KAYSER ORTHO

Total Knee Replacement Surgery

A Practical Guide for Patients and Families

This guide explains what to expect before, during, and after total knee replacement surgery. It is intended to reduce uncertainty and help you prepare for recovery. This handout is supplemented by a separate Pain Management Protocol, which outlines medication instructions.

Understanding Knee Arthritis

The knee joint is lined with smooth cartilage that allows motion without friction. Arthritis occurs when this cartilage wears down. As it thins, the knee may become painful, swollen, and stiff.

Total knee replacement is best described as cartilage resurfacing. The damaged joint surfaces are replaced with metal and medical-grade plastic to restore smooth movement.

Robotic-Assisted Knee Replacement

Robotic assistance is a surgical tool that helps your surgeon perform the procedure with a high degree of accuracy. The robot does not perform the surgery. All decisions and actions are controlled by the surgeon.

Key Advantages

- **Robotic guidance helps place the knee implant within fractions of a millimeter, improving alignment and balance.**
- **Each knee is different. Robotic planning allows the surgeon to adjust implant position and soft-tissue balance rather than relying on general population averages.**
- **Immediate data allows fine-tuning of alignment and ligament balance before final implantation.**
- **Improved balance and precision reduces soft-tissue irritation and improves early function.**

For many patients, this precision results in a more balanced knee and smoother early recovery.

Risks to Understand

All surgery involves risk. The most relevant risks of knee replacement include:

- **Infection – Reduced through medical optimization, skin preparation, and antibiotics**
- **Blood clots – Reduced through early walking, ankle exercises, and blood-thinning medication**
- **Nerve or blood vessel injury – Uncommon**
- **Implant wear or loosening – Modern implants commonly last 20–25 years**

Your surgeon will review these risks with you.

Anesthesia

Most patients receive spinal anesthesia, which numbs the body below the waist, along with light sedation for comfort during the procedure. General anesthesia is used when needed based on medical considerations or patient preference. Additional local anesthetic is often used to help control pain and keep you comfortable as you recover.

Choosing a Coach

A family member or friend should be designated as your recovery coach. This person should attend therapy sessions, be present for discharge instructions, and assist at home during early recovery. Patients with support recover more smoothly.

What Matters Most After Surgery

First Two Weeks

Keep the knee straight

- Do not place pillows under the knee
- Support the heel to encourage full extension

Control swelling

- Ice, elevation, and compression
- Elevate the leg above heart level when resting

Walk often

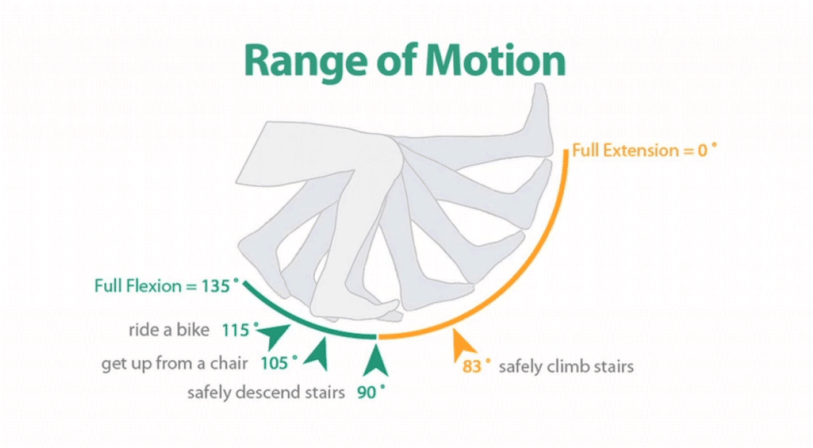
- Take short walks around the house every 1–2 hours while awake

Restore motion

- Week 1 goal: 60–70°
- Week 2 goal: 90°
- Do not bend beyond 90° during the first two weeks
- Six-week goal: 115° or more

Prevent blood clots

- Take medications as prescribed
- Perform ankle pumps
- Walk regularly



Preparing for Surgery

Four weeks before surgery

- **Medical and anesthesia clearance as needed**
- **Optimize health conditions**
- **Avoid cuts or skin injury around the knee**

Dental care

- **Treat active dental infections before surgery**
- **Complete elective dental work more than three weeks before surgery**

Healthy habits

- **Stop smoking at least four weeks before and after surgery**
    - **Nicotine use increwases risk of wound complications and infection**
- **Follow a low-sugar diet**
    - **elevated blood sugar increases risk of infection**
- **Maintain good hydration and nutrition**

Reading Food Labels

High fiber diet info

Low sugar diet info

Preparing Your Home

- **Remove loose rugs and clutter**
- **Use chairs with arms**
- **Install night lighting**
- **Use non-slip shower mats**
- **Arrange living space to minimize stairs**
- **Prepare meals in advance**

Medications After Surgery

Pain control
Pain is expected early after surgery. The goal is control, not elimination, with gradual reduction over time. Refer to the Pain Management Protocol.

