunk and improves your balance**

Requires a stationary chair (doesn't 'rock' or 'roll'). Stand with your feet shoulder-width apart with a stationary chair behind you; keeping your back straight and your feet flat on the floor, bend your knees to squat down as if you were going to sit down, then stand back up. Go down as low as you feel comfortable. Try not to use your arms.

Don't strain or hold your breath. If it causes pain, try a "mini-squat" – only go part-way down.

Sitting



Chair Push-Up

- **strengthens your arms**

Requires a stationary chair (doesn't 'rock' or 'roll') with arms. Sit at the front of the chair; using mostly your arms, raise yourself up to extend your elbows, then slowly lower back down again.

NOTE: You will be using a walker after surgery to limit the weight on your surgical leg. If you have strong arms, your walking will be easier. Stronger arms will also help you to get up from a chair – one of the more difficult things to do after surgery.

Avoid this exercise if it causes any arm pain or if you are straining too hard. You should not hold your breath on any of these exercises.

Do exercises **1-2 times** a day. Start with **5 repetitions**, increase to **15 times**, as you are able.

Preoperative Exercise Log

Write in the number of repetitions for each group of exercises — try to work up to 15 repetitions of each exercise twice/day.

WEEK 1	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Standing Exercises • Heel Raises • Partial Squats	a.m.						
	p.m.						
Chair Push-Ups	a.m.						
	p.m.						
Supine Exercises • Straight Leg Raise • Quad Sets • Short-Arc Quad	a.m.						
	p.m.						
Steps or Walking Minutes							
WEEK 2	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Standing Exercises • Heel Raises • Partial Squats	a.m.						
	p.m.						
Chair Push-Ups	a.m.						
	p.m.						
Supine Exercises • Straight Leg Raise • Quad Sets • Short-Arc Quad	a.m.						
	p.m.						
Steps or Walking Minutes							
WEEK 3	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Standing Exercises • Heel Raises • Partial Squats	a.m.						
	p.m.						
Chair Push-Ups	a.m.						
	p.m.						
Supine Exercises • Straight Leg Raise • Quad Sets • Short-Arc Quad	a.m.						
	p.m.						
Steps or Walking Minutes							

Knee Replacement Guide

****Total weeks of exercise you have will depend on your surgery date.**

Not all patients will have six weeks of preoperative exercises. Do as many as you can.

WEEK 4	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Standing Exercises • Heel Raises • Partial Squats	a.m.						
	p.m.						
Chair Push-Ups	a.m.						
	p.m.						
Supine Exercises • Straight Leg Raise • Quad Sets • Short-Arc Quad	a.m.						
	p.m.						
Steps or Walking Minutes							
WEEK 5	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Standing Exercises • Heel Raises • Partial Squats	a.m.						
	p.m.						
Chair Push-Ups	a.m.						
	p.m.						
Supine Exercises • Straight Leg Raise • Quad Sets • Short-Arc Quad	a.m.						
	p.m.						
Steps or Walking Minutes							
WEEK 6**	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Standing Exercises • Heel Raises • Partial Squats	a.m.						
	p.m.						
Chair Push-Ups	a.m.						
	p.m.						
Supine Exercises • Straight Leg Raise • Quad Sets • Short-Arc Quad	a.m.						
	p.m.						
Steps or Walking Minutes							

Surgery Preparation

Showering the Evening Before Surgery

- Shower or bathe with antibacterial soap (example: Dial) the evening before surgery.
- Wash your hair with any shampoo and towel dry with a clean towel. Wait for two hours before using the chlorhexidine gluconate cloths.
- Follow the Preoperative Skin Preparation instructions below if you have been given Chlorhexidine Gluconate Cloths to use.
- Paying attention to personal hygiene before and after your surgery is critical to preventing infections.
- DO NOT shave your surgical site for at least five days before surgery.
- DO NOT apply any makeup, lotions, oil, powders or deodorant on your skin.
- After showering, dry off with a clean towel and put on clean clothes. Place clean sheets on your bed.
- DO NOT sleep with your pets. Pet hair can adhere to your skin, increasing your risk for infection.

