Jourdan M. Cancienne, M.D.
Sports Medicine
Shoulder, Hip, Knee Arthroscopy
Shoulder Replacement Surgery

MIDWEST ORTHOPAEDICS AT RUSH

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DISCHARGE INSTRUCTIONS & PHYSICAL THERAPY PROTOCOL: Multiligamentous Knee Reconstruction +/- PCL

- 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. Do not place pillows under the knee (do not maintain knee in a flexed or bent position), place pillows under the foot and ankle. 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.
- You may take over the counter NSAIDs (Aleve, Ibuprofen, Advil) **for breakthrough pain**, follow instructions on the bottle.

- **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. Cancienne.
- **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

- **Range-of-Motion** – Maintain the knee locked in extension in the brace at all times until follow up with Dr. Cancienne.
- **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 or driving but lock the brace before standing. Sleep with the brace on and locked straight until directed by Dr. Cancienne.
- **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.
- **Weightbearing** – You will be non weight bearing for at least 6 weeks. Two crutches and no weight bearing should be followed until directed to discontinue by Dr. Cancienne.
- **Physical Therapy** – **PT is usually started the week of 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.
- **Driving**
  - **Right knee surgery:** Driving is NOT permitted for the first 1-2 weeks following right knee surgery.
  - **Left knee surgery:** Driving is allowed when comfortable AND you are not taking narcotic pain medication.

❖ WOUND CARE

- **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.
- **Dressings -** Remove the dressing 3 days after surgery. Your stitches will be left in until about 10-14 days post-op. Leave the white strips in place until they fall off. Keep incisions clean, dry, and intact.

❖ 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 will likely be within the first 1-2 weeks after your surgery. You can find your appointment the appointment date and time for the first post-operative visit in this folder.

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REHABILITATION PROGRAM:
Multiligamentous Knee Reconstruction +/- PCL

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

❖ INTRODUCTION

- Loss of the stabilizing ligaments of the knee can lead to functional instability during work or sports and can also lead to the development of knee arthrosis. These guidelines were developed for patients after multiligament reconstruction knee procedures.
- The goals of ligamentous reconstruction are:
  - To provide functional stability to the knee
  - Return the patient to his/her previous level of activity
  - Prevent development of arthrosis
- Modern methods of arthroscopic reconstruction of knee ligaments can successfully return functional stability to the knee. The most worrisome complication following this surgery is the development of arthrofibrosis with its adherent loss of motion and weakness in the operative extremity.
- The goal of rehabilitation is to return normal motion, strength, and function to the knee while not compromising the integrity of the reconstructed ligaments. Total body conditioning should be utilized throughout this protocol.

- **PHYSICAL THERAPY ATTENDANCE**
  - Phase I (0-6 weeks): 3 visits/week
  - Phase II (6-8 weeks): 2-3 visits/week
  - Phase III (2-6 months): 2-3 visits/week
  - Phase IV, V (6 months +): Discharge after completion

❖ Phase I: 0-6 weeks: Protection

- Crutches, brace, NWB will be continued for 6 weeks.
  - Avoid tibial rotation, hyperextension and varus force to the knee.
  - Hinged knee brace locked in extension for ambulation and sleeping x 6 weeks.
- **If PCL reconstruction dynamic knee brace used for 6 months, ROM 0-90 for weeks 0-2, then progress as tolerated. *Emphasize maintenance of full extension*.**
- **If PCL reconstruction, *perform ROM in prone position to avoid tension on PCL graft via posterior tibial glide from gravity***
- **If PCL reconstruction, *NO active knee flexion and open chain hamstring isometrics x 8 weeks*. Supervised physical therapy takes place for 3-9 months.**

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- **<u>Exercises Phase I: 0-6 weeks: Protection</u>**
  - **ROM:**
    - **Wall slides/supine heel slide with strap**
    - **Seated knee flexion with contralateral LE assist**
    - ***If PCL reconstruction perform prone knee flexion PROM with strap.***
  - **Neuromuscular Control:**
    - **Quad Set, Prone TKE, SLR in brace**
    - **Use of NMES if insufficient volitional quad activation.Weightbearing Status**
    - Quad isometrics at 90, 60, 30 and 0 deg knee flexion
    - S/L hip ABD in brace
    - Prone hip ext in brace
    - Ankle mobility and resisted motions in all planes in supine, long sit or seated
    - position.
    - Supine and seated core stabilization.
    - Seated/supine anti rotation/pallof
    - Supine core isometrics with UE and LE dissociative movements
  - Criterion to Progress
    - Pain free ROM 0-90
    - Pain/swelling controlled
    - SLR without extensor lag
- **<u>Phase 2: 6-12 weeks: Restore ROM and strength</u>**
  - No kneeling for 12 weeks post op.
  - Progress to PWB and then FWB/wean off assistive device
  - Discharge crutches then brace when adequate quad activation/strength
  - ***If PCL reconstruction keep dynamic brace for 6 months***
    - Ie. No extension lag with SLR, no knee buckling with weight shifting
  - **ROM**:
    - Stationary bike
    - Proprioception and balance:
    - Initiate balance training
  - **Strengthening**:
    - Closed chain functional exercise
    - Mini squat, Step up, lunging in sagittal plane (no flexion >70 deg)
    - Bridge
    - Side steps
    - Keep band proximal to minimize varus force on knee
    - Core strength and endurance
  - **Criterion to progress:**
    - Pain free, non-antalgic gait without AD for limited distances
    - PROM normalized to contralateral side 100%
    - Dynamometry 80% compared contralaterally with muscle testing

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- **PHASE III: 12-20 weeks: Restore dynamic strength and begin plyometrics**
  - Initiate transverse plane and multiplanar motions
  - Initiate plyometrics
  - Restore power
  - **Criterion to progress:**
    - Y balance test >90%
    - 60 sec continuous SL squat to 60 deg without femoral and lumbo-pelvic
    - compensations
    - Plank and side plank 60 sec without compensations
    - Dynamometry 90% compared contralaterally with muscle testing
    - Return to PLOF with minimal symptoms
- **Phase IV: Return to sport**
  - AlterG initiated at 20 weeks for running
  - Full body running at 24 weeks
  - Sport specific dynamic exercises
  - ***If PCL reconstruction, discharge dynamic brace if kneeling stress X-rays demonstrate less than 2mm of difference***