

**GARRETT COUNTY ORTHOPAEDICS**

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**Meniscus Allograft Transplantation**

**PHASE I: Hospital d/c through Week 12 – PROTECTION PHASE**

**PT Sessions:** Directed by physical therapist

**Ambulation:**

1. TTWB with crutches for 1<sup>st</sup> 8 weeks then allow progressive WBAT
2. D/C crutches when satisfactory quad strength (30 SLRs w/o lag)

**Brace:**

1. Must wear brace at all times when ambulating, but may unlock from 0-90° flexion to allow foot to clear floor
2. After week 8, may allow WBAT in brace from 0-90° flexion

**CPM:** *continue per surgeon request*

- on 4 hours, off 2 hours; may leave off at bedtime prn
1. set to start at 0° - 45°
  2. increase by 5-10° every hour until prn until reaches goal of 60° flexion

**Exercise:** **No hamstring work for 9 weeks.** *Exercise followed by 20 min ice with towel under heel cord – full extension)*

1. Quadriceps E-stim x 15 min (muscle re-education)
2. Quad sets x 100, SLR x 10
3. Heel slides x 30 (**Only up to 90° knee flexion**)
4. Prone hangs 5-10 min
5. Calf / ankle pumps with tubing
6. Hamstring (HS) stretching
7. Patellar mobilizations
8. Hip strengthening
9. Quad strengthening 30-90 degrees week 6

**Goals and Criteria for Progression to PHASE II:**

1. Full knee extension and good quad control (< 5° extensor lag)
2. Good patellar mobility
3. Active and passive **knee flexion to 90° only**
4. Pain under control and minimal effusion

**PHASE II: Week 12 through Week 18 – STRENGTHENING PHASE**

**PT Sessions:** Directed by physical therapist

**Ambulation:** WBAT w/o crutches

**Brace:** Discontinued after 8 weeks or when:

1. Pt has at least 0-90° AROM
2. Performs single leg balancing for 30 seconds
3. Demonstrates normal gait

**Exercise:**

1. Continue with PHASE I exercises, **but allow full knee flexion**
2. Initiate closed chain strengthening when gait is normal
  - a. mini squats (if no pain or crepitus)
  - b. heel raises and heel to toe rocking
  - c. single leg press 25% of body wt
  - d. **AVOID** active, open-chain quad extension
3. Initiate cardiovascular exercise
  - a. stationary bike for ROM (low resistance, seat high)
  - b. treadmill walking – forward
  - c. elliptical trainer
4. Proprioception drills:
  - a. single body blade
  - b. BAPS board (progress through levels w/ eyes open & closed)
  - c. plyoback training
5. Aquatic (pool) therapy
  - a. pool walking – forward and lateral
  - b. flutter kicks (knee remains extended)
  - c. weightless jogging

**Goals and Criteria for Progression to PHASE III:**

1. Full AROM (95% strength of uninjured knee)
2. Normal quad and HS control; no quadriceps extension lag
3. Minimal pain; no effusion
4. Normal patellar mobility
5. Normal gait without crutches
5. Stair ambulation w/ minimal difficulty (no sensation of giving-way)

**PHASE III: Week 18 through Week 24 (6 mo) – ADVANCED STRENGTHENING PHASE:**

**PT sessions:** Directed by physical therapist

**Brace:** low profile ACL sports brace to be worn during weight-bearing exercise

**Exercise:**

1. Continue with PHASE II exercises
2. Muscle strengthening
  - a. Leg press progression up to 50% of body weight (single leg)
  - b. Quad and HS strengthening – exercise to muscle failure
3. Cardiovascular exercise:
  - a. Retro-walking on treadmill (2mph @ 1% grade – progress prn)
  - b. Add resistance to stationary bike at 60 RPM (if no pain / crepitus)
  - c. Jogging (50-75% normal pace) on level surfaces – progress prn
  - d. *No cutting, jumping, twisting, or contact sports*
4. Advanced pool therapy:
  - a. Treading water
  - b. Kickboard swimming
  - c. Pool running, shuffling, and carioca

- d. Modified aquatic sports

**Goals and Criteria for Progression to PHASE IV:**

1. Jogging for 20 min at normal pace w/o pain, swelling, giving-way
2. No effusion

**PHASE IV: Week 24 through Week 30 –BASIC FUNCTIONAL TRAINING:**

**PT sessions:** Directed by physical therapist

**Brace:** low profile ACL sports brace to be worn during weight-bearing exercise prn

**Exercises:**

1. Continue with PHASE III exercises with increasing weight
2. Progress leg presses up to 75% of body weight
3. Begin leg extension machine from 90-45° only (if no pain or crepitus)
4. Agility and advanced proprioception exercises
5. Jumping / hopping progression
6. Jogging (100% normal pace) & Directional running (50-75% speed)

**Goals and Criteria for Progression to PHASE V:**

1. Jogging for 20 min at normal pace w/o pain, swelling, giving-way
2. No effusion

**PHASE V: Week 30 - 9 Months + -- ADVANCED FUNCTIONAL TRAINING**

**When rehabilitation goals are met**

1. Initiate straight line running when walk & slow jog is normal
2. Functional hop test as appropriate when running is normal
3. Functional progression to cutting and jumping
3. Begin full body weight. plyometrics prn
4. Return to sports prn when full strength and agility achieved  
*(Low-profile ACL sports brace when required by surgeon)*

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