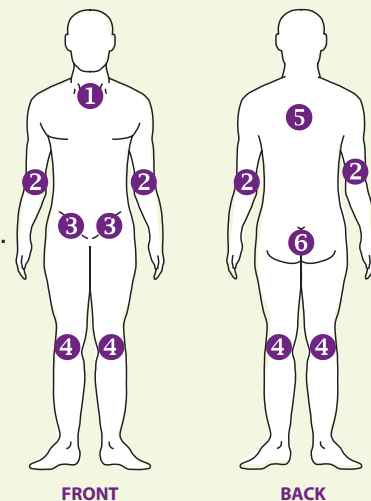
Preoperative Skin Preparation Instructions

Proceed with using Chlorhexidine Gluconate cloths

- Wash and dry hands prior to use. Open the packages and remove the cellophane film and discard. Using scissors cut off the end seal of all three packages.
- Use one clean cloth to prep each area of the body in order as shown below.
- Wipe each area in a back-and-forth motion and thoroughly. Assistance may be required.
- Use all cloths in the packages and discard in trash.
- Allow your skin to air dry. Skin will feel sticky/tacky – DO NOT WIPE OFF
- Cloths will not stain fabrics
- Keep pets out of bed
- Relax or sleep

- 1 Wipe your neck and chest.
- 2 Wipe both arms, starting each with the shoulder and ending at fingertips. Be sure to thoroughly wipe the arm pit areas.
- 3 Wipe your abdomen and right and left hip including thigh creases.
- 4 Wipe both legs, starting at the thigh and ending at the toes. Be sure to thoroughly wipe behind your knees.
- 5 Wipe your back starting at the base of your neck and ending at your waist line. Cover as much area as possible. Assistance may be required.
- 6 Wipe the buttocks.

Note: Do not use chlorhexidine wipes on your face or private areas.



Surgery Day

Surgery Preparation

- **Illness.** Notify your surgeon's office immediately if you develop any kind of illness the morning of your surgery or within ten days before surgery (cold, flu, fever, herpes outbreak, skin rash or infection, or "flare-up" of a health problem). Sometimes, even minor health problems can be quite serious when combined with the stress of surgery.
- **Ensure® Pre-Surgery** is a carbohydrate rich beverage, with added supplements that you will drink the day of your surgery - no substitutions. It improves your comfort, hydration, hunger and thirst and provides nutrients to aide in your post-op recovery. Your health care provider will give you further instructions.

It can be purchased at Trinity Health Ann Arbor Hospital: Reichert Medical Center Pharmacy or Joe's Java, main hospital; Trinity Health Medical Center - Brighton: Joe's Java or Genoa Medical Center Pharmacy; Trinity Health Livingston Hospital, Joe's Java or Chelsea Hospital: Joe's Java.



Patients with Diabetes

Ensure® Pre-Surgery Clear Nutrition Drink is not for patients who take insulin.

If you take insulin, you may drink 16 ounces of clear fluid up to four hours before surgery.



Morning of Surgery

- **Wash your face and private areas.**
Do not shower after using the Chlorhexidine wipes.
- **Brush teeth and rinse your mouth.**
- **Wear loose comfortable clothing to hospital.**

DO NOT:

- Apply any makeup, lotions, oil, powders or deodorant on your skin
- Suck on candy, breath mints or cough drops
- Chew gum
- Smoke, vape or chew tobacco

Items to REMOVE BEFORE SURGERY

- Dentures or any removable dental work
- Contact lenses, please wear glasses and bring a case
- Hair clips, hair pins
- Jewelry including all piercings
- Nail polish
- Wigs



Items NOT to bring

- Large sums of money
- Jewelry
- Home medications
- Opioid prescriptions
- Pillow

The hospital is not responsible for lost items

Items to BRING with you:

