

Meniscal Allograft Transplantation Rehabilitation Protocol

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Patient: _____ **DOS:** _____

Surgeon Parameters

Graft: ☐ Medial ☐ Lateral	Full weight bearing at _____ wks (default 8)	Concomitant: ☐ ACL ☐ Osteotomy ☐ Cartilage
Other Precautions:		

Parameters above are patient-specific and supersede the general timeframes below. **Healing of the graft to the capsule and bone is the rate-limiting factor: axial load is introduced in extension first, loaded flexion is kept shallow for 3 months, and impact is delayed to 6 months.** A concomitant osteotomy, cartilage, or ligament procedure may override the weight bearing below. Therapist to use clinical judgment to individualize exercise selection and pace within each phase.

Phase	Goals	Precautions	Treatment Focus
Phase 1 Weeks 0–6	Goals - Protect the graft; control pain and effusion - Full extension; flexion 90° by wk 4, ≥110° by wk 6 - Quad activation; SLR without lag - Patellar mobility	Precautions - Weight bearing with crutches, brace locked in extension: touch-down (foot-flat) wks 0–4 → 50% wks 4–6 - Brace locked in extension for walking and sleep; unlocked for ROM - Flexion 0–90° for 4 wks, then as tolerated; never forced - No weight bearing on a flexed knee; no squatting - No resisted hamstring curls; no pivoting or twisting	Treatment Focus - Quad sets, hamstring co-contractions, SLR in the brace until no lag; NMES; BFR if available from wk 2 - Heel slides within limits; prone hangs; patellar mobilization - Non-weight-bearing hip, core, and calf work - Cryotherapy, compression, elevation
► Advance to Phase 2 when: ≥6 wks, full extension, flexion ≥110°, minimal effusion, SLR without lag.			
Phase 2 Weeks 6–12	Goals - Full weight bearing and normal gait by ≈8 wks - Full ROM by 12 wks - Shallow closed-chain strength - Balance and proprioception	Precautions - Progress to full weight bearing over 2 wks; wean the brace as quad control allows - Loaded flexion 0–60° only; leg press ≤50% body weight at first - Leg extensions and curls: light weight, high repetition only - No pivoting, twisting, running, or jumping	Treatment Focus - Gait training; bike (high seat → normal height) - Leg press, mini-squats 0–60°, bridges, calf raises - Double-leg balance → single-leg stance - Pool once incisions are healed
► Advance to Phase 3 when: normal gait without a device, full ROM, effusion ≤ trace, shallow closed-chain work without symptoms lasting >24 hrs.			
Phase 3 Months 3–6	Goals - Build quad and hip strength (LSI ≥80%) - Single-leg control - Low-impact conditioning	Precautions - Loaded flexion ≤90° until 6 months; no deep squats or kneeling - No running, jumping, or pivoting - Effusion, joint-line pain, or patellofemoral symptoms → reduce load	Treatment Focus - Progressive open- and closed-chain resistance - Step-downs and single-leg squats from ≈16 wks - Treadmill walking forward and retro; bike, elliptical, swimming - Slide board (short → longer distance) - Single-leg balance and perturbation
► Advance to Phase 4 when: ≥6 months with surgeon clearance, full pain-free ROM, no effusion, quad and hamstring LSI ≥80%, controlled single-leg squat to 60°.			

Phase	Goals	Precautions	Treatment Focus
Phase 4 <i>Months 6–12</i>	Goals • Jogging progression • Plyometrics and sport-specific training as cleared • Strength and hop LSI $\geq 90\%$	Precautions • Running and impact only after surgeon clearance at ≈ 6 months • Cutting, pivoting, and contact sport: not before 8–9 months, and an individual decision with the surgeon	Treatment Focus • Walk–jog progression on a level surface • Plyometrics, double $\rightarrow$ single leg • Agility and sport-specific drills for speed and power • Strength and hop testing
► Full Release (typically 9–12 months): full pain-free ROM, no effusion or joint-line tenderness, quad/hamstring and hop LSI $\geq 90\%$, activity-specific progression completed, cleared by physician.			

Special Considerations

- The goal of transplantation is pain relief and joint preservation. Return to cutting and pivoting sport is possible but loads the graft; that decision is individualized with the surgeon
- New locking, catching, or recurrent effusion — contact the surgeon

Thank you for taking care of our patient.

This protocol serves as a general guideline and outline only. Our team defers to the clinical judgment and expertise of the treating physical therapist to make appropriate adjustments and modifications based on the individual patient's presentation, progress, and response to treatment. For any questions regarding this protocol, please contact Dr. Wollenman directly at (561) 215 – 0184.