

High Tibial / Distal Femoral Osteotomy Rehabilitation Protocol

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Patient: _____ **DOS:** _____

Surgeon Parameters

Osteotomy: ☐ HTO ☐ DFO ☐ Opening wedge ☐ Closing wedge	Full weight bearing at _____ wks	Concomitant: ☐ Meniscus/root repair ☐ Cartilage ☐ Ligament
Addl: ☐ Hinge fx ☐ Large correction	Other Precautions:	

Parameters above are patient-specific and supersede the general timeframes below. **Osteotomy healing is the rate-limiting factor: weight bearing is graded over the first 6–8 wks, and impact waits for radiographic union.** ROM is unrestricted. A concomitant meniscus/root repair, cartilage, or ligament procedure follows the more restrictive protocol. 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 osteotomy; control pain and swelling - Full extension; flexion $\geq 120^\circ$ by 6 wks - Quad activation; SLR without lag	Precautions - Opening-wedge HTO: touch-down (≈ 20 lb) wks 0–2 $\rightarrow$ 50% weight-bearing wks 2–6 $\rightarrow$ advance to full If closing wedge (HTO or DFO): 50% weight-bearing wk 2 $\rightarrow$ 75% wk 4 $\rightarrow$ full by wk 6 If opening wedge DFO, hinge fracture, or large correction: touch-down for 6 wks - Brace locked in extension for walking until SLR has no lag; off for ROM - No ROM limit; no impact	Treatment Focus - Quad sets, hamstring co-contractions, SLR in the brace; NMES; BFR if available from wk 2 - Heel slides, extension hangs, patellar mobilization - Calf stretches, ankle pumps; non-weight-bearing hip and core work - Bike without resistance for ROM from wk 4
► Advance to Phase 2 when: ≥ 6 wks, radiographs reviewed by the surgeon, full extension, flexion $\geq 120^\circ$, SLR without lag.			
Phase 2 Weeks 6–12	Goals - Full weight bearing and normal gait by ≈ 8 wks - Full ROM - Closed-chain strength - Balance and proprioception	Precautions - Advance WBAT: 2 crutches for 1 wk $\rightarrow$ 1 crutch for 1 wk $\rightarrow$ none - Brace off at 6 wks; no impact - Increasing pain at the osteotomy with weight bearing $\rightarrow$ hold progression and await surgeon/radiographic clearance	Treatment Focus - Gait training; stationary bike - Closed-chain strengthening (isometric $\rightarrow$ dynamic); core and pelvic stability - Joint mobilization for terminal ROM as needed - Balance re-education; pool once healed
► Advance to Phase 3 when: normal gait without a device, full ROM, effusion $\leq$ trace, no osteotomy-site pain with loading.			
Phase 3 Months 3–6	Goals - Build strength (quad LSI $\geq 80\%$) - Non-impact conditioning - Begin impact once the osteotomy has united	Precautions - No running or impact until radiographic union and surgeon clearance (typically 4–6 months) - Progress load by response	Treatment Focus - Progressive strengthening: core, hips, quads, hamstrings - Cycling, elliptical, swimming, rowing - Walk-jog progression once cleared
► Advance to Phase 4 when: radiographic union, quad LSI $\geq 80\%$, pain-free brisk walking and stairs.			
Phase 4 Months 6–9	Goals - Return to impact activity, sport, or heavy work - Strength LSI $\geq 90\%$	Precautions No formal restrictions after radiographic clearance; progress impact only if strength is adequate	Treatment Focus - Running, plyometric, and agility progression as goals require - Sport- or work-specific training
► Full Release (typically 6–9 months): radiographic union, full ROM, no effusion, strength $\geq 90\%$ of contralateral, activity-specific progression completed, cleared by physician.			

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.