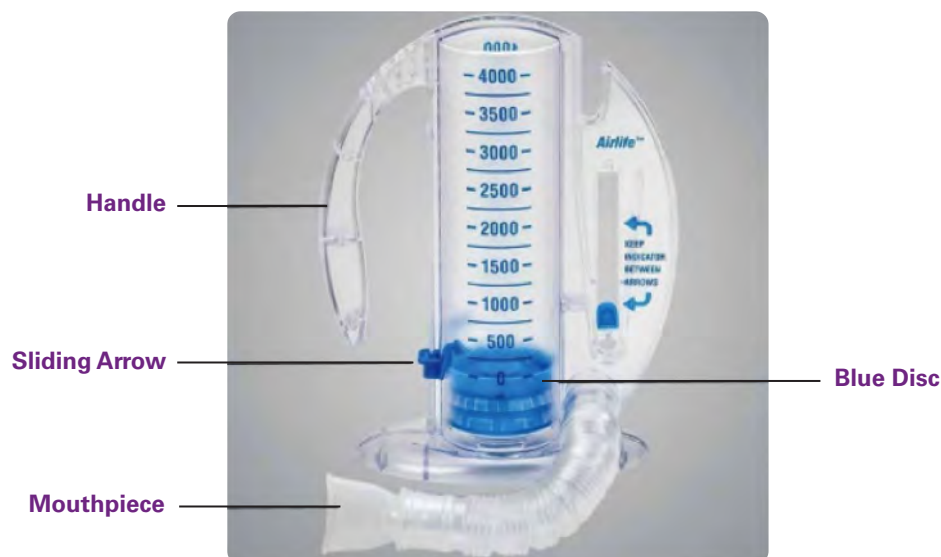
- Home medication list
- List of all allergies to medications
- Driver's license/photo identification
- Insurance information card
- Copy of your advanced directive/living will (if you have one)
- Phone charger
- Slippers
- Personal toiletries
- If you have sleep apnea please bring your CPAP/BiPAP machine to the hospital
- Leave your belongings in the car (your family can bring it to your room after surgery)
- Check or credit card to pay for medical equipment and prescription co-pays at discharge

Incentive Spirometer



Read these instructions before your surgery so that you will be prepared to start these exercises as soon as possible after your surgery. Take at least 10 breaths every hour, resting after each breath. Continue using the incentive spirometer for at least one to two weeks after your surgery.

Incentive Spirometer

- **Deep breathing is very important after surgery.** It expands the lungs, helps with circulation and helps prevent pneumonia. Your surgeon wants you to perform deep breathing exercises after surgery. You will also use an incentive spirometer to help you meet goals for deep breathing.
- The incentive spirometer is a plastic device that helps you to breathe deeply. It encourages you to take deep breaths and gives you instant feedback on how well you are doing.
- **How Do I Use the Incentive Spirometer?** Sit up as straight as possible so that your lungs can fully expand. Hold the spirometer's mouthpiece with one hand and the spirometer's handle with your other hand. Keep the spirometer level with your mouth.
 - Exhale normally, and then place your lips tightly around the spirometer's mouthpiece.
 - Slowly inhale through the mouthpiece as much air as you can. Give this your best effort! Watch the blue disc in the spirometer rise to see how deeply you inhaled. The deeper you breathe, the higher the blue disc rises. Hold your breath, keeping the blue disc elevated and count to five if you can.
 - Finally, remove the mouthpiece from your mouth and exhale normally. Rest for a moment and then repeat the exercise for 10 reps. Be sure to rest in between each deep breath. As you fully expand your lungs you will see the disc rise higher. You can track your progress on the spirometer with the sliding arrows. As you master one level, aim to move the disc higher with the next set of deep breaths.
 - Following discharge, use your incentive spirometer at least four times a day until you are back to your usual activity.



