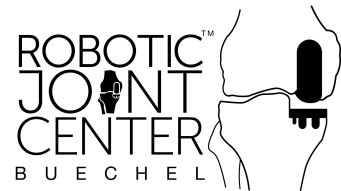


Frederick F. Buechel, Jr. MD

Robotic Joint Center

737 Park Avenue, Suite 1C
New York, New York 10021



Knee Care & Instructions after Mako™ Robotic Partial Knee Replacement Surgery

- 1. Cold Therapy:** A cold therapy cooling machine with knee sleeve is used to reduce swelling and relieve pain after surgery. Use the Cold Therapy machine several times a day, after walks, and after exercise for the first 4 weeks, then as needed for pain and swelling reduction. Because it is cold water and not direct ice, it can be left on for longer periods of time. You may find yourself falling asleep with this device running at times. Ice packs can be substituted but should be removed after 15-20 minutes to allow skin to recover from the ice pack, and to avoid freeze burns to the skin.
- 2. Leg Elevation:** Elevate leg as much as possible the first 2 weeks to reduce swelling when not walking. Elevation to heart level or above, is best for swelling reduction.
- 3. Compression stockings:** A thigh-high compressive sleeve for at least 4 weeks on the operative leg will reduce leg swelling and is recommended if your leg can tolerate it. We will provide one in the office on your post-operative visit. You may take it off for showers. Swelling will start to lessen after the first 10 days, some swelling may still be present but reduced at 8 weeks, and most swelling will be resolved at 6 months. If you are traveling for greater than an hour in a car or taking a plane, the compression sleeve is recommended for the first 6 weeks after surgery to reduce swelling and the potential for blood clots.
- 4. Dressings:** Your Ace wrap will be removed in the office the day after the procedure. There are 3 dressings covering your knee incisions. The dressings are designed to remain on for up to a week providing protection from external contamination. If necessary, they can be gently removed and then reapplied. After the first week, you may remove the dressings permanently. If you wish to apply another dressing on the main incision after the first week to keep the knee sleeve from rubbing, you may. Any small amounts of leaking into the dressings for the first few days will usually stop within the first week. If it persists, please notify the doctor.
- 5. Skin Glue:** The skin is sealed with a skin glue called Dermabond that you leave on for 2-3 weeks. This glue seals the skin from the outside world while the skin edges heal together. Do not clean the glue area with alcohol, hydrogen peroxide, Betadine or soap. When showering with the dressings off, just let the water rinse over the glued area without scrubbing the glue areas. You may clean around the glue only. The glue is removed with rubbing alcohol and a wash cloth once the skin is healed, at approximately 3 weeks. Once the glue is removed, the purple marker and any blood under the glue can be cleaned off with rubbing alcohol and it will look much better. When cleaning the glue off, only rub or peel the glue off in the up and down direction not side to side to avoid opening up the incision.
- 6. Skin Incision:** The skin will look “bunched up” for about 8 weeks from the deep stitches that take tension off the skin edges while they heal. This appearance is normal and expected. It will flatten once the stitches dissolve around 8-12 weeks usually leaving a thin scar. The skin under the incision will be stiff and hard feeling early on but softening over 6-12 weeks back to normal again by 6 months.

7. **Skin Care Products:** Do not put any skin care products on the incision until the glue is removed at 3-4 weeks. Once the glue is off you may apply scar reducing products, strips, creams, lotions, vitamin E, Vitamin C, or Mederma® on the incisions.
8. **Shower:** You may shower the next day after surgery when you get home from the doctor. For the first week you should shower with your waterproof dressing covering the incisions. In one week when the dressings are removed, you may just let the water rinse over the glued area. Don't scrub over the glue in the shower. You may clean around the glue only. No bath, pool, spa, hot springs or ocean water until the wound is sealed at about 3 weeks and after the glue has been removed.
9. Things you should **contact us** for include:
 - Fever > 101°F
 - Red around the incisions
 - Excessive draining from the knee
 - Severe calf pain
 - Nausea or vomiting from the pain medicine
 - Inability to urinate normally
 - Inability to move your bowels or pass gas after 2-3 days

Therapy & Exercise:

1. Walking:

- The first week, get up and walk short distances around your home each hour while your awake.
- Use your walker, crutches or cane as long as you wish to provide balance and safety.
- You may stop using your walker, crutches or cane once you feel stable and safe.
- By week 2-3 you may go out for longer walks as your tolerance increases.
- After walks, elevate your leg and use the cold therapy machine for 10-15 minutes if you can for the first 3-6 weeks to reduce swelling, and reduce any pain you may have.

2. Exercise:

- Perform Isometric quad sets, 3 sets of 10 repetitions, 3 times each day.
- Straight leg raises for those without lower back problems are safe.
- Hamstring stretching slowly for 5 minutes twice a day
- Stationary bike with the good leg only at first can begin the day after surgery with the therapist. Support the surgery leg off the pedal on a chair if possible.
- Stationary bike at 2 weeks with both legs is allowed as swelling improves and the skin heals.
- Leg presses to 30 degrees and light weight ¼ squats for the first 8 weeks
- Slow easy return to regular exercise from weeks 3-6 weeks.
- Slow it down if knee becomes sorer or swelling persists at 6-12 weeks, while tissues mature.
- Tendonitis can cause increasing pain for some at 3-6 weeks and can be improved with stretching, ice, reduced activity, or injections with PRP, or cortisone.
- Golf at 3-4 weeks at the earliest but be careful on over rotation on your drives.
- Tennis at 6-8 weeks at the earliest and make sure you stretch and ice after matches. Many require 3-4 months before getting back to normal tennis.
- Ice and stretch after all exercise for the first 12 weeks.

