



# Travis C. Burns, MD

Sports Medicine and Shoulder Reconstruction  
Arthroscopic Shoulder, Hip, and Knee Surgery

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## HTO – High Tibial Osteotomy

### General Guidelines

- Obtain full extension within 2 weeks after surgery
- Crutches for 6 weeks, non weight bearing
- Long leg brace for 6 weeks
- Knee range of motion as tolerated
- Run straight ahead on even ground at 3-4 months
- Return to sports at 6-9 months

### Post-op Days 1 – 14

**Goals:** Full passive extension and flexion to 90 degrees, obtain good quad control

- POD 2: Change dressing, keep wound covered, continue TED Hose
- POD 10-14: Sutures out, D/C TED Hose when effusion resolved
- Crutches – NWB 6 weeks

#### **Therapy:**

Patellar mobilization (teach patient)

Calf pumping

Passive extension with heel on bolster or prone hangs

Electrical stimulation with quad sets and SLR

Quad sets, Co-contractions quads/hams

Straight leg raise (SLR) x 4, in brace (parallel bars if poor quad control) Stretches – Hamstring,

Hip flexors, ITB

Ice pack with knee in full extension after exercise

### Weeks 2 – 4

**Goals:** ROM 0-120 degrees, no effusion, no extensor lag

#### **Therapy:**

Brace – Open to available range

Crutches – NWB

AROM, AAROM 0-120 degrees

Scar mobilization when incision healed

Co-contractions quads/hamstring at 0, 30, 60, 90 degrees

SLR x 4 on mat, no brace – Add weight above knee if good quad control Stationary bike for ROM

### Weeks 4 – 8

**Goals:** Full ROM

#### **Therapy:**

Brace – Open to available range  
Crutches – NWB x 6wks then Partial weight bearing (PWB) Continue appropriate previous exercises  
PROM, AAROM, AROM to regain full motion  
SLR x 4 on mat, no brace – Light weight below the knee Weight shifts, Mini squats – In parallel bars  
Leg press with light resistance  
Hamstring curls – Carpet drags or rolling stool  
Double leg heel raises  
Stationary bike – Progressive resistance and time  
Pool therapy – Chest deep exercises in sagittal plane only

### **Weeks 8 – 12**

**Goal:** Full ROM, normal gait

#### **Therapy:**

Brace – Continue until 12 weeks post-op  
Crutches – Weight bearing as tolerated (WBAT) (D/C when gait is normal) Continue appropriate previous exercises  
Forward, lateral and retro step downs – No flexion > 45 degrees (small step) SLR x 4 with Theraband bilaterally  
Wall squats – No knee flexion past 45 degrees Single leg heel raises  
Proprioceptive training – Single leg standing in parallel bars  
– Double leg BAPS for weight shift  
– Progress to single leg BAPS, ball toss and body blade  
Treadmill – Forwards and backwards walking – Walking progression program Elliptical trainer  
Pool therapy – Walk in waist deep water

### **Months 3-4**

**Goal:** Jog 2 miles at 15 min/mile pace

#### **Therapy:**

D/C crutches and brace  
Continue appropriate previous exercises with progressive resistance Forward, lateral and retro step downs – Medium to large step  
Hamstring curl weight machine  
Knee extension weight machine  
Hip weight machine x 4 bilaterally  
Fitter  
Slide board  
Stairmaster  
Swimming  
Treadmill – Running progression program

### **Months 4 – 6**

**Goals:** Return to all activities

**Therapy:**

Continue appropriate previous exercises Agility drills / Plyometrics

Sit-up progression

Progressive weight training program

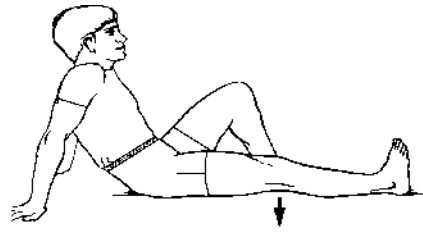
Running progression to track

Transition to home / gym program

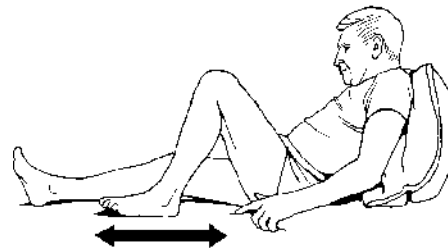
## Knee Post Op Phase 1

Perform exercises below frequently: 30 reps 3-5x a day

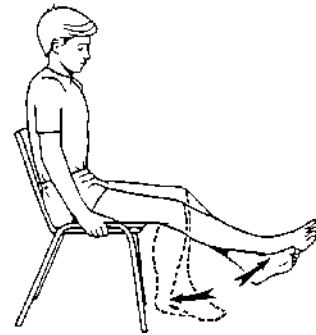
**Quad Isometrics**



**Heel Slides**



**Active Assisted Motion**



**Ice Position 15 minutes 2-3 x  
per day**

