

MEDIAL OPENING WEDGE HIGH TIBIAL OSTEOTOMY WITH FEMORAL CONDYLE OSTEOCHONDRAL ALLOGRAFT

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 6-8	WEEKS 8-12	WEEKS 12-24	MONTHS 6-12
Weight bearing	NWB <i>Crutches</i>	NWB <i>Crutches</i>	Begin WBAT <i>Full by 8 weeks</i>	Full <i>Gait training</i>	Full	Full
Range of motion	Gentle PROM 0-90° <i>Goal 0-90°</i>	0-90° <i>Goal 0-125°</i>	Progress to full	Progress to full	Full	Full
Brace	Locked straight	Locked straight <i>Walking, sleeping</i>	Locked until off <i>crutches</i>	None	None	None
CPM	6 h/day <i>0-40°, +10°/day</i>	6 h/day <i>To 90°</i>	Stop			
Strengthening	Quad sets (brace at 0°) <i>Heel slides, ankle pumps</i>	Side-lying hip, core <i>Quad sets, stretching</i>	Total Gym, heel raises <i>Eccentric quads, HS</i>	Closed chain; lunges, leg press 0-90° <i>only</i>	Walking lunges, planks <i>Bridges, ball, half-bosu</i>	Functional activity
Impact and sport	None	None	None	Stationary bike	Bike	Sport ~9 months <i>When cleared</i>

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

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.

WEEKS 0–2

- **NWB for 6 to 8 weeks with crutches.**
- Brace locked in full extension.
- Quad sets with brace locked at 0°; heel slides; ankle pumps.
- **Gentle PROM 0 to 90°.**
- **Weeks 0 to 6: CPM 6 hours/day**, beginning at 0 to 40° and advancing 10° as tolerated daily until 90° is reached.

WEEKS 2–6

- Brace locked in extension when ambulating and sleeping.
- Side-lying hip and core.
- Advance quad sets and stretching.

WEEKS 6–8

- Addition of heel raises; Total Gym (closed chain).
- Eccentric quads, eccentric hamstrings.
- Advance core, glutes, and pelvic stability.
- **Begin WBAT progression; advance to full WBAT by 8 weeks.**

WEEKS 8–12

- Gait training; progress closed chain activities.
- Advance hamstring work; lunges and leg press 0 to 90° only; proprioception and balance exercises.
- Begin stationary bike.

WEEKS 12–24

- Advance phase III exercises and functional activities: walking lunges, planks, bridges, Swiss ball, half-BOSU exercises.
- Advance core, glutes, and balance.

MONTHS 6–12

- Advance functional activity.
- **Return to sport-specific and impact activity when cleared, usually around 9 months**, once strength and hop testing are at 90% or better.

WEEK-BY-WEEK PROGRESSION

EXERCISE	1	2	3	4 (1 mo)	5	6	7	8 (2 mo)	9	10	16	20	26 (6 mo)	32				
Initial Exercises:																		
ROM Goals	0-90°		0-125°			Progress to full												
Flexion/extension, wall slides																		
Flexion/extension- seated																		
Patella/Tendon mobilization																		
Extension mobilization																		
Quad Series																		
Hamstring strength progression																		
Sit and reach for hamstrings (towel)																		
Ankle Pumps																		
Crutch weaning (full WBAT by 8 weeks)	NWB						WBAT											
SLR (w/ brace until quad control restored)																		
Toe and Heel Raises																		
Balance Series																		
Weight-bearing Strength Exercises:	1	2	3	4	5	6	7	8	9	10	16	20	26	32				
Leg Bridges (2 → 1 leg)	NWB																	
SLS Balance progressions																		
Beginning cord exercises																		
Squat/Leg press (ISO → reps, 2 → 1 leg)																		
Step-up/Lunge Progressions																		
Dead Lift (2 → 1 leg)																		
Cardiovascular Exercises:	1	2	3	4	5	6	7	8	9	10	16	20	26	32				
Bike with non-operative leg-no resistance																		
Bike with both legs-no resistance progress as tolerated	NWB																	
Aqua jogging																		
Treadmill-walking (no limp)																		
Swimming with fins																		
Elliptical Trainer																		
Stair stepper																		
*Note for Cardio Exercises	Must tolerate daily walking with no limp & no significant increase in pain/swelling prior to initiating WB cardio (walk, elliptical, stepper)																	
Agility Exercises:	1	2	3	4	5	6	7	8	9	10	16	20	26	32				
Running Progression	NWB																	
Initial-Single Plane																		
Advance-Multi Directional																		
High Level Activities:	1	2	3	4	5	6	7	8	9	10	16	20	26	32				
Golf Progression	NWB																	
Outdoor biking, hiking, running																		
Return to Full Sport at 9 months post-op																		

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.