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

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MIDWEST ORTHOPAEDICS at RUSH

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DISCHARGE INSTRUCTIONS & PHYSICAL THERAPY PROTOCOL: Meniscus Transplant

- 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.
- **Swelling** – A cooling device may be provided to control swelling and discomfort by slowing the circulation in your knee. Initially, 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 10-minute intervals.
  - If a cooling device is not provided at the time of surgery, place crushed ice in a plastic bag over your knee for 20 minutes at a time with at least a 60 minute rest between sessions.
- **Medication**
  - **Pain Medication-** Take medications as prescribed, but only as often as necessary. Avoid alcohol and driving if you are taking pain medication.
  - **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.
- **Driving –** Driving is NOT permitted for four weeks following right knee surgery.

ACTIVITIES

- **Range-of-Motion** – Move your knee through range of motion as tolerated up to 90 degrees of knee flexion.
  - A CPM machine will be provided for you to use to progress Range of motion.

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- **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.
- **Weightbearing** – You are limited to toe touch weight bearing for the first week. You can then progress weight bearing as tolerated.
- **Physical Therapy** – PT is usually started after your first post-operative appointment.
- **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.

❖ 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 1 week post-op. You may apply band-aids to the small incisions around your knee.

❖ 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.

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- 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.

❖ 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 for this first post-operative visit in the post op instruction folder.

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REHABILITATION PROGRAM:
Meniscus Transplant

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

I. **IMMEDIATE POSTOPERATIVE PHASE (Week 0-2)**
- a. Goals:
  - i. Reduce swelling, inflammation, and pain
  - ii. Gradually increase ROM
  - iii. Reestablish patellar mobility
  - iv. Restore voluntary quadriceps control
  - v. Protect healing tissues
- b. **Week One**
  - i. **Cryotherapy** elevation and compression
  - ii. **Brace:** knee immobilizer (sleep in brace)
  - iii. **Weight bearing:** toe touch (less than 25%)
  - iv. **Range of motion:** full passive knee extension, gradually progress to 90 degrees flexion with use of CPM
  - v. **Exercises:**
    1. Patellar mobilization
    2. Heel slides to gain flexion
    3. Straight leg raises (flexion)
    4. Knee extension (active assisted)
    5. Ankle Pumps
    6. Hamstrings, gastroc-soleus stretches
- c. **Week Two**
  - i. Continue all exercises listed above
  - ii. Use ice before and after exercises

II. **PROTECTION PHASE (Week 3-8)**
- a. Goals:
  - i. Protect healing tissue
  - ii. Gradually restore ROM (flexion)
  - iii. Progress weight bearing
  - iv. Restore quadriceps muscle strength
- b. **Criteria to progress to Phase II:**
  - i. Mild effusion

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ii. Good patellar mobility
iii. ROM minimal 0-95 degrees
iv. Active quadriceps contraction

c. **Weeks 3-4**
   i. **Brace:** continue use of knee immobilizer (sleep in brace for 4 weeks)
   ii. **Weight bearing:** increase to 50% at week 3 and 75% at week 4
   iii. **Range of motion:** passive ROM 0-105 week 3
   iv. **Exercises:**
      1. Patellar mobilizations
      2. Scar mobilization (if needed and closed incision)
      3. Passive knee ROM
      4. Quad setting
      5. Multi-angle knee extension 30 degrees, 60 degrees
      6. Straight leg raise (flexion)
      7. Hip abd/adduction
      8. Knee extension (90-30 degrees)
      9. Hamstrings, gastroc, soleus stretching
      10. Electrical muscle stimulation to quads
      11. UBE for aerobic conditioning
   v. **Cryotherapy:** continue use of ice and compression

d. **Weeks 5-6**
   i. **Brace:** continue use of knee immobilizer
   ii. **Weight bearing:** gradually progress to FWB week 6
   iii. **Range of motion:**
      1. Passive ROM 0-120 week 5
      2. Passive ROM 0-135 week 6
   iv. **Exercises**
      1. Continue all strengthening exercises listed above
      2. Pool exercise program
      3. Initiate bicycle
   v. **Cryotherapy:** continue use of ice and compression

e. **Weeks 7-8**
   i. **Brace:** discontinue use of brace at week 7-8
   ii. **Weight bearing:** full without brace
   iii. **Range of motion:** passive ROM 0-135
   iv. **Exercises:**
      1. Straight leg raise (flexion)

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2. Hip abd/adduction
3. Knee extension (90-30 degrees)
4. CKC mini-squats (0-40 degrees)
5. CKC leg press (0-60 degrees)
6. Bicycle
7. Pool program and swimming
8. Continue stretching hamstrings and gastroc
9. Proprioception and balance training
10. Cup walking
11. No resisted hamstrings*

III. **MODERATE PROTECTION PHASE (Weeks 9-12)**

a. Goals:
   i. Protect healing tissue (deep squats)
   ii. Maintain full ROM
   iii. Normalize strength and proprioception

b. **Criteria to progress to Phase III:**
   i. Range of motion 0-135
   ii. Minimal pain and effusion
   iii. Quadriceps strength 4/5
   iv. Good patellar mobility
   v. Symmetrical gait

c. **Weeks 9-12**
   i. **Exercises:**
      1. Stretch hamstrings and gastroc muscles
      2. Progress strengthening exercises listed above
      3. Initiate following
         a. Walking program
         b. Swimming
         c. Lateral step-ups
         d. Wall squats (no deep)
         e. Progress proprioception training

IV. **MINIMAL PROTECTION PHASE (Weeks 13-22)**

a. Goals:
   i. Increase strength, power, and endurance
   ii. Begin gradual return to function

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b. **Criteria to progress to Phase IV**
   i. Full non-painful ROM
   ii. Minimal to no effusion
   iii. Normal gait
   iv. Strength 4 to 4+/5
c. **Weeks 13-22**
   i. **Exercises**
      1. Leg Press 0-100 degrees
      2. Wall squats 0-60 degrees
      3. Lateral step-ups (6") height
      4. Front step-downs (6") height
      5. Knee extension 90-30 degrees
      6. Hip abd/adduction
      7. Vertical squats
      8. Bicycle
      9. Toe-calf raises
      10. Stairmaster
      11. Pool running/jobbing program
      12. Walking longer distance
d. **Week 20** Continue all exercises listed above

V. **RETURN TO ACTIVITY PHASE (Weeks 23-52)**
a. Goals: Gradual return to functional activities
b. **Criteria for progress to Phase V:**
   i. Full non-painful ROM
   ii. No swelling
   iii. Normal patellar mobility
   iv. Strength: isokinetics test – satisfactory result 10-15% of appropriate leg
c. **Week 23 and Beyond**
   i. Exercises: continue all exercises listed above
   ii. Initiate light jogging (if appropriate and physician clearance)
   iii. May return to light aerobic conditioning
d. **Week 26-30**
   i. **Return to recreational sports (physician decision)**