Hospital Recovery

- **Bedside devices.** You will have Intermittent Pneumatic Compression Devices on your legs to reduce the risk of blood clots. These devices pump up for a few seconds on your lower legs, giving them a gentle squeeze, then release.
- **Diet.** You may eat your normal diet after surgery. It may take several days before your appetite returns to normal. Some patients will experience nausea and medications will be used to prevent this.
- **Incentive Spirometer.** It will be important for you to cough and breathe deep after your surgery and you will be encouraged to use a device called an incentive spirometer. Your nurse will instruct you in how to do this and how often after you awaken from your anesthesia (*see page 26*).
- **Medications.** Your doctor and nurses will review your home medications and start these if needed. You will receive antibiotics to help reduce the risk of infection.
- **Pain control.** It is normal to have some pain after surgery. Your pain needs to be controlled so you can participate in activities that help you recover, such as walking and exercises. Your anesthesia will provide some pain relief after surgery. Frequently, your nurse will ask you to rate your pain on a scale from 0-10. Zero is no pain and 10 is the worst pain imaginable. Oral or IV pain medication may be given as needed. Ice packs or cooling machines, position changes and relaxation methods may also be used to assist with your comfort. Take action as soon as the pain starts. Ask for medication before the pain becomes severe. It can take time for certain medications to work and we want you to be comfortable.
- **Nerve Block.**??????  
- **Side effects of anesthesia and pain medications.** Some patients may become confused because of the effects of pain medications or anesthesia. This is called delirium. This is often temporary, but can be alarming for families. You may be asked a series of questions to help our staff know if you have developed delirium so that we can treat it. Some other side effects can include constipation, nausea or vomiting, dizziness or dry mouth. If you develop any of these symptoms notify your nurse immediately.
- **Physical Therapy.** You will be seen by physical therapy. They will instruct you in walking, climbing stairs and exercises. They will assess your readiness for your discharge home.
- **Blood clot prevention.** Your orthopedic surgeon will prescribe one or more measures to prevent blood clots and decrease leg swelling, such as inflatable leg coverings (compression devices) and blood thinners (*see page 36*). Circulation exercises will also help prevent leg swelling and blood clots (*see page 28*).
- **Numbness.** You may feel some numbness in the skin around your incision. This will improve over time following your surgery.



Postoperative Circulation Exercises

The following exercises will help prevent blood clots from forming in your legs, as well as improve your pain.

Walk

While in the hospital, nursing will help you to walk to the bathroom and get you up to the chair. These short frequent walks are the best circulation exercises.

Do exercises **5-10 repetitions** each, every hour that you are awake.



Calf Stretches (both legs)

Bend your ankles back toward you as far as you can to stretch your calf — hold for two seconds. Reverse and point your ankles and toes down as far as you can — do 10 repetitions every hour.



Ankle Circles (both legs)

Draw a large circle with your toes — five times in one direction then five times in the other direction. Movement should be in your foot and ankle, not in your hip or knee. Do every hour.



Quad Sets (both legs)

Press your knee down flat — hold for two seconds. Do them one at a time or both together. You should feel your thigh muscle (quads) tighten up.



Heel Slides (both legs)

Bend one leg at a time by sliding your heel towards your bottom — hold for two seconds. Don't go more than halfway on your surgical leg.



Glut Sets

Squeeze buttocks together tightly. Hold for a count of two. Relax.

Discharge Checklist

Completing the checklist is your ticket to discharge

Before leaving, I confirm:

- Someone has reviewed my medications with me and I understand how to take them at home. This includes my anticoagulation plan, my pain medication, any possible side effects and where to obtain my new medications.
- I understand how to manage swelling at home.
- I know it is important that I have a bowel movement within the next three days and what to do if I don't.
- My incision is covered by a dressing and I understand I need to remove this in seven days.
- I understand my post-discharge care plan (if not, please confirm with your doctor or nurse before leaving) - home physical therapy, home exercise/activity plan, cold therapy plan and follow-up appointment.
- **I understand that I call my surgeon's office for non-emergent issues or questions and call 911 for emergencies.**

If you have any questions, please ask your nurse or doctor before discharge.

You may also use Twistle to contact your care team following your discharge.



