



Trinity Health

Total Knee Replacement

Pre-Surgery Class

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Virtual Class Reminders

- Please keep your microphones muted until we break for questions
- Please type your questions in the chat box and I will answer them at the end of the class
- You can find the Knee Book, these slides, nerve block video and a class video on our website
TrinityHealthMichigan.org/ortho-help

Class Objectives

The purpose of this presentation is to:

Help you to feel more comfortable about your upcoming hospitalization

To let you know what you can do to help in your own recovery

Michigan Arthroplasty Registry Collaborative Quality Initiative - MARCQI

- Your surgeon participates in MARCQI which tracks patients for quality improvement purposes
- Michigan hospitals and orthopedic surgeons working together to reduce complications and improve your recovery
- You will be asked to complete surveys before surgery and after surgery at multiple intervals from 2-16 weeks, 1, 2, 5, and, 10 year intervals.
- The survey can be completed by e-mail or in your surgeon's office during your appointment
- If you have provided your email address, you will receive an email from marcqi@mail.ortechsystems.com with instructions for completing the questionnaire via email

Preparing For Your Surgery



Selecting Your Joint Coach

- **What?**
- A coach is a person who can help support you in your recovery at the hospital and at home.
- **Who?**
- A coach can be anyone: a spouse, a family member, a friend or a companion.
- **Why?**
- A coach is someone that will help you stay motivated and succeed. We all need encouragement at times to help us along the way. Your coach can provide this encouragement for you just by being present and participating in your therapy both at the hospital and after your discharge.
- **Expectations?**
- Attend at least one physical therapy session in the hospital. Assist with your needs after discharge.

Tips for Preparing your Home

You and your family must consider these tips before your surgery to help make your home as safe and comfortable as possible for your return after surgery:

- Check every room for tripping hazards. Remove throw rugs and secure cords
- Arrange furniture to have unobstructed pathways while using walker
- Move items in lower drawers to height to eliminate excessive bending or reaching
- Plan on having a cordless phone or cell phone close by
- Make sure stairs have handrails that are securely fastened to walls
- In homes with steep long stairs, you may need a bed, portable toilet on first level
- If you have pets, try to keep them away from your incision while healing
- A chair with a firm back and arm rests is recommended, NO chairs on wheels
- Prepare or purchase meals ahead of time to minimize cooking after surgery
- Install night lights in bathrooms, bedrooms, and hallways
- Get a non-slip bathmat
- Put clean linens on your bed



What to Bring with You

- If you have Advance Directives please bring them with you
- Personal care items
- Slippers (that cover your whole foot) – your leg/foot will be swollen following surgery so make sure they are not tight
- Clothes -Loose pants/shorts, T-shirt/top. We want you to get dressed
- Please do not bring your own pillow
- If you use a CPAP machine at home bring it with you, we have distilled water in the hospital for you to use.
- Driver's license, Insurance Cards and a check or credit card to pay for home medical equipment

Enhanced Recovery Program

Ensure Pre-Surgery clear nutrition drink is a carbohydrate rich beverage with added supplements that you will drink in the morning on the day of your surgery

Use of Ensure Pre-Surgery Improves:

- Comfort
- Hydration
- Hunger
- Thirst



Enhanced Recovery Program

- Ensure Pre-Surgery is available for purchase at the pharmacy in the Reichert Health Building- approx. \$4 for 1 bottle
- You will need to purchase 1 bottle
- You need to ask for the Ensure Pre-Surgery at the pharmacy counter

- If you have Diabetes, Do not drink the Ensure Pre- Surgery

Ensure Pre-Surgery- When to Drink

- Finish drinking your Ensure Pre-Surgery 2 hours before your surgery time
- If you have diabetes, do not drink the Ensure- you will be given different instructions at your pre admission appointment