Blood clot prevention
Take aspirin or other prescribed medication and remain mobile.

Nutrition
Daily multivitamin, high-protein, high-fiber, low-sugar diet.

Surgery Timeline

Day before surgery

- **Shower**
- **Do not shave the leg**
- **Nothing to eat or drink after midnight**

Day of surgery

- **Arrive as instructed**
- **Take approved medications with a sip of water**
- **Begin recovery in the PACU**

Hospital Recovery

- **Physical therapy begins the day of surgery**
- **You will stand and walk with assistance**
- **Ankle pumps and knee motion exercises begin immediately**
- **Most patients go home the same or next day**

Discharge and Equipment

- **Dressing checked**
- **Therapy reviews walking and stairs**
- **Prescriptions provided**
- **Walker arranged**
- **You must have a ride home**

Assistive devices

- **Walker: 1–2 weeks**
- **Cane once walking without a limp**
- **Progress to independent walking as balance improves**

Avoid rushing. Falls are a major risk early on.

Recovery at Home

Incision care

- **Keep dressing clean and dry**
- **Do not remove unless instructed**
- **Shower starting post-operative day 3 using plastic wrap or Press ’n Seal®**
- **No soaking for approximately eight weeks**
- **No creams or ointments unless directed**

Swelling control

- **Change position every 45 minutes**
- **Ice 30 minutes on / 30 minutes off with a cloth barrier**
- **Elevate above heart level**

Activity

- **Walk frequently**
- **Avoid prolonged sitting**
- **Do not place pillows under the knee**

Bowel care

- **Use stool softeners, high fiber diet, and hydrate**

Follow-Up

First follow-up visit is usually 2–3 weeks after surgery. At that visit we assess the incision, swelling, pain control, and knee motion. Physical therapy is coordinated as needed.

Call Immediately for

- **Increasing redness, warmth, drainage, or odor**
- **Fever over 101°F**
- **Calf pain or swelling**
- **Bloody/Black tar stools**
- **Chest pain or shortness of breath (call 911)**

Common Questions

Clicking or noise
Common and expected. Usually improves as swelling decreases.

Numbness near the incision
Common along the outer incision. May improve over time.

Kneeling
Often uncomfortable. Does not damage the implant. Pads help.

Driving

Most patients return to driving within 2–4 weeks once off narcotics and able to safely brake. Left knee surgery often allows earlier return.

Dental Work

Avoid non-urgent dental work for three months after surgery. Once you are three months out from surgery there are no restrictions or antibiotics needed for dental care.

Return to Work

Desk jobs may return to work earlier. Physical jobs require more time. Most patients return within 1–3 months.

Sports and Recreation

- **6 weeks: walking, stationary bike**
- **3 months: golf, fitness training, pickleball (doubles), hunting and fishing**
- **Discouraged: running, singles tennis, powerlifting**

Discuss individual goals with your surgeon.

Sexual Activity

Most patients resume sexual activity within 6–8 weeks as comfort allows. Avoid deep bending or kneeling early.

Final Thoughts

Knee replacement recovery is a process. Progress is not linear. Focus on consistency, not perfection. Your care team is here to support you every step of the way.

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Post-Operative Joint Replacement Pain Control

Sleep, Daily Routine, and Healing

Sleep is important for physical and mental recovery after joint replacement. Poor or interrupted sleep is very common during the first 1–2 weeks after surgery. This is normal.

Rather than trying to sleep more, the most important goal early after surgery is to maintain a regular daily routine.

A consistent sleep–wake cycle helps to:

- Reduce pain sensitivity
- Improve daytime energy
- Support healing
- Make medications easier to take correctly

How Sleep and Medications Work Together

Your body works best when sleep, meals, and medications occur at regular times each day.

Keeping a steady routine helps to:

- Improve pain control
- Reduce the need for narcotic pain medication
- Prevent missed or double doses

Do not change medication timing to try to improve sleep. Light or interrupted sleep is expected early after surgery.

Using timers or alarms may help keep both sleep and medication schedules consistent.

Daily Routine

Try to follow the same routine every day:

- **Morning:** Wake up around sunrise, eat breakfast, take morning medications
- **Midday:** Eat lunch and take midday medication
- **Evening:** Eat dinner and take evening medications
- **Night:** Go to bed at a consistent time

Short naps (20–30 minutes) are acceptable. Avoid long or late naps.

Aim for 7–9 hours of sleep per night. Sleep typically improves as pain and swelling decrease.

Home Medication Instructions

Start this schedule the day you go home.

The foundation of pain control is **scheduled medications** (Acetaminophen [Tylenol] and Celecoxib [Celebrex]) combined with **movement/exercises, ice, and quality sleep**.
Narcotic pain medication is not the foundation—it is available only as an *add-on* for breakthrough pain.