This list will keep you on track to a safe discharge:

- I can eat my normal diet
- I can urinate without difficulty
- I have passed physical therapy
- My pain is tolerable with activity
- I have been involved in my discharge planning



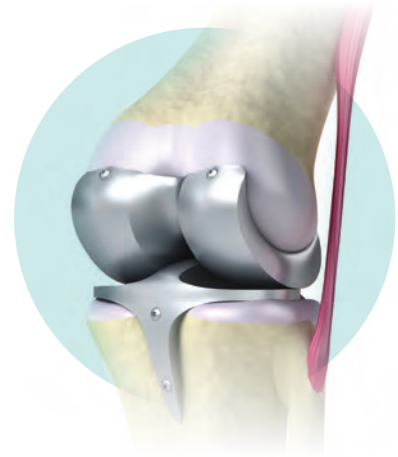


Recovery at Home

Your New Knee

You may feel some numbness and stiffness in the skin around your incision particularly with excessive bending. This often diminishes with time and most patients find these are minor compared to the pain and limited function they experienced prior to surgery. You may also have some activity precautions following your surgery. Your physical therapist will review these with you.

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.



After surgery, make sure you also do the following:

- Participate in a regular exercise program to maintain proper strength and mobility of your new knee.
- Take care to avoid falls and injuries. Individuals who have undergone knee replacement surgery and suffer a fracture may require more surgery.
- You will have regular follow-up appointments with your orthopedic surgeon.

Recovery at Home

- **Activity.** You should be able to resume most normal activities of daily living within three to six 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 walking up and down stairs.
- **Antibiotics.** Certain procedures can cause bacteria to enter your bloodstream, which may travel to your new implant and can cause an infection. You may need to take antibiotics before having any procedure that may cause bacteria to enter the bloodstream. These procedures include dental cleaning and dental work. Discuss with your surgeon how long you should take antibiotics before having these procedures done.



- continued on page 32

Recovery at Home - continued

- **Blood thinners.** You will take blood thinners after surgery. These can be an injection or a pill. These help to prevent blood clots. While you are at the hospital, we will go over these medications, their potential side effects and how to take the medications, which will vary depending on the medications ordered.

Side effects of blood thinners. While you are on any blood thinners, you should not take any extra aspirin, Naprosyn (Aleve), Ibuprofen (Advil) or related medications that may contain these medications, such as cold or allergy products unless advised to at discharge. Some medications have other dietary restrictions and may require laboratory testing. Your nurse will go over these with you before you leave.

While taking blood thinners, notify your surgeon immediately if you fall or if you hit your head, have prolonged bleeding from a cut or your nose, blood in your urine or stool, unusual bruising. If bleeding is severe, call 911.

- **Constipation.** Opioid induced constipation is a side effect that is common when taking opioid medications. To prevent this, drink 8 - 10 (8 oz.) glasses of water or fluids each day unless told to limit your fluids by your health care provider. Warm liquid can also help bowels to move. Unless you have dietary restrictions, increase the amount of fiber in your diet such as dried/fresh fruit, popcorn, berries, wholegrain breads/cereals. Take an over-the-counter stool softener (Colace) and laxative (Miralax or Senna) each day you are taking opioid pain medication.



- **Driving.** You will not be able to drive after surgery until approved by your surgeon. On average this can take up to four weeks while you recover. You will also not be able to drive while taking opioids.
- **Handwashing.** It is very important that you and anyone that is helping you care for your incision, wash your hands often and thoroughly. Bacteria carried on our skin and hands can lead to a wound infection.



- **Incision care.** You will have a dressing over your incision that will remain in place until you remove it on day seven after your surgery. Use an anti-bacterial soap when showering following your surgery. You do not need to wash your incision, but can allow the soap suds to run over your incision. Your nurse will give you more incisional instructions before you are discharged. Avoid submerging your incision in water until your incision has completely healed. After your nerve block is removed you are encouraged to shower, this may be done with your dressing still in place and following its removal. Do not use any lotion or cream on your incision until it is completely healed without scabs.

- **Pain control.** You will be given a prescription for pain medications when you leave the hospital. These medications can cause constipation (your ability to have a bowel movement is slowed down). Do not drink alcohol or drive while taking opioid pain medication. Never take more than your prescribed dose. Some pain medications can have serious side effects including slowed or stopped breathing, confusion or changes in blood pressure. Others include dizziness, nausea or vomiting. If your pain is not relieved, contact your surgeon's office. Do not take more than prescribed or combine medications without first talking to your surgeon. Caution must also be taken when you are taking other medications for other conditions such as anti-depressants, sedatives, etc., as the side effects can become more noticeable. Your pain will get better as you begin to heal after surgery. As your pain improves, you can begin to take less opioid pain medicine. You may use the Pain Management Journal to help you monitor your pain medication administration after discharge (*see page 43*).