Reducing Risks and Complications

- Stay active – Exercises for before your surgery are in your book and will be explained further by PT
- Healthy diet - Before your surgery, avoid foods that increase inflammation in your body. Those foods include sugar and white flour; saturated fats from red and organ meat; trans fats from commercially baked cookies, cakes and pastries; and alcohol. Aim for fresh foods, including fresh fruits, vegetables and nuts (see the Improving Your Nutrition on page 15 of your Knee book)
- Manage diabetes – see your PCP if needed
- Reduce, eliminate tobacco. Smoking increases your risk of developing wound infection so we encourage you to try to stop before your surgery 1-800-Quit-Now can offer free advice
- Reduce, eliminate alcohol. Hazardous alcohol use (3 or more drinks per day) can increase your risk of postoperative infections, cardiopulmonary complications and bleeding risk

Prevent Surgical Site Infection

- Dental work – must be completed 1 week prior to surgery and delayed for 3 months after your surgery- you will require antibiotics before dental work after surgery
- Shaving – do not shave your surgical leg or use any hair removal products near the surgical site 5 days prior to surgery
- Hand washing – Good hand hygiene is essential. Encourage your family and friends to utilize an antibacterial cleanser and to always wash their hands to prevent spread of infection. Clean your cell phone and TV remote frequently
- Preoperative nasal swab
- Use the Dyna-hex soap that you were given at your pre-admission testing appointment in the shower for 3 days before surgery and use wipes on the evening before surgery. Read the instructions very carefully. Do not use the soap or wipes on your face or private area.
- In pre-op you will receive an intra nasal treatment to help prevent postoperative infection
- Mepilex dressing with Sylke wound closure (mesh strip)

Prevent Surgical Site Infection

- **Incision care**
- Remove the Mepilex dressing 7 days after surgery and then remove the Sylke strip under that dressing 7 days later
- Use the Dyna-hex soap that you were given before surgery to shower until the bottles are gone and then use an antibacterial soap like Dial
- Do not submerge incision in water
- Do not put lotion or cream on your incision
- Do not touch your incision or wash your hands first

Surgery and Postoperative Recovery

Day of Surgery

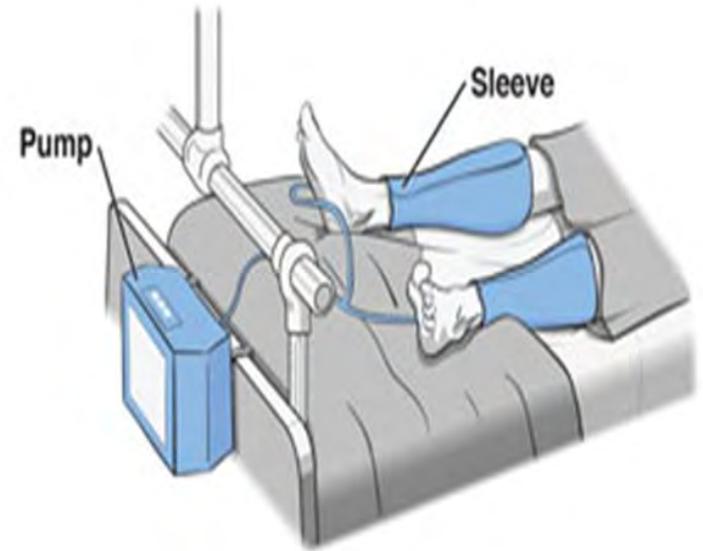
- Meet anesthesiologist to discuss options for anesthesia
- Surgery will take between 1-2 hours and the patient will remain in the recovery room for 1-2 hours so from the beginning of the surgery to arriving on the unit may be up to 4 hours

Recovery Room

- You will wake up after your surgery in the recovery room.
- Your nurse will ask how your pain is on the pain scale of 0-10, 0 no pain, 10 worst pain imagined
- When you wake up you will have a dressing over your incision, sequential compression devices (SCD's) on your legs, oxygen in your nose and IV fluids connected to an IV in your arm

Sequential Compression Devices (SCD's)

- A Sequential Compression Device (SCD) is equipment that can assist in prevention of deep vein thrombosis (DVT). It improves blood flow in the legs. SCD's are shaped like “sleeves” that wrap around the legs and inflate with air one at a time. This imitates walking and helps prevent blood clots. You should wear your SCD's any time you are in bed or sitting in a chair.



