

Rehabilitation Protocol: Achilles Tendon Repair

Phase I - Post-operative Period (Weeks 0-1)

- **NON-weight bearing**
- **Splint immobilization**
- **Daily icing, compression and elevation home program**

Phase II (Weeks 1-3)

- **Weightbearing:**
 - Continue NON-weight bearing for 3 weeks with crutches.
 - No push off or toe touch walking
 - Will place into CAM boot with ankle wedges (approximately 30 deg of plantar flexion) after first post-operative visit, may remove for hygiene and exercises
- **Manual:**
 - Soft tissue mobilization to ankle / foot / effleurage for edema.
 - Avoid direct palpation to suture line.
- **Exercises:**
 - Toe curls, toe spreads, gentle foot movement in boot, straight leg raises, knee flexion / extension
- **Goals:**
 - Decrease pain, edema, Gait non weight bearing with axillary crutches / boot.

Phase III (Weeks 3-8)

- **Weightbearing:**
 - Gradually increase weight bearing from toe touchdown to partial as tolerated and as able per range of motion (heel contract once partial weight bearing).
 - After 6 weeks, ok to progress to full weight bearing.
 - Walking boot with wedges at 30 degrees at 3 weeks and adjust down 10 degrees per week or so.
- **Manual:**
 - Soft tissue mobilization to ankle, foot, effleurage for edema.
 - Initiate gentle passive range of motion dorsiflexion (not past neutral), inversion, eversion per tolerance.
 - At 4 weeks initiate scar mobilization once incisions completely closed.
- **Exercises:**
 - Straight leg raises, side-lying hip abduction, Straight legged bridges. Isometrics of uninvolved muscles.
 - Light active dorsiflexion of the ankle until gentle stretch of Achilles after 4 weeks.
 - Slowly increase the intensity and ranges of isometrics of Achilles within the range of the boot.
 - Slowly increase passive range of motion and stretch on the Achilles after 6 weeks.
 - Proprioception exercises, intrinsic muscle strengthening, PNF patterns for hip and knee (not to Achilles).
 - At 6 weeks, okay to add stationary cycling with heel push only.
- **Goals:**

- Zero degrees dorsiflexion
- After 6 weeks progress to full weight bearing and discontinue crutches

Phase IV (Weeks 8-12)

- **General:**
 - After 8 weeks, okay to wear shoes with a heel (i.e. cowboy boots, 1/4 " heel lift in shoes).
 - Full weight-bearing with heel lift as tolerated, gait training.
 - Wean into a regular shoe over a 2-4-week period.
- **Manual:**
 - Continue with soft tissue mobilization, range of motion, joint mobilizations as needed.
- **Exercises**
 - Begin and gradually increase active / resistive exercises of the Achilles (i.e. submaximal isometrics, cautious isotonic, Theraband).
 - Progress to cycling in shoe, swimming (no fins).
- **Goals:**
 - Full range of motion ankle.
 - Tolerance to regular shoe, good gait mechanics.

Phase V (Months 3-6)

- **General:**
 - Wean off heel lifts if not already
- **Exercises:**
 - Closed chain exercises: controlled squats, lunges, bilateral calf raise (progress to unilateral), toe raises, controlled slow eccentrics vs. body weight.
 - Cycling, VersaClimber, rowing machine, Nordic Track (gradually).
 - Unless excessive fibrosis present, should be discharged into a home program.
- **Goals:**
 - Complete and pass Sport Test 1. Strength 5/5.
 - Able to perform single leg calf raise.

Phase VI (Month 6-8)

- Progress training jogging / running, jumping and eccentric loading exercises, noncompetitive sporting activities, sports-simulated exercises.

Phase VII (Month 8-9)

- Return to physically demanding sport and / or work

Criteria for Return to Sports / Full Activities:

- Full functional range of motion
- No pain or swelling with functional activities
- Good core control and balance / proprioception