



## PHYSICAL THERAPY SECTION

### ACL RECONSTRUCTION – BONE-TENDON-BONE AUTO / ALLOGRAFT

*Revised November 2016*

*Adapted from William Beaumont Army Medical Center*

#### **Post-op Days 1 – 14**

Dressing – POD 1: Debulk dressing, TED Hose in place  
– POD 2: Change dressing, keep wound covered, continue TED Hose  
– POD 7-10: Sutures out, D/C TED Hose when effusion resolved  
Brace x 4 weeks – Locked in extension for ambulation  
– Open to available range when pt has good quad control (no extensor lag)  
Crutches – weight bearing as tolerated (WBAT) in brace (D/C when gait is normal – generally at 2 weeks)  
Patellar mobilization (teach patient)  
Calf pumping  
AAROM 0-90 degrees (passive extension, active flexion, heel slides)  
Passive extension with heel on bolster or prone hangs  
Electrical stimulation in full extension with quad sets and SLR  
Quad sets, Co-contractions quads / Hamstring  
Straight leg raise (SLR) x 4 on mat (in brace if poor quad control)  
Mini squats – 0-45 degrees in parallel bars  
Weight shifts  
Total Gym (level 3-5) – Mini squats 0-45 degrees  
– Passive flexion to 90 degrees max (push up with opposite leg)  
Leg press 0-45 degrees with light resistance (up to ¼ body weight)  
Hamstring curls – Carpet drags or rolling stool (closed chain)  
Double leg heel raises  
Parallel bar ambulation – Forwards / backwards / lateral  
Stationary bike for ROM – Complete cycle as able  
Ice Pack with knee in full extension after exercise

#### **Goals**

Full passive extension  
Flexion to 90 degrees  
Good quad control

#### **Weeks 2 – 4**

Brace x 4 weeks – Open to available range  
Crutches – WBAT, D/C when gait is WNL  
Continue appropriate previous exercises and following ex without brace  
Scar massage when incision healed  
AAROM, AROM through full range as tolerated  
Electrical stimulation – Continue as needed  
SLR x 4 on mat – Add light ankle weights if quad control is maintained

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Wall squats – No knee flexion past 45 degrees  
Total Gym – Progress levels of Mini-squats, 0-45 degrees  
Leg Press 0-45 degrees with resistance no more than ½ body weight  
Hamstring curls on weight machine with light resistance  
Forward, lateral and retro step downs in parallel bars  
– No knee flexion past 45 degrees (small step)  
Single leg heel raises  
Proprioceptive training – Single leg standing in parallel bars  
– Double leg BAPS for weight shift  
Stationary bike – Progressive resistance and time  
Treadmill – Forwards and backwards walking  
Stretches – Hamstring, Hip Flexors, ITB

### **Goals**

ROM 0-110 degrees  
No effusion  
No extensor lag

### **Weeks 4 – 6**

D/C Brace  
Continue appropriate previous exercises  
PROM, AAROM, AROM to regain full motion  
Standing SLR x 4 with Theraband bilaterally  
Mini squats, Wall squats 0-60 degrees – Progress to single leg  
Leg press 0-60 degrees with resistance no more than ½ body weight  
Forward, lateral and retro step downs 0-60 degrees (medium step)  
Proprioceptive training – Single leg BAPS, ball toss and body blade  
Elliptical trainer  
Pool therapy – Walking / running (no kicking)

### **Goals**

Full ROM  
Normal gait

### **Weeks 6 – 9**

Continue appropriate previous exercises  
Wall squats 0-90 degrees  
Leg press 0-90 degrees with resistance as tolerated  
Hamstring curls with resistance as tolerated  
Forward, lateral and retro step downs 0-90 degrees (large step)  
Hip weight machine x 4 bilaterally  
Proprioceptive training – Grid exercises  
Stationary bike – 15-20 minutes at a time, at least 70 rpm  
Treadmill – Walking progression program

**Goal** – Walk 2 miles at 15 min/mile pace

### **Weeks 9 – 12**

Continue appropriate previous exercises with progressive resistance  
Fitter  
Slide board  
Functional activities – Figure 8s, gentle loops, large zigzags  
Stairmaster – Small steps  
Pool therapy – No swimming laps  
Quad stretches

**Goal** – Walk 3 miles at 15 min/mile pace

### **Months 3 – 4**

Isokinetic testing at 180 and 300 degrees/sec – Must have 80%  
of opposite leg to clear for straight line running  
Continue appropriate previous exercises  
Knee extension weight machine  
Short arc quads  
Agility drills / Plyometrics  
Treadmill – Running progression program if cleared  
Pool therapy – Swimming laps

**Goal** – Run 2 miles at easy pace

### **Months 4 – 6**

Repeat Isokinetic testing as needed  
Continue appropriate previous exercises  
Sit-up progression  
Running progression to track  
Transition to home / gym program

#### **Goals**

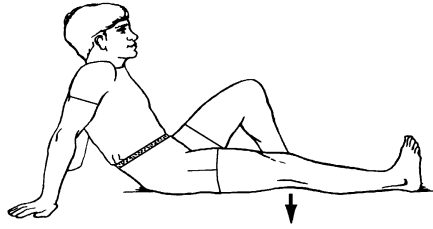
Return to all activities  
Pass APFT at 6 months post-op

***No contact sports until 6 months post-op***

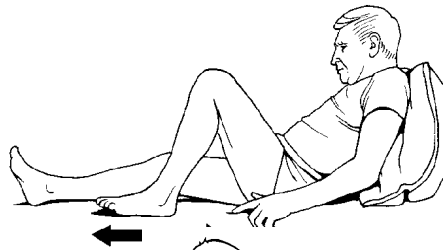
## Knee Post Op Phase 1

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**

