



ROSENBERG COOLEY METCALF  
THE ORTHOPEDIC CLINIC AT PARK CITY

**Charles C. Lind, MD  
High Tibial Osteotomy  
Post-Operative Protocol**

**Phase I – Maximum Protection (0 to 1 week):**

**0 to 1 week:**

- Ice and modalities to reduce pain and inflammation
- Use crutches **non-weight bearing for 8 weeks; progress off as instructed by physician**
- Elevate the knee above the heart for the first 3 to 5 days
- Initiate patella mobility drills
- 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 (NWB)

**Phase II – Progressive Stretching and Early Strengthening (Weeks 1 to 8):**

**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
- Begin stationary bike and pool exercise program (when incisions healed)
- Implement reintegration exercises emphasizing core stability
- Closed kinetic chain multi-plane hip strengthening on uninvolved side
- Manual lower extremity PNF patterns
- Proprioception drill emphasizing neuromuscular control
- Multi-plane ankle strengthening

**Phase III – Strengthening and Proprioceptive Phase (Weeks 8 to 12):**

**Weeks 8 to 10:**

- Modalities as needed
- Continue with Phase II exercises as indicated
- **As instructed by physician:** Begin partial weight bearing at 25% of body weight and increase by 25% approximately 3 days. May progress to one crutch at 9.5 weeks as tolerated, gradually wean off of crutches by week 10-12.

**Weeks 10 to 12:**

- 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
- Initiate proprioception training

#### **Phase IV – Advanced Strengthening (Weeks 12 to 24):**

##### **Weeks 12 to 16:**

- Initiate gym strengthening-beginning bilateral progressing to unilateral Leg press, heel raises, hamstring curls, squats, lunges, knee extensions (30° to 0° as tolerated).

##### **Weeks 16 to 24:**

- Continue with advanced strengthening
- Begin functional cord program

#### **Phase V – Return to Sport/Functional Program (Week 24):**

- Follow-up examination with physician
- Implement sport specific multi-directional drills
- Continue with lower extremity strengthening, cardiovascular training, and flexibility
- Sports test for return to play