You should gradually decrease the number of tablets you are taking a day. Space out the time between doses or take less opioid tablets (1/2 tablet or one tablet). Store your opioid pain medication in a safe place. Dispose of any unused medications as instructed by your pharmacy.

- **Physical therapy.** Exercise is a critical component of home care, particularly during the first few weeks after surgery. Once you are discharged home, you should continue to do your home exercise program twice per day as instructed by your physical therapist. This will help to restore movement and strengthen your knee. You can keep track of your exercises on the Postoperative Exercise Log (*see page 40*).
- **Prescriptions.** Consider having your prescriptions filled at one of our on-site pharmacies before you leave. If you want to have your prescriptions filled at the pharmacy you use frequently, you should call and ask them before you are discharged to see if they carry your medications to ensure you have the medications you need.
- **Sexual activity.** Your surgeon can tell you when it is safe to have sex. Most important is that you are comfortable and able to position your operative leg safely.
- **Swelling management.** Elevation and cold therapy are important to help control pain and swelling. Elevate your leg above your heart using pillows. Pillow should not be under knee, keep your knee straight. Cold therapy may include ice packs, gel packs or cold machine (*see page 37*).



Activities of Daily Living

Walk in Shower

- You can shower both with your dressing on and when it has been removed. Do not submerge your incision under water until it is completely healed with no scabs.
- Transfer into the shower leading with the non-surgical leg and transfer out of the shower leading with the surgical leg.

→ **Equipment that may help:**

shower chair | grab bars | hand-held shower head | non-skid bath mat

Tub/Shower

Transfer into the tub from a seated position if possible, sitting on a shower chair or tub-transfer bench and then swinging your legs into the tub from a seated position. If stepping in/out of the tub, use grab bars, make sure feet are dry, and ask for help at first if needed.

→ **Equipment that may help:**

tub-transfer bench | shower chair | clamp on grab bar | non-skid bath mat | hand-held shower head

Toilet Transfers

When you're sitting and standing, kick the surgical leg out in front of you. Make sure you are balanced before letting go of the walker/crutches to manage your clothing.

→ **Equipment that may help:**

toilet safety frame | raised toilet seat | ADA height standard toilet (replace standard toilet) | grab bars

Dressing the Lower Body

- Sit down on a surface that is easy to get up and down from, preferably the edge of the bed or a chair with arms.
- Wear pants/shorts that are easy to get out of (always dress the surgical leg first).
- Wear shoes that are supportive (ones that you can slip on and off).

→ **Equipment for getting dressed that may help:**

reacher | sock aid | long-handled shoe horn

Each item is designed to make it easier to reach your feet when dressing. If you think you would like some of the equipment mentioned, you can purchase it before your surgery from internet websites or local pharmacies/medical supply stores.

Postoperative Activity

- Do the home exercise program twice daily as you were instructed by your hospital physical therapist (*see pages 38-39 for the postoperative exercises*).
- Remember to take a short walk every one to two hours that you are awake. This is especially important after surgery.

Wear your pedometer/activity tracker to track your daily steps; try to gradually increase your steps daily. Below is a guide to help.

Postop Day 1	no goal
Postop Day 2	500 steps
Postop Day 3	1,000 steps
Postop Day 4	1,500 steps
Postop Days 5-7	2,000 + steps
Week 2	3,000 steps
Week 3	4,000 steps
Week 4	5,000 steps
Week 5	6,000 steps
Week 6	7,000 steps



Avoiding Problems After Surgery

Preventing blood clots

Follow your orthopedic care team's instructions carefully to minimize the potential of blood clots that can occur during the first several weeks of your recovery.

