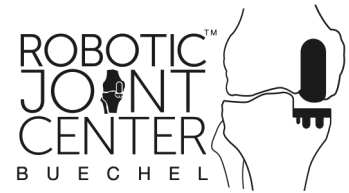


Frederick F. Buechel, Jr. MD

Robotic Joint Center™

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



MAKO™ ROBOTIC PARTIAL KNEE REPLACEMENT

PATIENT CARE AND EXERCISE PROGRAM SUMMARY

Once you have undergone your knee procedure, it is important to observe the recommendations outlined below to optimize your chances for long-term success and satisfaction. Most patients will return to their basic activities of daily living 3-6 weeks after surgery, with some taking several months. Although many patients have high levels of function in just a few weeks, the maturation process and complete healing takes time and continues for up to 18 months.

ESSENTIAL TO THE SUCCESS OF THE PROCEDURE AFTER SURGERY

Leg Swelling Control After Surgery

- Cold Therapy Wrap
- Compression (Ace wrap, then Stockings)
- Elevation of foot & knee (heart level or above)
- Reduced activity level the first 2 weeks

Pain Control

- NSAIDs medications
- Acetaminophen
- Aspirin (reduces blood clots)
- Narcotic as needed
- Cold Therapy

Wound Healing Optimization

- Proper nutrition
- Vitamin supplementation
- Adequate water intake
- Avoidance of tobacco

Muscle Conditioning / Maintenance

- Maintaining good lower extremity strength
- Isometric Quad Sets Daily
- Maintaining good lower extremity flexibility
- Stretch Hamstrings and Quadriceps

IMMEDIATELY POST-OP

- Swelling management includes an ACE wrap on your knee in the operating room, elevation and a cold therapy sleeve in the recovery room.
- Isometric Quad sets and ankle pumps can begin in the stretcher in the recovery room and continue several times a day.
- A physical therapist or nurse will get you standing after surgery and walking with a walking aid once your anesthesia has worn off and you are medically stable.
- You may immediately fully weight bear on your leg with a walker or crutches until you are safe without one in a few day to a week.

1 DAY POST OP

- You may begin physical therapy, weight bearing to tolerance with a walker or crutches
- You should get up each hour and walk short distance around the home
- Work on extending your leg fully (quad sets) and start flexion exercises (heel slides)
- Perform isometric quad sets with your leg in full extension 3-5 times per day
- Manage your swelling with your knee compression sleeve, elevation and cold therapy.

DAILY PROGRAM

- Aggressive swelling management with knee compression sleeve, elevation and cold therapy
- Get up each hour and walk short distance around the home.
- Use pain medication as needed to assist in your therapy program
- Use your walker, crutches, or cane until you are stable without one
- Work on full knee extension (quad sets), flexion exercises (heel slides) & ankle pumps.
- Flexion goal is to return to preoperative range of motion or better in 3-6 weeks

2 WEEKS POST OP

- You may begin stationary bicycle exercise with seat adjusted up (or back if recumbent)
- Driving when narcotics are stopped and leg strength is good

3 WEEKS POST OP

- You may remove the skin glue with rubbing alcohol
- You may begin pool exercises and hot tub usage as long as your incisions are sealed

4 WEEKS POST OPERATIVE

- Discontinue Aspirin
- You may Discontinue Compression Stockings.
- If you are experiencing moderate swelling in the leg or foot after the first 4 weeks, continue the use of your compression sleeve especially for long walks, car rides, & plane flights
- Start focusing on strength and balance with exercise
- You should have good quadriceps control and full extension at this point

10 -12 WEEKS POST OPERATIVELY

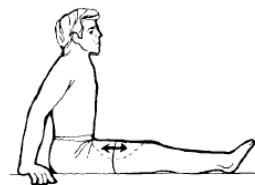
- Increase endurance and strength exercise
- Speed of movements may be increased
- Sports like tennis are safer if you wait until this point to return
- NO running as exercise, or jumping until 12 weeks

3 MONTHS POST OPERATIVE AND BEYOND

- A regular exercise program 2-3 times per week to maintain lower extremity strength and endurance will provide the most long-lasting benefits for the success of your knee resurfacing surgery.

