



Post-operative Rehabilitation Protocol
High Tibial Osteotomy/Distal Femoral Osteotomy

Phase 1 (0-4 weeks post op):

Goals	<ul style="list-style-type: none">• Minimize pain• Reduce edema• Restore ROM
Brace/Precautions/ Crutch Use	<ul style="list-style-type: none">• Weight bearing:<ul style="list-style-type: none">○ 0-4 weeks: toe-touch to 25% weight-bearing• Brace: 0-2 weeks: 0-90 degrees; 2-4 weeks: open to available range<ul style="list-style-type: none">○ Leave brace unlocked at all times following resolve of nerve block○ Brace may be removed for hygiene and therapy• Avoid active hamstring activity for first 2 weeks
Range of Motion	<ul style="list-style-type: none">• Weeks 0-2: 0-90 degrees• Weeks 2+: progress to full ROM• Patellofemoral joint mobilizations
Strengthening	<ul style="list-style-type: none">• Restore quadriceps recruitment through strengthening exercises• Quadriceps, hamstring, and gluteal strengthening exercises• Exercises to reduce swelling/ effusion (modalities as needed)• Quadriceps NMES• Avoid active hamstring exercises for first 2 weeks
Home Instructions	<ul style="list-style-type: none">• Keep surgical dressings clean and dry• Change surgical bandages on the 2nd day after surgery (keep covered until first clinic visit)• Avoid getting sutures wet until at least 5 days after surgery (do not scrub, soak, or submerge the incisions)• Note DVT (blood clot) prophylaxis medications provided by your surgeon to take following surgery – follow those instructions carefully.
Suggested Exercises	<ul style="list-style-type: none">• Ankle pumps• Quad isometrics• SAQ and LAQ (through protected ROM- 90-45 degrees)• SLR 4-ways• Flexion and extension ROM exercises• Cycling for ROM only (week 2)• Clamshells

Phase 2 (4-8 weeks post op):

Goals	<ul style="list-style-type: none">• Improve muscular strength and endurance• Full, pain-free ROM
Brace/Precautions/ Crutch Use	<ul style="list-style-type: none">• Medial Opening Wedge HTO:<ul style="list-style-type: none">○ Weeks 0-4: TTWB to 25% WB○ Weeks 4-6: 50% WB○ Weeks 6-8: WBAT with crutches• Brace: Discontinue after 6 weeks if capable of SLR without extensor lag

Range of Motion	<ul style="list-style-type: none"> Restore full, pain-free active ROM
Strengthening	<ul style="list-style-type: none"> Continue strengthening exercises from Phase I Advance to multi-angle knee isometrics Advance gluteal strengthening exercises to closed chain (bridges) Closed chain quadriceps exercises (mini-squats, wall sits, TKE) Open chain knee extension (week 7+) Open chain hamstring exercises (week 6+)
Home Instructions	<ul style="list-style-type: none"> Restore normal activities of daily living (within weight-bearing restrictions)

Phase 3 (8-16 weeks post-op):

Goals	<ul style="list-style-type: none"> Normalize gait Progress balance and NM control Progress lower extremity and gluteal strengthening Maintain full ROM
Brace/Precautions/ Crutch Use	<ul style="list-style-type: none"> Caution should be exercised when engaging in CKC knee flexion of approximately 90 degrees and stepping downstairs in early postoperative period Full weight-bearing without crutches
Range of Motion	<ul style="list-style-type: none"> Maintain full ROM
Strengthening	<ul style="list-style-type: none"> Continue strengthening exercises from Phase 2 Progress balance and proprioception exercises (integrate balance with strengthening exercises- BOSU squats & lunges) Advance lower extremity strengthening exercises (open and closed chain) Advance gluteal strengthening exercises Include cardiovascular conditioning with elliptical, swimming, and cycle (12+ weeks) <p>Precautions:</p> <ul style="list-style-type: none"> Weeks 8-10 <ul style="list-style-type: none"> Limit mini-squats 0-45 degrees Weeks 10-12 <ul style="list-style-type: none"> Heel taps 2-4" Step ups 6-8" Weeks 12-14 <ul style="list-style-type: none"> Resisted OKC quadriceps strengthening through full ROM
Home Instructions	<ul style="list-style-type: none"> Maintain normal activities of daily living

Phase 4 (3+ month):

Goals	<ul style="list-style-type: none"> Progress to sport specific activities
Precautions/ Crutch Use	<ul style="list-style-type: none"> None
Range of Motion	<ul style="list-style-type: none"> Maintain full ROM
Strengthening	<ul style="list-style-type: none"> Continue previous exercises with progressive resistance Begin running progression program Month 4+: agility drills and plyometrics can begin along with any other sport-specific exercises
Home Instructions	<ul style="list-style-type: none"> Maintain normal activities of daily living Transition to home/gym program