Warning signs of possible blood clots include:

- Pain in your calf and leg, unrelated to your incision
- Tenderness or redness of your calf
- Excessive swelling of your thigh, calf, ankle or foot that doesn't go away with leg elevation

→ **If you experience any of these signs please call your surgeon's office.**

Warning signs that a blood clot has traveled to your lung include:

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

→ **If you experience any of these signs please call 911 or go to an emergency room.**



Avoiding falls

A fall during the first few weeks after surgery can damage your new knee and may result in a need for more surgery. You should use a cane, crutches, walker or handrails on stairs or have someone help you until you improve your balance, flexibility and strength. Your surgeon and physical therapist will help you decide which assistive aides will be required following surgery, and when those aides can safely be discontinued.

Preventing infection

Follow your orthopedic care team's instructions carefully to minimize the risk of infection.

Signs and symptoms of an incision or joint replacement infection include:

- Increased pain or stiffness in a previously well-functioning joint
- Swelling
- Warmth and redness around the wound
- Wound drainage or foul odor
- Fever over 101.0° F for one day or 100.0° F or more for three days in a row; if you develop chills or night sweats that are new for you

→ **If you are experiencing any of these signs please contact your orthopedic surgeon.**

Postoperative Management Guide

It is normal for your leg to be swollen and bruised after surgery. The incision may also be warm and red.

Manage Swelling

- **Expect increased swelling with activity:** elevate, rest and use cold packs on surgical leg.
- **Elevate your leg:** Lie down four times a day for 20-30 minutes and position your leg above your heart.
- **Ice your leg:** Apply an ice/ gel pack throughout the day (20 minutes on, 20 minutes off). Make sure you have something between your skin and the ice/gel pack. If you are using the prescribed cold machine you can use it continuously.
- **Stiffness is normal after prolonged inactivity.** Move every hour when awake. Perform your home exercises as prescribed.



Manage Pain

- Take pain medications as directed by your surgeon.
- Elevate and ice your leg as instructed above to reduce swelling.

Manage Constipation

- Take Miralax daily at bed time and Colace (100mg tablet) in the morning and at bed time until you are having regular bowel movements.
- If you do not have a bowel movement by day 3 after your surgery, add Senna (1 tablet) in the morning and at bed time until you are having regular bowel movements.
- If you do not have a bowel movement by day 4 add a 10mg Bisacodyl suppository or try this constipation recipe:

Constipation recipe: 2 oz prune juice + 2 oz clear soda + 2 oz milk of magnesia. Mix and drink, follow with 8 oz of warm water.

- Drink plenty of water to help break down the food in your stomach. Water assists with digestion.
- Add fiber in your diet to help you pass stools and stay regular. Include bran, beans, apples, pears and prunes.
- Caffeine can make you dehydrated so limit the amount, if necessary.
- Walk and move around as much as tolerated. Exercise helps move digested food through your intestines and signals your body that it's time for a bowel movement.



Postoperative Exercise Program

The purpose of these exercises is to increase motion and strength in your operated knee. Apply cold to your knee after exercising to help with pain and swelling

Continue with hourly ankle pumps and glut sets



Quad Set

Push the back of your knee down into the bed. You should feel your thigh muscle (quads) tighten up. **Hold for a count of five.** Relax.



Prolonged Extension Stretch

Place a large towel roll under the ankle of your surgical leg. Relax your leg to allow gravity to stretch the back of your knee. Work up to a ____ minute stretch. As you are able, go ahead and do some easy quad sets to add a little stretch, but go easy—don't aggravate your pain.



Short Arc Quad

Have someone place a large towel roll under the knee. Straighten knee completely, **hold for a count of two.** Relax.

NOTE: This exercise can also be done by sitting, slightly reclined, with your legs dangling; then extend your knee.



Straight Leg Raise

Bend your opposite knee for stabilization; hold your surgical knee as straight as you can; raise your leg up 12 inches. Relax. You will likely need help with this for a few days.



Heel Slides (both legs)

Bend one leg at a time by sliding your heel towards your bottom — **hold for two seconds.** Don't go more than halfway on your surgical leg.

Do exercises **1-2 times** a day while laying flat in bed. Do **2 sets of 10** for each exercise.

