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Sports Medicine and Shoulder Service

### **MENISCAL ALLOGRAFT TRANSPLANTATION PHYSICAL THERAPY PRESCRIPTION**

**Patient Name:**

**Date:**

**Diagnosis: S/P**

**Medial**

**Lateral**

**Meniscal Transplantation**

Post-operative Period:

#### **0 to 1 month:**

1. 2 to 3 visits per week, everyday home program
2. Prone lying and gentle stretching to achieve full extension
3. Quad sets, may use electrical stimulation, increase # visit/week if quad inhibited
4. Patellar mobilizations, especially superiorly
5. Straight leg raises, partial arc quads (0 to 90 degrees) without weights
6. Prone knee flexion, heel slides, calf and hamstring stretching
7. Flexion is strictly limited to 90 degrees for 1 month
8. Icing program, 3 to 5 times a day and 30 minutes each after exercises
9. Pt is to get full hyper-extension symmetrical to the contralateral knee within 4 wks of surgery
10. Partial weight-bearing with crutches with brace locked in extension
11. Brace must be locked in extension for the first week at all times (except for exercises and shower), and then can be unlocked except for crutch walking, where the brace must be locked in extension during any ambulation

#### **1 to 2 months:**

1. 2 to 3 visits per week, 5 times a week home program
2. Continue all exercises in previous phase (as described above)
3. Brace may be unlocked at all times, does not need to be worn at night, and can be discontinued at 8 weeks
4. Progress from partial to full weight bearing by 6 to 8 weeks

5. Gait training to walk without a limp with crutch assistance should be a primary goal of this stage
6. Crutches should be weaned off by 8 weeks
7. Flexion should be gradually progressed to full motion during this time period

### **2 to 3 months:**

1. 2 to 3 visits per week, 5 times a week home program.
2. Continue exercises in previous phases (as described above)
3. Begin quad exercises including mini-squats, wall slide mini-squats, leg extensions (0 to 90 degrees), and hamstring curls with light weights
4. Toe raises with weights, step-ups (begin with 2 inches and progress to a full step)
5. Stationary bike with no resistance, within flexion range
6. Continue gait training, including slow walking on a treadmill
7. If a pool is available, swimming may started but the frog-kick and breaststroke should be avoided
8. Range of motion should be full by 3 months.

### **3 to 5 months:**

1. 1 to 2 visits per week, mostly a home program 5 times a week.
2. Continue exercises in previous phases (as described above)
3. Focus rehabilitation towards more closed-chain exercises including leg presses (0 to 90 degrees), step-ups, mini-squats (0 to 90 degrees), leg extensions (0 to 90 degrees), and leg curls with light weights, high repetitions
4. Endurance closed-chain quadriceps exercises should begin such as Stairmaster, stationary bike, elliptical trainer, Nordic trac, etc. Focus on increasing endurance and should be performed 3 to 4 times per week.
5. Continue gait training, including progression to fast walking on a treadmill or even ground
6. Gait should be normal by this phase.

### **5 to 8 months:**

1. 4 to 5 times a week home program. May also have 2 visits per month to review home program.
2. Continue exercises in previous phases (as described above)
3. Begin slow jogging and progress to slow running on even ground or treadmill, no cutting, jumping or pivoting
4. Advance strengthening with weights including leg presses (full), step-ups, mini-squats (full), leg extensions (full), and leg curls (full). Repetitions should be smooth and slow and NOT explosive. May begin jump rope exercises.

### **8 to 12 months:**

1. 3 to 5 times a week home program. May need physical therapy supervision for functional training.
2. Begin advanced strengthening with weights including leg presses, squats, leg curls, and lunges
3. Initiate plyometric program as appropriate for patient's functional goals

4. May begin functional training exercises including fast straight running, backward running, cutting, cross-overs, carioca, etc.
5. Begin gradual return to previous sports/activities/work duties under controlled conditions
6. High impact activities/sports should be discouraged
7. Full return to sports/activities/full work duties are pending Dr. Farrow's approval based upon the following criteria:

Criteria for Return to Sports/Full Activities:

1. Quadriceps and hamstring strength at least 90% of opposite leg
2. No effusion or quadriceps atrophy
3. Satisfactory clinical examination

**Concerns or questions:**

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**Physician Signature:**