



Experience With Proven Results

4140 Centennial Hills Boulevard • Casper, WY 82609 • (307) 265-7205

## ***HIGH TIBIAL OSTEOTOMY***

*Revised SEP 2013*

### **SPECIAL PRECAUTIONS/ LIMITATIONS:**

#### **1) CRUTCHES/ WEIGHT BEARING:**

- **TOE TOUCH WEIGHT BEARING (TTWB) in brace locked at 0 extension X 6 WEEKS.**
- **Partial weight bearing will be progressed after 6 weeks with clearance and guidance of surgeon.**

#### **2) BRACE: 9 to 12 WEEKS:**

- **Wear at all time to include sleep.**
- **ROM set at 0-90' and can unlock for sitting.**
- **Length of time in brace by surgeon preference.**

#### **3) ROM:**

##### **FLEXION LIMITATION:**

- **90 degrees x 6 WEEKS- bending knee with no load applied (i.e. NO squat or leg press)**
- **Progress flexion as tolerated after 6 weeks per guidance of surgeon**

**\*\*\*Patient educated in the application of the post-op brace assuring that hinges are properly aligned with knee and how to lock and unlock brace\*\*\***

### **ADDITIONAL INSTRUCTIONS:**

- 1) Help prevent patellar entrapment from post-op scarring by doing patellar mobilization, lateral patellar tilting and scar mobilization starting at about 5-7 days post-op.**
- 2) Achieving FULL PASSIVE EXTENSION as soon as possible and MAINTAINING it is essential.**
- 3) Additional limitations to the rehabilitation plan may be added post-operatively depending on associated surgical findings and surgeon's preference. Adherence to the protocol guidelines and maintaining a consistent home exercise program as directed is critical in achieving an optimal outcome.**
- 4) Liberal use of "Game Ready" ice/ compression device if available or ice packs, compression Ace wrap and/or TED Hose and elevation of lower extremity should be done to control swelling.**



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## **REHABILITATION PROGRAM**

### **PHASE I: WEEKS 0-4:**

#### **WEIGHT BEARING and BRACE:**

- Gait training w/crutches TTWB in post-op brace locked at 0° extension during ambulation
- Can open brace 0-90° when not ambulating for sitting.

#### **RANGE OF MOTION:**

- 1) FULL PASSIVE Extension
- 2) AA and AROM Flexion LIMITED to 90 degrees
- 3) Patellar day 1-2; Scar mobilization once incisions healed.

#### **STRENGTHENING:**

- Ankle pumps, QS,
- SLR's *in brace* w/o weight
- HS curls w/o weight
- Electrical stimulation to quad as needed.
- Short Arc quad – progress light ankle weights as tolerated

#### **GOALS:** Full passive extension asap

Flexion 90 limit

Quad control

Pain and swelling control

Maintain patellar mobility

Crutches with Toe Touch Weight bearing ambulation in locked brace

### **PHASE II: WEEKS 5-6:**

**WEIGHT BEARING/ BRACE: Continue TTWB in brace locked at 0 extension during ambulation.**

**RANGE OF MOTION: Continue 90 Flexion limit.**

**STRENGTHENING: continue above.**

- **ADD: light** Ankle weights and no brace for SLR's (**if no ext. lag**) and HS curls.

**Progress to:**

- **4 WAY multi hip machine.**



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**STRETCHING:** gentle IT band, HS, Hip flexors

**GOALS:** Protected ROM limit 90  
Protected Toe Touch Weight bearing ambulation in locked brace  
Improved strength, endurance, balance, function  
Control pain and swelling

**PHASE III: 6-9 weeks:**

**BRACE:** continue post-op brace.

**WEIGHT BEARING:** Progress to 25 – 50% partial weight bearing per surgeon guidance.

**ROM:** Progress to FULL Flexion as tolerated

**EXERCISE Progression:**

- Continue previous above
- Bicycling light resist

**GOALS:** Full ROM

**PHASE IV: 9 weeks - 4 months:**

**BRACE:** continue post-op brace until OK'd to DC by surgeon/ PT.

**WEIGHT BEARING:** Progress to partial weight bearing per surgeon guidance to Full at 12 weeks. Gait training as needed.

**RANGE OF MOTION:** maintain FULL Active and Passive ROM

**EXERCISE:** continue above and **ADD:**

- **PWB Total Gym Squats and toe raises**
- **Leg Press-** light resist: weight machine or with Sport Cord
- **Single leg weight shifting to balancing**
- **Bicycle-** add resistance and time; interval training as tolerated

**GOALS:** weight bearing protection and progression; strength, balance and conditioning



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### **PHASE V: 4-6 MONTHS:**

#### **EXERCISE Progression:**

- **“Mini” Lunges-** forward and lateral ; progress to Sport Cord
- **“Mini” Squats-** progress to single leg (ROM as above)
- **Controlled Eccentric Step downs-** forward and lateral
- **Progressive HS strengthening: on machine, bridging on gym ball, TRX, “repeated contractions”, “Glut kicks” drill**
- **Theraband Side – Steps**
- **“Steamboats”--** bilateral
- **Treadmill-** Forward and retro walking
- **Elliptical Trainer-** progress as tolerated
- **Stairmaster-** single light resist, progress to double legged
- **Slowly Progress Balance/ Proprioceptive/ strength training** on unstable platforms
- **Slider Board**
- **Harness resisted Squats and Step-ups/downs**
- **Shuttle MVP :** squat progressions advancing to Plyometrics
- **Home /GYM program for progressive bicycling, elliptical trainer and light weight training.**

**GOALS:** Progress to normal gait

Progression of strength, endurance, functional activity, and independence

### **PHASE VI: 6 + MONTHS:**

Continue above.

#### **Progression:**

- **Progressive Balance/ Proprioceptive/ strength, Functional LE training**
- **Return to Run program ONLY if CLEARED** by surgeon and PT – criteria: 80% of uninvolved Single Leg Hop for time (15 seconds) and distance tests
- **RETURN TO FULL ACTIVITY/ DUTY: when cleared by surgeon and PT.**
- **Continue on a Home/ Gym based program with periodic Follow-up in PT and Orthopedic Clinics.**

**GOALS:** Normalized activity, strength, endurance, agility.

progressive Jog/ Run on treadmill or level ground.