Anticoagulation Therapy

- Your surgeon will prescribe an anticoagulant (blood thinner) to help prevent blood clots
- There are many different medications we use for this. The anticoagulant will begin to be administered in the hospital and will continue as prescribed by your surgeon
- You will receive information and instructions on how to take this medication from your nurse before you are discharged home. It is important you take this medication as instructed

When you arrive on the Short Stay/Ortho Unit

- You will start to eat/drink juice, jello, crackers, water, ginger ale and progress to your regular diet
- We will show you how to use an incentive spirometer and encourage you to use it 10/hour
- You will have your ice on your knee throughout your stay
- You will begin your rehabilitation today, either with physical therapy or nursing staff helping you to the side of the bed, walking around your room and/or sitting in the recliner
- Your nursing staff will have to check on you frequently the first night

Pain Management

- Your caregiver will do everything they can to get you comfortable enough to participate in your recovery.
- Caregivers will often ask you to rate your pain level on a scale of 0-10
- Our goal is to always keep your pain level at a level where you are able to participate in your rehabilitation
- Your pain will be managed with different medications including oral medications. Some of these medications are scheduled and given at set times and others are given as needed to help control your pain. Cold therapy will also be used.

Pain Management

Tylenol 1000mg (500mg tab x 2) every 8 hours

Oxycodone 5mg for breakthrough pain (Opioid)

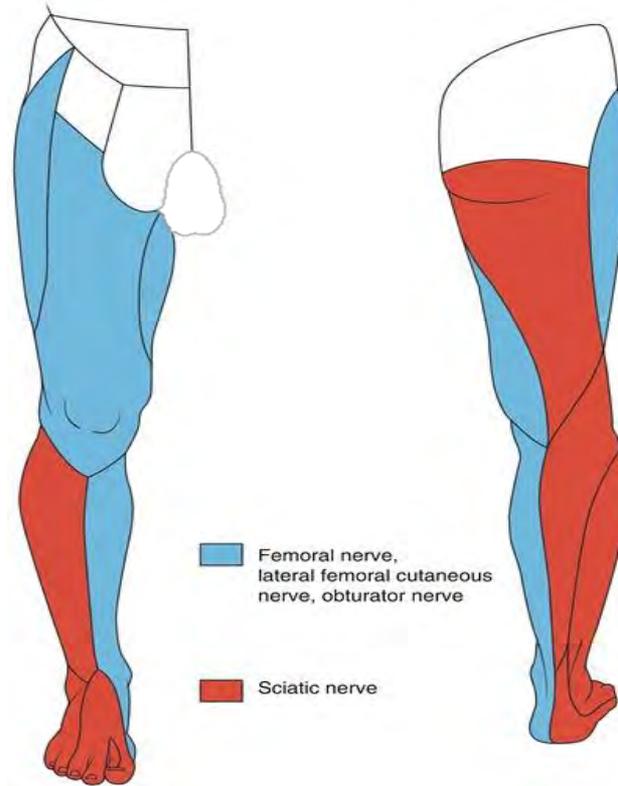
Opioid Information

- Surgeon can only prescribe a 7 day supply at discharge- must call surgeon's office for refill- allow 2 days for refill. Don't call on weekends, after hours or holidays
- Opioids can cause constipation, nausea, dizziness- you should take laxatives and a stool softener while on opioids. Colace(stool softener), Miralax and Senna (laxatives)

Nerve Block

- Your anesthesiologist may talk with you about placing a nerve block to help with pain relief after your surgery. The block is put in just before surgery .
- You may still have pain with a nerve block and need to take additional pain pills as prescribed by your doctor.

