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### Achilles Tendon Repair

#### Phase I (0 – 2 weeks)

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

#### Phase II (2 – 4 weeks post-op)

- Wound care: Observe for signs of infection and begin scar management and mobilization techniques when incision is closed.
- Weight Bearing/Brace:
  - Walking boot with 2-cm heel lift. Sleep in the boot. OK to remove for showers.
  - Protected weight-bearing with crutches
- Modalities
  - prn for pain and swelling (ice, IFC)
  - Consider contrast bath if significant edema
- ROM: Active plantar flexion and dorsiflexion to neutral, inversion/eversion below neutral.
- Strengthening:
  - Begin isometrics
  - Knee/hip exercises with no ankle involvement; e.g., leg lifts from sitting, prone, or side-lying position
  - Non-weight-bearing fitness/cardiovascular exercises; e.g., bicycling with one leg, deep-water running
  - Hydrotherapy (within motion and weight-bearing limitations)

#### Phase III (4 – 6 weeks post-op)

- Wound care: Continue scar management and mobilization techniques.
- Weight Bearing/Brace:
  - Walking boot with 2-cm heel lift. Sleep in the boot. OK to remove for showers.
  - Weight Bearing as tolerated
- Continue Phase II protocol.

#### Phase IV (6 – 8 weeks post-op)

- Wound care: Continue scar management and mobilization techniques.
- Weight Bearing/Brace:

- Remove heel lift. OK to remove for bathing and sleeping.
- Weight Bearing as tolerated
- Modalities: continue prn
- ROM/Strengthening:
  - Dorsiflexion stretching, slowly
  - Graduated resistance exercises (open and closed kinetic chain as well as functional activities)
  - Proprioceptive and gait retraining
  - Fitness/cardiovascular exercises to include weight-bearing as tolerated; e.g., bicycling, elliptical machine, walking and/or running on treadmill, StairMaster
  - Hydrotherapy

**Phase V (8 – 12 weeks post-op)**

- Wean off boot
- Return to crutches and/or cane as necessary and gradually wean off
- Continue to progress range of motion, strength, proprioception

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

- Continue to progress range of motion, strength, proprioception
- Retrain strength, power, endurance
- Increase dynamic weight-bearing exercise, include plyometric training
- Sport-specific retraining

*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.