

HIGH TIBIAL OSTEOTOMY

Physical Therapy, Strength and Conditioning

PHASE I: MAXIMUM PROTECTION (0 TO 1 WEEK)

- Ice and modalities to reduce pain and inflammation
- Use crutches toe touch weight bearing for 6 weeks
- Brace locked in full extension for 1 week.
- Initiate patella mobilizations
- Begin full passive/active knee range of motion exercises
- Quadriceps setting focusing on VMO restoration
- Multi-plane open kinetic chain straight leg raising
- Gait training with crutches (TTWB)

PHASE II: PROGRESSIVE STRETCHING AND EARLY STRENGTHENING (WEEKS 1 TO 8)

- Maintain program as outlined in week 0 to 1
- Continue with modalities to control inflammation
- Initiate global lower extremity stretching program
- Brace 0-90 degrees weeks 1-6. Brace 0-120 weeks 6-10.
- Passive and active ROM 0-90 degrees until 6 weeks. Gradually progress to full ROM after 6 weeks.
- Begin stationary bike (no resistance) and pool exercise program (when incisions healed)
- Implement reintegration exercises emphasizing core stability
- Closed kinetic chain multi-plane hip strengthening on uninvolved side
- Multi-plane foot and ankle strengthening

PHASE III: STRENGTHENING AND PROPRIOCEPTIVE PHASE (WEEKS 8 TO 12)

- Begin partial weight bearing at 50% at week 6 for 4 weeks. Full weight bearing with crutches weeks 10-12 pending x-ray appearance. Weight bearing as tolerated without assistance at 12 weeks.

Weeks 10 to 12:

- Discontinue brace
- Normalize gait pattern
- Advance stationary bike program; begin treadmill walking and elliptical trainer; avoid running and impact activity
- Initiate closed kinetic chain exercises progressing bilateral to unilateral
- Step-up progression

PHASE IV: ADVANCED STRENGTHENING (WEEKS 12 TO 24)

- Initiate gym strengthening-beginning bilateral progressing to unilateral
- Leg press, heel raises, hamstring curls, squats and step-ups
- Encourage NM endurance with biking, walking, elliptical and swimming (non-impact)
- May begin functional work on court (doubles tennis) or interval golf progression at 20 weeks.

PHASE V: RETURN TO SPORT/FUNCTIONAL PROGRAM (WEEK 24)

- Follow-up examination with physician
- Continue with lower extremity strengthening, cardiovascular training, and flexibility for long term optimal knee health (avoiding impact activity)