

Brian Forsythe, M.D.
Sports Medicine
Shoulder, Elbow, Knee Arthroscopy
Shoulder Replacement Surgery

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**MIDWEST
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AT RUSH**

Midwest Orthopaedics at Rush
1611 W. Harrison St, Ste 400
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Munster Indiana Office
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Munster, IN 46321

Rush Oak Brook
2011 York Road, Ste 1500
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DISCHARGE INSTRUCTIONS & PHYSICAL THERAPY PROTOCOL: Medial Patellofemoral Ligament Reconstruction

- ❖ Recovery after knee surgery entails controlling swelling and discomfort, healing, return of range-of-motion of the knee joint, regaining strength in the muscles around the knee joint, and a gradual return to activities. The following instructions are intended as a guide to help you achieve these individual goals and recover as quickly as possible after your knee surgery.

- ❖ **COMFORT**

- **Elevation**

- Elevate your knee and ankle above the level of your heart. The best position is lying down with two pillows lengthwise under your entire leg. This should be done for the first several days after surgery.

- **Cold Therapy**

- If you elected to receive the **circulating cooling device**, this can be used continuously for the first 3 days, (while the initial post-op dressing is on). After 3 days, the cooling device should be applied 3 times a day for 20-30 minute intervals.
 - If you elected to receive the **gel wrap**, this may be applied for 20 minutes on, 20 minutes off as needed. You may apply this over the post-op dressing. Once the dressing is removed, be sure to place a barrier (shirt, towel, cloth, etc.) between your skin and the gel wrap.
 - If you elected to use **regular ice**, this may be applied for 20 minutes on, 20 minutes off as needed. You may apply this over the post-op dressing. Once the dressing is removed, be sure to place a barrier (shirt, towel, cloth, etc.) between your skin and the ice.

- **Medication**

- **Pain Medication-** Take medications as prescribed, but only as often as necessary. Avoid alcohol and driving if you are taking pain medication.
 - You have been provided a narcotic prescription postoperatively. Use this medication sparingly for moderate to severe pain.
 - **You are allowed two (2) refills of your narcotic prescription if necessary.**
 - When refilling pain medication, weaning down to a lower potency or non-narcotic prescription is recommended as soon as possible.

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- Extra strength Tylenol may be used for mild pain.
- Over the counter anti-inflammatories (Ibuprofen, Aleve, Motrin, etc.) should be **avoided** for the first 4 weeks following surgery.
- **Anti-coagulation medication:** A medication to prevent post-operative blood clots has been prescribed (Aspirin, Lovenox, etc.) This is the only medication that MUST be taken as prescribed until directed to stop by Dr. Forsythe.
- **Nausea Medication** – Zofran (Odansetron) has been prescribed for nausea. You may take this as needed per the prescription instructions.
- **Constipation Medication** - Colace has been prescribed for constipation. Both your pain medication and the anesthesia can cause constipation. Take this as needed.

❖ ACTIVITIES

- **Locking Knee Brace** – The brace is to be worn for up to 4-6 weeks following surgery. It will be locked straight until bone healing and good knee strength have been achieved (usually 5-6 weeks after surgery). At that time your doctor will determine if your leg has enough strength to allow your brace to be unlocked. You may unlock the brace while sitting but lock the brace before standing. Sleep with the brace on until directed by Dr. Forsythe.
- **Exercises** – These help prevent complications such as blood clotting in your legs. Point and flex your foot and wiggle your toes. Thigh muscle tightening exercises should begin the day of surgery and should be done for 10 to 15 minutes, 3 times a day, for the first few weeks after surgery.
- **CPM** – (Continuous Passive Motion Machine) – A Continuous Passive Motion (CPM) machine may be started the day **after** your surgery. This machine will be set at 30°. Motion on the machine should be increased at 10-15° per day or as much as tolerated, to a maximum of 90° in one week. The machine should be used 6 hours per day (i.e. 2 hours in the morning, 2 hours in the afternoon and 2 hours in the evening). Use of the machine will continue for 1-2 weeks, or until maximum flexion of the machine is reached (110°).
DO NOT WEAR BRACE OR COOLING DEVICE WHILE USING CPM MACHINE
- **Weightbearing** – You are allowed to put full weight on your operative leg. Keep your brace locked in a straight position. Walk using two crutches or a walker. Do this within the limits of pain.
- **Physical Therapy** – PT is usually started a 1-2 weeks after surgery. You should call the physical therapist of your choice for an appointment as soon as possible after surgery. A prescription for physical therapy, along with physical therapy instructions (included in this packet) must be taken to the therapist at your first visit.

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- **Athletic Activities** – Athletic activities, such as swimming, bicycling, jogging, running and stop-and-go sports, **should be avoided** until allowed by your doctor.
- **Return to Work** – Return to work as soon as possible. Your ability to work depends on a number of factors – your level of discomfort and how much demand your job puts on your knees. If you have any questions, please call your doctor.
- **Bathing** - Tub bathing, swimming, and soaking of the knee **should be avoided** until allowed by your doctor - Usually 4-6 weeks after your surgery. Keep the dressing on, clean and dry for the first 3 days after surgery.
 - You may shower 3 days after surgery with WATERPROOF band-aids on. Apply new band-aids after showering. Keep incision sites clean and dry.
- **Dressings** - Remove the dressing 3 days after surgery. Your stitches will be left in until about 1-2 weeks post-op. You may apply band-aids to the small incisions around your knee and cover your larger incisions with sterile gauze or large band-aids. If you have steri-strips (small white band-aids) they can remain in place until your first office visit.
- **Driving**
 - **Right knee surgery:** Driving is NOT permitted for the first 1-3 weeks following right knee surgery.
 - **Left knee surgery:** Driving is allowed when comfortable AND you are not taking narcotic pain medication.

