

## Achilles Tendon Repair

### Phase I (0 – 2 weeks post-op)

- Wound care: Keep splint dry
- Modalities: prn for pain and swelling (ice, IFC)
- Brace: Posterior splint
- Gait: NWB with crutches

### Phase II (2 weeks – 4 weeks post-op)

- Wound care: Observe for signs of infection and begin scar management and mobilization techniques when incision is closed, including possible use of ultrasound
- Modalities:
  - Prn for pain and swelling (ice, IFC)
  - Consider contrast bath if significant edema
- Brace: Walking boot with 2- 2cm heel lifts. Sleep in boot. OK to remove for showers
- Gait: Protected WB with crutches
- ROM:
  - Active PF and DF to neutral, inversion/eversion below neutral (DF)
  - Grade I and II mobilizations
- Strengthening:
  - Begin isometrics
  - Knee/hip exercises with no ankle involvement (leg lifts in sitting, prone, and sidelying)
  - NWB fitness/cardiovascular exercises (bicycling with non-operative leg, deep water running)
  - Hydrotherapy (within motion and WB limitations)
  - Light theraband for inversion and eversion ONLY

### Phase III (4 weeks – 6 weeks post-op)

- Wound care: Continue scar management and mobilization techniques
- Brace: Walking boot with 2 -2cm heel lifts/wedges. Sleep in the boot. OK to remove for showers
  - At week 5, remove 1 lift/wedge
- Gait: WBAT
  - At 5 weeks, begin WB/weight-shifting without boot, with 2 lifts/wedges
  - By 6 weeks, FWB in boot with 1 lift/wedge
    - Progress from boot to regular footwear with ½ inch lift/wedge
  - By 8 weeks, D/C boot
  - Until 10 weeks post-op, no barefoot walking

- ROM: Grade II and III talocrural and subtalar joint mobilizations
- Strengthening: Progress WB exercises in boot
  - Weight-shifting
  - Balance exercises
  - Step ups
  - Wall Slides

#### **Phase IV (6 - 8 weeks post-op)**

- Wound care: Continue scar management and mobilization techniques
- Modalities: Continue prn
- Brace/boot:
  - Remove heel lift
  - OK to remove boot for bathing and sleeping
- Gait: WBAT in boot
  - Until 10 weeks post-op, no barefoot walking
- ROM: Continue joint mobilizations
- Strengthening:
  - Dorsiflexion stretching, slowly- to neutral as tolerated
  - Graduated resistance exercises
    - Open and closed chain as well as functional activities IN BOOT and REGULAR FOOTWEAR WITH WEDGE/LIFT as tol
      - Step ups, Wall squats, Body weight squats
    - At 8 weeks, begin BAPS
  - Proprioceptive and gait retraining
    - Weight-shifting WITHOUT BOOT
    - SLS
  - Fitness/cardiovascular exercises to include WBAT (bicycling, elliptical, walking, stair master)
  - Hydrotherapy

#### **Phase V (8 – 12 weeks post-op)**

- Wean off boot
  - At 10 weeks, can begin barefoot walking
- Return to crutches and/or cane as necessary and gradually wean off
- Continue to progress ROM, strength, and proprioception
- Gentle gastroc/soleus stretching
- At week 8, begin bilateral heel raises
- At week 12, single heel raises



- At 12-16 weeks, begin treadmill, plyometrics, and sports drills per physician recommendation

**Phase VI (12 + weeks post-op)**

- Continue to progress ROM, strength, and proprioception
- Retrain strength, power, and endurance
- Increase dynamic WB exercise, include plyometric training
- Sport-specific training
  - Ladder drills, hopping, and jumping

Adapted From:

1) Willits K, Amendola A, Bryant D, Mohtadi N, Giffin JR, Fowler P, Kean C, Kirkley A. Operative versus Nonoperative Treatment of Acute Achilles Tendon Ruptures. A Multicenter Randomized Trial Using Accelerated Functional Rehabilitation. J Bone Joint Surg Am. 2010; 92:2767-75.

2) Bortzman SB, Wilk KE. Clinical Orthopedic Rehabilitation Second Edition. Philadelphia: Mosby; 2003.

3) Illinois Bone and Joint Institute. Post-operative Physical Therapy Achilles Tendon Repair Protocol.

4) University of Delaware. Rehab Practice Guidelines for: Achilles Tendon Repair. Univ. of Delaware Physical Therapy Clinic, Newark, DE.

5) Marquette University Department of Intercollegiate Athletics. Achilles Tendon Protocol