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Post-operative Rehabilitation Protocol:

High Tibial Osteotomy or 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
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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) Precautions: <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

Physician's Signature: _____

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