3. **Bending Knee:** Gentle bending only. No aggressive bending is required. When your swelling starts to reduce, your motion will start to increase. Many knees only bend 90° for the first 10 days while swollen. The motion improves when swelling subsides in 2-3 weeks. Final motion can be achieved when all the swelling has resolved, and the scar has matured. Therapists should only gently assist your bending and should not force flexion. Stationary bikes are good for improving motion and exercise as the swelling dissipates.
4. **A Rehabilitation Exercise Program or formal Physical Therapy is recommended** and is important in your recovery. Patients benefit from a regular stretching and exercise program but it should not be an aggressive pain provoking program. It should be tailored to increasing your activity level, flexibility and strength gradually and without significant pain. You may have your therapist follow my Physical Therapy Protocol for guidance as to what is expected and safe.
5. **Outpatient Physical Therapy** will be arranged while you are in town and should be continued as a reconditioning exercise program until full recover. Depending on your pre-operative level of conditioning, you may require more or less therapy. Work on flexibility, quadricep and hamstring strengthening and stretching. Follow my Physical Therapy Protocol for guidance.
6. **Returning to Work** is allowed for light duty jobs at 2-3 weeks depending on swelling & pain level. Standing for more than 2-3 hours at a time will cause leg swelling in the first 6 weeks and frequent breaks with your leg elevated may be necessary. Heavy lifting jobs should not be done for 6-8 weeks after surgery and sometimes will be difficult until 12 -16 weeks after surgery. Pain and swelling will be your guide during your early recovery on how much you should push yourself. If you are out in the public work environment keep your incision covered to protect yourself against community bacteria. Your compression sleeve is adequate coverage.
7. **Driving** is permitted once you have stopped using narcotics and you have enough control over your leg to press on the brake pedal and gas rapidly.

Medications

1. **Blood Thinner:**

- **Aspirin 81mg** twice a day for 4 weeks following surgery is most commonly recommended
- High Risk Patients, or patients already on blood thinners will be placed on specific medications that may include:
 - Coumadin for 3-4 weeks after surgery
 - Xaralto 10mg Daily for 12 days

2. **Anti-Inflammatory / Pain Medicine:**

- **Acetaminophen** is recommended to help with pain, limit to 3,000mg per day.
 - This will reduce pain.
- **Ibuprofen** 400mg every 4 hours for 72 hours after surgery is recommended.
 - This will reduce inflammation and pain.
 - If you are taking Xaralto or Coumadin blood thinners, then you should not take ibuprofen because there is an increased risk of bleeding.
 - if you have kidney dysfunction or a GI ulcer history, avoid NSAIDs, if possible.

3. **Pain Medication (Narcotic):**

- **Hydrocodone** 5mg every 4 hours can be taken for moderate to severe pain after surgery for the first week. Start with one and evaluate your pain level. You may take two if pain relief is not adequate but be careful. An alternative will be provided if allergic. Some patients will take only a few pills or just at bedtime after their procedure; others will use the medicine for a week.

4. **Stool Softener:**

- Take an over the counter twice each day while taking narcotics to reduce constipation
- Drink adequate water daily to avoid constipation

Supplements

1. **Vitamins:**

- Take a Multivitamin Daily
- Vitamin C 1000mg orally three times a day for 4-6 weeks is highly recommended to help wound healing
- Calcium 1,000mg Daily
- Vitamin D 2,000mg Daily to aid in bone healing

2. **Probiotics:**

- Take one capsule twice a day to help support your normal intestinal bacteria levels since you were given an IV antibiotic during surgery that can reduce normal bacterial levels in your digestive tract leading to diarrhea.
- These are “over-the-counter” supplements at the grocery store or health food store
- Probiotics with 50 million units are the ones you should consider.

Follow-Up Visits

1. **Wound Check & X-ray:**

- 1 day after surgery to evaluate incision and review post-op x-rays
- 3 weeks after surgery glue can be removed with rubbing alcohol

2. **Follow-up Visits**

- Patients that live locally can follow-up at 3 weeks, 6 weeks & 3 months after surgery and then annually
- Patients that are from out of the area will be contacted via phone, text, or emails to continue to monitor your recovery and answer questions you may have.
- If you are visiting New York an annual in person visit can be made if there are any issues.
- We would ask you to obtain and send an x-ray once a year for evaluation
- X-rays are reviewed by Dr. Buechel to ensure the implants are maintaining proper position, the polyethylene bearing is maintaining appropriate thickness, the opposite compartment is not wearing down, and the implants are not loosening from the cement-bone interface.
- A prescription can be sent for the necessary x-rays.
- Once the images are sent, please contact our office to ensure Dr. Buechel receives them for review.