

PATELLOFEMORAL OSTEOCHONDRAL ALLOGRAFT WITH TIBIAL TUBERCLE OSTEOTOMY

Post-Operative Physical Therapy Protocol



SCAN FOR THE
ONLINE VERSION



Stanford
MEDICINE

Dear Colleague,

I appreciate your partnership in the rehabilitation of this very special patient of ours. I have instructed the patient that you will be using this protocol. My belief is that the biggest predictor of success is what the patient does at home and consistently. **They should view you not just as a therapist but as a highly educated and skilled teacher** and the patient *must* be an active participant in the rehab process.

To facilitate this, I have included a copy of the rehab protocols I would like the patient to focus on at each time point in the rehab process. Please assist me by encouraging and teaching our mutual patient their home exercises as well.

With your help and the active participation of our patient, I know we can have another fantastic knee.

Please do not hesitate to reach out directly to me and my team with any questions at any time.

Respectfully,



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	WEEKS 0-2	WEEKS 2-6	WEEKS 6-12	MONTHS 3-6	MONTHS 6+
Weight bearing	Full <i>Brace locked</i>	Full <i>Brace locked</i>	Full <i>Brace unlocked</i>	Full	Full
Range of motion	PROM 0-45° <i>No active extension</i>	PROM 0-90° <i>Active flexion OK; no active ext</i>	Progress <i>As tolerated</i>	Full	Full
Brace	Locked straight <i>Except exercises</i>	Locked straight <i>Except exercises</i>	Unlocked walking <i>D/C when able</i>	None	None
Strengthening	Quad sets, SLR <i>Leg hang to 45°; mobs</i>	Quad, HS, glute sets <i>Heel slides, hip, core</i>	Closed chain <i>Wall sits, mini squats</i>	Open chain quads <i>Short arc; eccentric HS</i>	Sport-specific
Impact and sport	Optional CPM <i>0-45°</i>	Optional CPM <i>0-90°; as needed</i>	Stationary bike	Elliptical, bike, pool	Running from 6 mo <i>Sport ~9 months</i>

As tolerated means pain during exercise no more than 2/10 above baseline. Avoid pushing into pain.

WEEKS 0-2

- **Full weight bearing allowed, but the brace must be locked in full extension.**
- Brace locked in full extension when not performing the exercises below (sleeping, resting, etc.).
- **PROM 0 to 45°;** optional CPM 4 to 6 hours per day, 0 to 45° only.
- Passive leg hang to 45°; quad sets, patellar mobilizations, ankle pumps, straight leg raises.

WEEKS 2-6

- Continue WBAT with the brace locked in full extension.
- **PROM 0 to 90°;** may use CPM as needed (0 to 90°).
- **Heel slides with active knee flexion OK; no active knee extension.**
- Patellar mobilizations; quad, hamstring, and gluteal sets; side-lying hip and core exercises.

WEEKS 6–12

- Begin ambulation with the brace unlocked; may discontinue when able.
- Begin closed chain exercises (wall sits, mini squats with no weight), stationary bike.
- Unilateral stance activities and balance training.

MONTHS 3–6

- Maximize core, gluteal, and pelvic stability work.
- Slowly incorporate open chain quad exercises (begin with short arc, then progress).
- Eccentric hamstring exercises.
- Advance to elliptical, bike, and pool activity as tolerated.

MONTHS 6+

- Return to sport-specific activities.
- **Run progression and jogging can begin at this point (around 6 months).**
- **Return to sport around 9 months**, once strength and hop testing are at 90% or better and Dr. Tummala clears the patient.

CRITERIA TO RETURN TO SPORT

- Full ROM compared with the uninvolved side.
- No effusion.
- Normal gait and pain-free activities of daily living.
- Quadriceps strength at least 90% of the uninvolved side.
- Single-leg hop tests at least 90% of the uninvolved side.
- Around 9 months after surgery.

WEEK-BY-WEEK PROGRESSION

EXERCISE	1	2	3	4 (1 mo)	5	6	7	8 (2 mo)	9	10	12 (3 mo)	16	20	24 (6 mo)
Initial Exercises														
WBAT, brace locked straight (except exercises)														
Brace unlocked for walking; D/C when able														
PROM 0-45°, leg hang to 45°														
PROM 0-90°; active flexion OK, no active extension														
Optional CPM within ROM limits														
Quad sets, patellar mobs, ankle pumps, SLR														
Quad, HS, glute sets; side-lying hip and core														
Advanced Exercises														
Closed chain: wall sits, mini squats (no weight)														
Unilateral stance, balance														
Open chain quads (short arc first)														
Eccentric hamstrings; core and pelvic stability														
Cardiovascular Exercises														
Stationary bike														
Elliptical, pool														
High-Level Activities														
Running from 6 months; sport around 9 months														

This protocol is a general guideline and does not replace the clinical judgment of the treating therapist and surgeon. Please contact our office with any questions.