

## Achilles Tendon Repair Percutaneous or Open Rehabilitation Protocol

### General notes:

Time frames mentioned in this protocol should be considered approximate with actual progression based upon clinical presentation. Physician appointments as well as continued assessment by the treating practitioner should dictate progress.

Avoid forceful active and passive range of motion of the Achilles for 10-12 weeks.

Carefully monitor the tendon and incisions for mobility and signs of scar tissue formation. Regular soft tissue treatments (i.e. scar mobilization and friction massage) may be used to decrease fibrosis.

All exercises should be carefully observed for any signs of compensation or guarding.

No running, jumping, or ballistic activities for 6 months.

Aerobic and general conditioning may be done throughout the rehabilitation process.

M.D. appointments at day one, day eight through ten, month one, month two, month four, month six and one year post-op.

Ice should be applied to the Achilles/foot/ankle area for 15 to 20 minutes following each exercise, therapy, or training session.

Return to sport based on provider team (physician, physician assistant, athletic trainer, therapist) input and appropriate testing.

### 0 – 3 Weeks:

**Brace:** Boot locked, 30 degrees of plantar flexion

### **Weight Bearing:**

NWB (non-weight bearing) in cast, must use crutches

### **ROM (range of motion) Goals:**

Dorsiflexion (ankle bent up): none  
Plantar flexion (ankle bent down): 30 degrees

### **Therapeutic Exercises:**

- Strengthening: toe curls, toe spreads, gentle foot movement in boot, straight leg raises, knee flexion/extension
- Conditioning: UBE (upper body exercise bike), single leg stationary bike with uninvolved leg, weight training

### **Manual Therapy:**

Scar massage

**Cryotherapy (ice treatments):** six to eight time a day for 20 minutes

### Weeks 3 to 8:

**Brace:** Continue with boot; plantar flexion DECREASED five degrees per week until 10

degrees of plantar flexion (allowing progression of dorsiflexion)

### **Weight Bearing:**

Gradually increasing from toe-touch to partial, as tolerated; continue with crutches' after 6 weeks, full weight bearing OK

### **ROM (range of motion) Goals:**

- Dorsiflexion (ankle bent up): passive (someone else moves ankle for you) beginning at 6 weeks
- Plantar flexion (ankle bent down): 30 degree

### **Therapeutic Exercises:**

- Strengthening: Isometrics of uninvolved muscles, light active dorsiflexion of the ankle until gentle stretch of Achilles; slowly increase the intensity and ranges of isometrics of Achilles within the range of the boot.
- Proprioception: proprioception exercises, intrinsic muscle strengthening, PNF patterns (not to Achilles)
- Conditioning: Continue UBE, single leg stationary bike with uninvolved leg,

weight training, may begin deep water pool workouts, at six weeks add two-legged stationary cycling with heel push only.

**Manual Therapy:** soft tissue treatments daily

### Weeks 8 to 12:

**Brace:** transition from boot to shoes with heel (i.e cowboy boots, ¼ inch heel lift in shoes), regular shoes by week 12

**Weight Bearing:** full weight bearing with heel lift as tolerated

### **ROM (range of motion) Goals:**

- Dorsiflexion and plantarflexion: progress to full active and passive ROM

### **Therapeutic Exercises:**

- Strengthening: begin resistive with theraband, continue isometrics
- Proprioception: gait training, two foot balance activities
- Conditioning: begin regular stationary bike without restriction. Begin swimming

**Manual Therapy:** soft tissue massage, scar tissue massage, joint mobilization

### Months 3-6:

**Brace:** None

**Weight Bearing:** Full weight bearing, weaning from heel lift

### **ROM (range of motion) Goals:**

- Dorsiflexion and plantarflexion: progress to full active and passive ROM

### **Therapeutic Exercises:**

- Strengthening: closed chain, ¼ to ½ depth squat, lunges, bilateral heel raises/unilateral heel raises, core strengthening
- Proprioception: gait training
- Conditioning: begin regular stationary bike without restriction, begin swimming, climbing machine, rowing, cross country ski machine, elliptical, treadmill walking.
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### 6 Months:

### **Therapeutic Exercises:**

- Strengthening: continue closed chain and core strengthening exercises,

raises/unilateral heel raise, plyometric activities

- Proprioception: gait training, single leg balance activities
- Conditioning: running and cutting, stationary bike, swimming, climbing machine, rowing, cross country ski machine, elliptical

### 8-9 months:

Return to physically demanding sport and/or work

