



Brian Bjerke, MD

# Non-Operative Treatment of Achilles Tendon Rupture

## Post-Operative Protocol

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### Accelerated Rehabilitation Program:

#### **Weeks 1-2:**

- Short leg fiberglass cast with ankle in plantarflexion of ~20 degrees
- Non-weight bearing with crutches for ambulation assistance

#### **Weeks 2-6:**

- Transition to CAM walking boot with 6 heel lifts
- Protected weight bearing with crutches for ambulation assistance
  - Week 2-3: 25% weight bearing
  - Week 3-4: 50% weight bearing
  - Week 4-5: 75% weight bearing
  - Week 5-6: 100% weight bearing

#### **Weeks 6-8:**

- Start removing heel lifts
  - Remove one peel off heel lift every 2-3 days as tolerated (total of 6 heel lifts)
  - Entire process of removing should take around 2-3 weeks
  - Weight bearing as tolerated, usually 100% weight bearing in CAM boot at this time
- Exercise Progression:
  - Active plantar and dorsiflexion range of motion exercises to neutral, inversion/eversion below neutral
  - Modalities to control swelling (US, IFC with ice, Acupuncture, Light /Laser therapy)
  - EMS to calf musculature with seated heel raises when tolerated.
  - Patients being seen 2-3 times per week depending on availability and degree of pain and swelling in the foot and ankle.
  - Knee/hip exercises with no ankle involvement e.g. leg lifts from sitting, prone or side-lying

- Non-weight bearing fitness/cardio work e.g. biking with one leg (with boot walker on), deep water running (usually not started to 3-4 week point)
- Hydrotherapy (within motion and weight-bearing limitations)
- Emphasize need of patient to use pain as guideline
  - If in pain back off activities and weight bearing
- Continue with EMS on calf with strengthening exercises
  - **Do not go past neutral ankle position**
- Active assisted dorsiflexion stretching, slowly initially with a belt in sitting
- Graduated resistance exercises (open and closed kinetic chain as well as functional activities) – start with Theraband tubing exercises
- With weighted resisted exercises do not go past neutral ankle position
- Gait retraining now that 100% weight bearing
- Fitness/cardio to include weight –bearing as tolerated e.g. biking
- Hydrotherapy

#### **Weeks 8-12:**

- **Ensure patient understands that tendon is still very vulnerable and patients need to be diligent with activities of ADL and exercise**
- **Any sudden loading of the Achilles (e.g. tripping, stepping up stairs etc.) may result in a re-rupture**
- Wean out of boot (usually over 4-5 day progression, varies per patient)
- Wear compression ankle brace to provide extra stability and swelling control once walking boot removed
- Return to crutches/cane as necessary and gradually wean off
- Continue to progress ROM, strength and proprioception exercises
- Add exercises such as stationary bicycle, elliptical, and walking on treadmill as patient tolerates
- Add wobble board activities- progress from seated to supported standing to standing as tolerated
- Add calf stretches in standing (gently)
  - **DO NOT allow ankle to go past neutral position**
- Add double heel raises and progress to single heel raises when tolerated
  - **DO NOT allow ankle to go past neutral position**
- Continue physiotherapy 1-2 times a week depending on how independent patient is at doing exercises and access they have to exercise equipment

#### **Weeks 12-16:**

- Continue to progress ROM, strength and proprioception exercises
- Retrain strength, power and endurance through eccentric strengthening exercises and closed kinetic chain exercises
- Increase cardio training to include running, cycling and elliptical as tolerated

**Weeks 16+:**

- Increase dynamic weight bearing exercise including sport specific retraining

**4-6 months:**

- Return to normal sporting activities that do not involve contact or sprinting, cutting and jumping, etc.
- Patient needs to have regained approximately 80% strength to participate

**6-9 months:**

- Return to all sports as long as patient has recovered 100% strength after being cleared by physician

\*Please feel free to contact Dr. Brian Bjerke's office with any questions or concerns. Dr. Bjerke's care coordinator Andria Larson is available by phone at 952-456-7095.