Sitting Exercises



Sitting Heel Slide

- Sit toward the front of a stationary chair with your feet flat on the floor. Your surgical leg should be able to slide easily (pillowcase on a hard floor works well). Bend your knee as far as feels comfortable. **Hold for a count of five.** Relax and slide leg out. Try to go a little farther each time.
- ~~Same as above, only use your opposite leg to assist with sliding your foot back to get a stretch. You may also use a belt or towel to assist with bending your knee.~~

CAUTION: Needs to be done slowly, don't push too hard. If you notice your incision oozing or bleeding, then ease up on the stretch.



Long Arc Quad

Sit in a chair with your thigh supported. Straighten knee completely, **keeping your thigh on the chair.** **Hold for a count of two.** Relax. You may need assistance.



Prolonged Flexion Stretch

~~This works best if your foot does not slide too well—either barefoot or a good fitting slipper. Slide surgical foot backward as far as you can comfortably go, then let your leg relax in this position. Hold this for a full 30-60 seconds, then let it back out. Repeat one to two more times.~~
To increase the stretch you can either slide your foot backward or you can scoot your hip forward.

CAUTION: Don't bounce or strain too hard; you want a slow, steady stretch. If you notice your incision oozing or bleeding, then ease up on the stretch.

Do 2 sets of 10 repetitions. Do this exercise 2-3 times a day.

Walking

Walking is a good exercise. This means household walking for the first week or two; get up frequently, change positions and walk around your house. Progress your walking gradually, as tolerated.

Postoperative Exercise Log

Write in the number of repetitions for each group of exercises — try to work up to 2 sets of 10 repetitions of each exercise twice/day.

WEEK 1	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Supine Exercises • Heel slide • Short arc quad • Straight Leg Raise	a.m.						
	p.m.						
Standing Exercises	a.m.						
	p.m.						
Steps or Walking							
WEEK 2	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Supine Exercises • Heel slide • Short arc quad • Straight Leg Raise	a.m.						
	p.m.						
Standing Exercises	a.m.						
	p.m.						
Steps or Walking							
WEEK 3	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Supine Exercises • Heel slide • Short arc quad • Straight Leg Raise	a.m.						
	p.m.						
Standing Exercises	a.m.						
	p.m.						
Steps or Walking							

WEEK 4	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Supine Exercises • Heel slide • Short arc quad • Straight Leg Raise	a.m.						
	p.m.						
Standing Exercises	a.m.						
	p.m.						
Steps or Walking							
WEEK 5	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Supine Exercises • Heel slide • Short arc quad • Straight Leg Raise	a.m.						
	p.m.						
Standing Exercises	a.m.						
	p.m.						
Steps or Walking							
WEEK 6	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Supine Exercises • Heel slide • Short arc quad • Straight Leg Raise	a.m.						
	p.m.						
Standing Exercises	a.m.						
	p.m.						
Steps or Walking							



When to Call Your Surgeon's Office

If you notice the following, you should contact your surgeon's office:

- More than one temperature greater than 101 degrees in 24 hours
- Worsening redness and heat around your incision
- Drainage from your incision
- Swelling not controlled by elevation, rest and cold therapy
- Calf pain
- Pain that is not controlled by your pain medication, elevation, rest and cold therapy
- A fall or injury to your surgical leg
- Unexplained bleeding or bruising
- If you have not had a bowel movement by the third day after surgery

If you notice the following, you should report to an Emergency Room:

- Chest pain
- Shortness of breath at rest
- Mental status changes/confusion



For non urgent questions, you may use the Twistle app or contact:

- **Ann Arbor Orthopedic Nurse Navigator** at 734-712-2392
- **Brighton/Livingston Orthopedic Nurse Navigator** at 810-844-7614



Trinity Health Ann Arbor

5301 McAuley Drive, Ypsilanti, MI 48197

Trinity Health Livingston

620 Byron Road, Howell, MI 48843

Trinity Health Medical Center - Brighton

7575 Grand River, Brighton, MI 48114

Chelsea Hospital

775 South Main Street, Chelsea, MI 48118

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