Step 1: Scheduled (Baseline) Medications

These medications form the foundation of pain control and risk reduction and should be taken on schedule, even if pain is well controlled.

Morning (Wake-up / Breakfast ~7 AM)

- **Acetaminophen (Tylenol) 1,000 mg** – Base pain control
- **Aspirin 81 mg** – Blood clot prevention (twice daily for 30 days)
- **Celecoxib (Celebrex) 100 mg** – Pain control and anti-inflammatory (twice daily for 30 days)
- **Pantoprazole (Protonix) 40 mg** – Stomach protection while taking aspirin and celecoxib
- **Multivitamin** – One tablet daily with food
- **Polyethylene glycol (Miralax) 17 g** – Constipation prevention

Midday / Lunch (12–2 PM)

- **Acetaminophen (Tylenol) 1,000 mg** – Base pain control

Evening Meal (Dinner)

- **Celecoxib (Celebrex) 100 mg** – Pain control and anti-inflammatory
- **Aspirin 81 mg** – Blood clot prevention

Bedtime (8–10 PM)

- **Acetaminophen (Tylenol) 1,000 mg** – Base pain control

  Taking acetaminophen at bedtime helps control pain overnight.

Step 2: Narcotic Pain Medication

(For Breakthrough Pain Only)

Oxycodone 5 mg

- Take every 6 hours **only for severe pain (6–10/10)** despite scheduled medications
- Use in addition to (not instead of) the scheduled pain regimen
- Do not exceed **4 doses (20 mg total)** in 24 hours
- Do not drive, drink alcohol, or take sleep medications while using this drug

* Tramadol may be requested as an alternative if appropriate.

Step 3: Medication to Prevent Common Narcotic Side Effects

Constipation Prevention

- Taking **Miralax daily** helps with baseline prevention
- If no bowel movement after 1 day, take **Senna** at bedtime as needed
- Drink plenty of fluids

Nausea Medication (As Needed)

Ondansetron 4 mg orally disintegrating tablet (ODT)

- Take **one tablet every 8 hours as needed** for nausea or vomiting
- **Maximum dose:** Do not exceed **3 doses (12 mg total)** in 24 hours

Orally Disintegrating Tablet (ODT) instructions:

- Place tablet on the tongue
- Allow it to dissolve
- Swallow with saliva
- No water needed

Important Safety Information

NSAIDs

Do not take **ANY additional NSAIDs** while you are taking **celecoxib (Celebrex)**.

This includes:

- **Ibuprofen** (Advil®, Motrin®)
- **Naproxen** (Aleve®)
- **Meloxicam** (Mobic®)
- **Diclofenac** (Voltaren®)
- **Ketorolac** (Toradol®)

Taking more than one NSAID at the same time significantly increases the risk of:

- Stomach ulcers and bleeding
- Kidney injury
- Cardiovascular complications

Acetaminophen (Tylenol)

- Do not exceed **3,000 mg per day**
- Avoid other products containing acetaminophen

Stomach / Ulcer History

Pantoprazole is used to protect your stomach. Notify your surgeon if you have a history of ulcers, gastrointestinal bleeding, or severe reflux.

Blood Thinners

If you take any blood thinner, you must discuss this with your surgeon. Do not take aspirin in addition to blood thinners such as apixaban (Eliquis®), rivaroxaban (Xarelto®), dabigatran (Pradaxa®), warfarin (Coumadin®), clopidogrel (Plavix®), or enoxaparin (Lovenox®), unless specifically instructed.

Pain Medication Policy

Narcotic pain medications are intended for short-term use only.
Our practice does **not** prescribe opioid pain medication beyond **two months** after surgery.

Transitioning to Over-the-Counter Pain Medication

After prescription medications are finished, you may continue with over-the-counter options if needed.

Option 1: Naproxen (Aleve) + Acetaminophen (Tylenol)

- Naproxen 220 mg: 1–2 tablets twice daily with food (max 660 mg/day)
- Acetaminophen 500 mg: 2 tablets up to 3 times daily (max 3,000 mg/day)

Option 2: Ibuprofen (Advil, Motrin) + Acetaminophen (Tylenol)

- Ibuprofen 200 mg: 400–600 mg three times daily with food (max 1,800 mg/day)
- Acetaminophen 500 mg: 2 tablets up to 3 times daily (max 3,000 mg/day)

Contact Your Surgeon If You Have

- Black or bloody stools
- Severe stomach pain or vomiting blood
- Fever greater than 101.5°F
- Increasing redness, drainage, or pain at the incision
- Pain not controlled with medication and ice

Key Reminders

- Do not take additional NSAIDs
- Most patients require little or no opioid medication after the first few days
- This plan is designed to control pain while minimizing side effects
- Joint replacement surgery is painful—this plan supports safe recovery