



Austin Cole, MD

## Achilles Tendon Repair- Complex Post-Operative Protocol

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### Weeks 0-2

- Splint, non-weight bearing with crutches, no scooter use

### Postoperative Weeks 2-4

- Cast in plantarflexion, non-weight bearing with crutches, no scooter use

### Postoperative Weeks 4-6

- Walking boot with 5-cm heel lift (3 level wedge)
- Partial protected weight-bearing with crutches; progressive increase in weight bearing 25% of body weight/week
- Active plantar flexion and dorsiflexion to neutral, inversion/eversion below neutral
- Modalities to control swelling
- Scar mobilization
- Joint mobilizations for pain relief
- Open kinetic chain hip and knee exercises (in boot or without ankle involvement)
- Non-weight bearing fitness/cardiovascular exercises (bicycling with one leg, may do stationary bike with boot and NuStep with boot)

### Postoperative Weeks 6-10

- Remove 1 level of wedge from boot (2 levels in boot)
  - Remove 1 level of wedge from boot at 8 week mark (1 level in boot)
- Start progressing to weight-bearing as tolerated in boot with single crutch starting at 8+ weeks
- Dorsiflexion stretching, slowly
- Graduated resistance exercises (open and closed kinetic chain as well as functional activities)
  - Ankle 4-way resistance band exercises
- Modalities including ice, heat and ultrasound, as indicated
- Scar mobilization
- Joint mobilizations for mobility, protecting repair site
- Cardiovascular fitness: bike or elliptical in boot
- Hydrotherapy when incisions are healed (chest depth)
- Continue lower extremity strengthening with OKC out of boot, CKC in boot

### Postoperative Weeks 10-12

- Advance to full weight bearing with boot; wean off crutches
- Remove wedge from boot
- Continue to progress range of motion, strength
- Proprioceptive and gait retraining
- Elliptical Trainer and bike with boot
- Chest deep treadmill or Alter G walking

### **Postoperative Weeks 12-16**

- D/c boot for sleeping
- Wean from boot as tolerated
- 1-cm silicone heel cup in sneaker x6 weeks then d/c
  - Must wear a shoe with heel cup at all times, no walking barefoot or sandals
- Return to crutches and/or cane if necessary and gradually wean off
- Normalize gait mechanics with treadmill walking under PT supervision with transition into shoe
- Continue to progress range of motion, strength
- Proprioceptive and gait retraining
- Double Leg Heel Raises on flat surface (once FWB)
- Elliptical Trainer and bike without boot
  - may begin outdoor biking at week 12
- Chest deep treadmill or Alter G walking for fitness

### **Postoperative Week 16-24**

- Single leg calf raises (use eccentrics as needed)
- Progression of closed chain strengthening
- Treadmill walking
- Progress double leg heel raises to step or slant board
- Single leg calf raises (use eccentrics as needed)
- Progression of closed chain strengthening—double limb to single limb
- Continue balance training, progressing to unstable surfaces

### **Postoperative 6-9 months (must pass Preliminary Testing to advance)**

- Pass Preliminary Functional Test
- Plyometric training
- Initiate return to running
  - May begin with chest deep water treadmill running, or Alter G
  - Criteria to run:
    - Pass functional test >90%
    - Equal ROM
    - Equal Plantarflexion strength (25 SL heel raises)
- Sport specific training
  - Agility ladder—sagittal plane progressing to frontal planes and multidirectional
  - Cutting; stop and go movements
  - Landing and jumping

### **Postoperative 9 months+**

- Pass Full Return to Sport Testing >90% on all tests
- Gradual return to sports

**Patients are required to wear the boot while sleeping. Patients can remove the boot for bathing and dressing but are required to adhere to the weight-bearing restrictions according to the rehabilitation protocol. If, in the opinion of the physical therapist, scar mobilization is indicated, scar mobilization should be attempted using friction, ultrasound or stretching (if appropriate). Heat may be applied as indicated before beginning mobilization techniques.**