Local Nerve Block



Cooling Therapy



- There are many different options for Cold Therapy after surgery. It is important to use cold to help decrease pain and swelling after surgery
- Cold machines, gel packs, ice in plastic bags, frozen vegetables from the grocery store
- Most Insurance companies do not pay for cold therapy

After your Surgery

- Your nurse will continue to assess your pain level and work on a plan with you to ensure it is controlled using scheduled Tylenol and opioid pain medication
- A side effect of the pain medication is constipation so you will also be started on a bowel management program
- Physical Therapy will work with you, helping you regain your strength. As your recovery progresses, you will get up for meals and go to the bathroom with help from our team. The physical therapy team will work with you to ensure a safe discharge home
- Our discharge planners will meet with you to discuss your discharge and any equipment needs you may have

Discharge

- Most people are ready to go home either the day of surgery or after 1 night in the hospital. You will go home when you meet your discharge goals.
- We want you to go home after your surgery-not rehab
- Patients recover better in their own home environment
- Please make sure you arrange to have someone available to drive you home
- Home physical therapy will be provided for 2 weeks and then you will go to outpatient Physical Therapy
- Discharge instructions will be given to you by your nurse and prescriptions given to you which can be filled in our pharmacy, just ask your nurse how to do this

Possible complications following surgery

- Blood clots – follow your surgeon’s instructions carefully to minimize this potential risk. Make sure you take your anticoagulation medication as instructed by nursing staff and continue doing your ankle exercises
- Infection – follow instructions given at discharge to prevent infection. Do not remove your top dressing until day 7 after your surgery and the Sylke on day 14. Use Dyna-hex in the shower until gone and pat your incision dry. Leave open to air. Do not use any creams or lotions on your incision
- Constipation – Your pain medication can make you constipated. Make sure you take laxatives (Miralax or Senna) and stool softener (Colace) following your discharge and eat a diet high in fiber and drink lots of water



- Pain - Make sure you take your pain medication as instructed. Elevate your leg higher than your heart. Your leg will swell and this can add to your discomfort

Post op Guide

page 37 of your book

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.



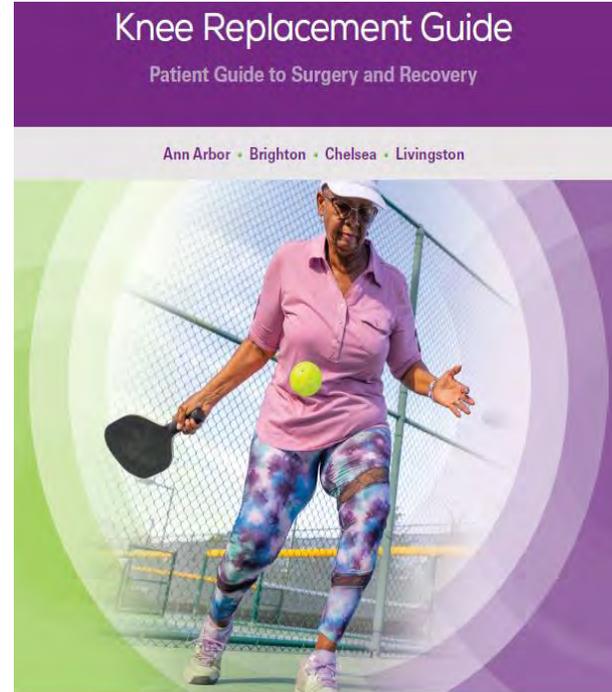
Questions?