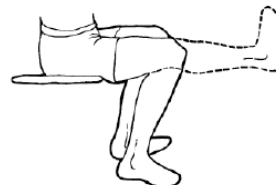
EXERCISES:

1. **ISOMETRIC QUADRICEPS EXERCISES (QUAD SETS)** - With leg straight, tighten the thigh muscles on top of the leg as tightly as possible and hold. The knee will flatten and knee cap will move slightly upward. Hold 5-10 seconds, trying every second to pull even tighter. Then relax. Repeat for 3 sets of 10 repetitions 3 times per day.



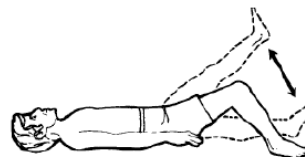
2. KNEE EXTENSION

Sitting, straighten knee. Hold for 5 seconds. Lower leg and relax. Repeat for 3 sets of 10 repetitions 3 times per day.



3. STRAIGHT LEG RAISE

While lying on back, do quad set (above) then lift leg straight up slowly to about 45°. Holding the tension, lower leg slowly. Then relax. (May bend the other leg.) Repeat for 3 sets of 10 repetitions 3 times per day.



4. **WALL SQUAT WITH PILLOW OR BALL** - Stand with your back, shoulders, and head against a wall and look straight ahead. Keep your shoulders relaxed and your feet one foot away from the wall, shoulder width apart. Place a rolled up pillow or a small ball between your thighs. Keeping your head against the wall, slowly squat while squeezing the pillow or ball at the same time. Squat down until your thighs are 45 degrees to the floor. Hold this position for 10 seconds. Slowly stand back up. Make sure you are squeezing the pillow or ball throughout this exercise. Repeat 10-15 times.



WALL SQUAT

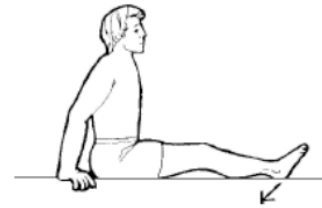
5. **STEP-UP** - Stand with the foot of your operated leg on a support (like a block of wood) 3-5 inches high. Keep your other foot flat on the floor. Shift your weight on to the operated leg and straighten the knee as the uninjured leg comes off the floor. Lower you non-operated leg to the floor slowly. Repeat 10 times



STEP-UP

6. ISOMETRIC HAMSTRING EXERCISE

Tighten the muscles behind the knee, as if you're going to bend the knee. Dig down with your heel, but do not actually bend the knee. Hold for 5 seconds. Then relax. Repeat for 3 sets of 10 repetitions 3 times per day.

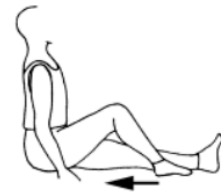


7. KNEE FLEXION

Lie face down. Bend knee as far as possible. Then lower leg and relax. Repeat for 3 sets of 10 repetitions 3 times per day.



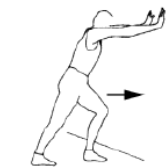
8. **HEEL SLIDE** - Sit on a firm surface with your legs straight out in front of you. Slowly slide the heel of your injured leg toward your buttocks by pulling your knee to your chest as you slide. Return to the starting position. Repeat 20 times.



HEEL SLIDE

9. **HAMSTRING STRETCH** - Sitting or standing with your legs straight, reach toward your toes as far as you can without significant discomfort. Hold this position for 30 to 60 seconds, feeling a stretch in the back of your thigh. Repeat three times.

10. **STANDING CALF STRETCH** - Facing a wall, put your hands against the wall at about eye level. Keep the uninjured leg forward and your injured leg back about 12-18 inches behind your uninjured leg. Keep your injured leg straight and your heel on the floor. Next, do a slight lunge by bending the knee of the forward leg. Lean into the wall until you feel a stretch in your calf muscle. Hold this position for 30-60 seconds, and repeat 3 times.



STANDING CALF STRETCH

11. HEEL RAISE

While standing straight with feet slightly apart, raise your heels up off the floor up onto the balls of your toes. Hold for 5 seconds. Return to starting position. Repeat for 3 sets of 10 repetitions 3 times per day.