❖ EATING

- Your first few meals, after surgery, should include light, easily digestible foods and plenty of liquids, since some people experience slight nausea as a temporary reaction to anesthesia.

❖ CALL YOUR PHYSICIAN IF:

- Pain in your knee persists or worsens in the first few days after surgery.
- Excessive redness or drainage of cloudy or bloody material from the wounds (Clear red tinted fluid and some mild drainage should be expected). Drainage of any kind 5 days after surgery should be reported to the doctor.
- You have a temperature elevation greater than 101°
- You have pain, swelling or redness in your calf.
- You have numbness or weakness in your leg or foot.

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❖ RETURN TO THE OFFICE

- Your first return to our office should be within the first 1-2 weeks after your surgery. You can find your appointment date and time for this first post-operative visit in the post op instruction folder.

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REHABILITATION PROGRAM: Medial Patellofemoral Ligament Reconstruction

NOTE: The following instructions are intended for your physical therapist and should be brought to your first physical therapy visit.

The following protocol utilizes a blend of both criteria and timeframes as the determinants of advancement. It is recognized that many athletes will feel good relatively early in their rehabilitation and want to advance to higher level activities as a result. In spite of rapid functional progress it is important to respect the biological component of recovery and limit advancement if the timeframe for a given stage has not been completed. Overall, this protocol targets return to full unrestricted activity at 6 months if all other criteria are also met. If the criteria are met sooner, the patient must restrict his/her activity level until the end of the sixth post operative month.

Week 1: (Visit #1 scheduled to begin within 2 weeks of surgery date)

Goals:

- 1) Crutch Use: FWB
- 2) Brace Use/Ambulation: Keep post-op brace locked in full extension for ambulation FWB
****Sleep with brace locked in full extension****
- 3) Minimize Pain and Effusion – Compression wrap, elevation, ice
- 4) Maintain Full Knee Extension
- 5) Restore Quad Activation
- 6) Increase knee flexion – 10° per day

Exercises:

- PROM/Flexibility
- Wall Slides
- Seated Active Assistive Knee Flexion
- Prone Dangle
- Passive resting extension with heel prop
- Hamstring/Calf Stretches
- Manual Therapy
 - a. Patellar Mobilizations: medial, superior, inferior (avoid lateral glide)
 - b. Soft tissue mobilization of distal IT Band and lateral retinaculum
- Strength a. Promote Muscle Activation (NMES w/ Quad setting and/or Biofeedback)
- Isometrics
- SLR x3 (Flexion, Adduction, Abduction)

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- Theraband Ankle Plantarflexion
- Home Exercise Program

Weeks 2 to 4:

Goals:

1. Crutch use: Wean, discontinue crutches after 2 weeks
2. Brace Use/Ambulation: WBAT, Unlock post-op brace for ambulation (30° - progress to open @ 4 weeks) if following criteria are met:
 - a. SLR without quadriceps lag (10 repetitions)
 - b. Active knee flexion range to greater than angle of brace*****Sleep with brace locked in full extension until end of week 4*****
3. Continue Muscle Activation if necessary (NMES with Quad Setting or FES)
4. Minimize Effusion and Pain
5. Promote Knee Flexion:
 - a. 90° by end of week 2
 - b. 130° by end of week 6
6. Good patellar mobility; medial patella mobilization (avoid lateral glide)

Exercises:

- As previous
- Stationary Bike for ROM
- ITB stretching
- Proprioceptive Neuromuscular Facilitation, Progressive Resistive Exercises
- Balance/Proprioception
- Manual/Machine resisted leg press
- Isometric Knee extension 30°
- Step Ups
- Mini-Squats progress up to 90°
- Hip abduction/external rotation
- Calf Raises
- Core

Weeks 4 to 12:

Goals:

1. Wean, discontinue post-op brace **after 6 weeks** if following criteria are met:
 - a. ROM > 100°
 - b. Single Leg Squat 30° with good knee control and no lag

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2. Full ROM
3. Enhance Strength
4. Enhance Proprioception/Balance
5. Improve Local Muscular Endurance
6. Initiate Cardiovascular training

Exercises:

- As previous
- Scar Massage
- Functional Strengthening
- Single-leg squats
- Lunges
- Side lunges
- Hamstring bridging

8-10 weeks:

- Initiate open chain knee extension through full range
- May begin squatting and lunging past 90° knee flexion

Weeks 12 to 16:

Goals:

1. May begin straight ahead running at 12 weeks if the following criteria are met:
 - a. Stable patella: asymptomatic with all activity

Exercises:

- Continue strength, endurance, proprioception progression
- Begin bilateral low level plyometrics and progress as able
- Begin agility drills and sport specific activities as able

Weeks 16 to 24:

Goals:

1. Gradual Return to unrestricted sports **at 24 weeks** if the following criteria are met:
 - a. Pain free running
 - b. Functional Tests (>90%) and Pain free with good neuromuscular control
 - c. Isokinetic test
 - d. Quadriceps Peak Torque Deficit $\leq 15\%$

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e. Cardiovascular endurance to subjective pre-morbid level

Exercises:

- Single-leg plyometrics
- Cutting/pivoting drills with stutter step pattern
- High intensity aerobic/anaerobic sport specific training
- Advanced lower extremity strengthening

RETURN TO SPORTS CRITERIA

1. 90% Functional tests
2. $\geq 85\%$ Isokinetic Test at $180^\circ/\text{sec}$, and $300^\circ/\text{sec}$
3. Full knee ROM
4. 6 months post-op