- If you have any questions about anything you have heard today, or have any concerns about your surgery please do not hesitate to contact me
 - Molly-Orthopedic Nurse Navigator 734-712-2392
 - Molly.Sieffert@Trinity-Health.org
- You can leave a message and I will return your call as soon as possible
- **If you have urgent questions please call your orthopedic surgeons office**

Physical Therapy

Pre-op Exercises

- See “Pre-op exercise” pp. 18-20 of your patient guide booklet
- Start with 5 reps, increase to 15 as able
- We’ve targeted **functional** exercises
- We also target your thigh muscle – quads
- Do these exercises on a bed, no need to get on the floor!



Pre-Op Exercises

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.

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.

What to do before surgery

- Stay mobile!
- Make it a habit to interrupt your sitting every 1-2 hours especially after surgery



Activity/Walking Log

(Pages 20-21 in knee book)

- Any pre-op exercise or activity can help your body to be more *resilient*
- This will help reduce your chances of complications
- Start with shorter distances and increase as able
- Stationary bike, swim exercise, chair yoga, etc. are all good
- Housework and yardwork count!

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							

Goals



Set an activity goal for after surgery

Write it down, stick it on the fridge!

For example:

- Go on vacation
- Start an exercise class
- Walk without a walker

Physical Therapy in the Hospital

- PT will see you . . .
 - Day of surgery
 - And then as needed until discharge
- Therapy will include:
 - Home Exercise Instruction
 - How to get in & out of bed and how to get on & off the toilet
 - Walking
 - Practice stairs
 - Family instruction

Walking After Surgery

- Recommend a front-wheeled walker
- Avoid 4-wheeled walkers for the first week
- Weight-bearing as tolerated

Starting Walking Pattern:

1. Move the walker forward
2. Step into the walker with your surgical leg
3. Bring your opposite leg forward in line with your surgical leg

Stairs

- Can the depth of your walker fit on your entry steps (as you can see in this picture)?
- If so, your walker will go up first then
 - Going up stairs the stronger leg goes first
 - Going downstairs the weaker leg goes first
 - “The good leg goes to heaven; the bad leg goes to hell”



If your walker does **NOT** fit on each step



- We strongly recommend you have a railing installed
- We will practice stairs in the hospital
- Using a single handrail and a crutch or cane works well
- The same applies going to the second level of your home

Home Exercise Program

- We will start you with ‘circulation exercises’
- Your PT will instruct you in your home exercises
Don't start any exercises until we ask you to
- **Exercises** and **household walking** will be your rehab for the first 2 weeks
Gradually progress walking and activity
Progress to using cane in your opposite hand
- You may request to have home PT the first 2 weeks

Outpatient Physical Therapy

- You can start outpatient PT after several weeks (you will need a prescription from your surgeon)
- You may need a ride as you will probably not be driving when you start outpatient PT
- Outpatient PT will help you get a stronger, safer, more flexible knee and get a more fluid walking pattern
- You can go to Trinity Health Probability Physical Therapy or a place of your choice

Discharge Planning

- We recommend you have someone stay with you for several days, up to a week
It does not need to be 24/7
- Don't turn down offers for help!
Help with meals is particularly helpful

Equipment

- **Walker** –front-wheeled
- **Tub transfer bench**
- **Single crutch or cane** – for stairs with a rail
- **Raised toilet seat** – try getting off your toilet without using your surgical leg; taller people more likely to need them
- **Reacher** – very helpful, may want to get one ahead of time



Where to Obtain Equipment

Medical Equipment store for prescribed equipment

- Local stores for purchase-Lowes, CVS, Meijer, Walmart
- Online stores for purchase- Amazon
- Loan closets to borrow equipment

[LOANCLOSETS.ORG/MICHIGAN](https://loanclosets.org/michigan)

Senior centers

Church's

VFW's

American Legion's

Summary

- Pre-op exercises
- Log your activity
- Set an activity goal
- Get a railing for your entry steps
- Visit our website – trinityhealthmichigan.org/ortho-help
- Arrange for help after your surgery
- Plan your equipment needs

Thank you!

Any Questions?