

Accelerated Rehabilitation Program
For Non –Operative Treatment of Achilles Tendon Ruptures¹

June 2015 Updated Version

Prepared and Modified by: Daniela Rubinger, BScPT, Citadel Physiotherapy
Mark Glazebrook MSc. PhD MD FrCS(C)

0-2 weeks

- Plaster cast with ankle plantar flexed to approx. 20 degrees; non-weight bearing with crutches
- Prior to cast being removed please make arrangements to purchase an Achilles pathology specific cast boot (e.g. Bledsoe) at reputable health care provider.
- In Halifax this can be purchased at Arthritis and Injury Care Center, 902-442-5199.
- Please bring the Achilles Specific Bootwalker to your follow up 2 week appointment at the hospital.

2-4 weeks

- *Bledsoe Achilles Specific* walking boot with 40 degree plantarflexed heel lifts
- Protected weight-bearing with crutches:
 - Week 2-3 – 25%
 - Week 3-4 – 50%
 - Week 4-5 – 75%
 - Week 5-6 – 100%
- 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 bootwalker on), deep water running (usually not started to 3-4 week point)
- Hydrotherapy if available (within motion and weight-bearing limitations)
- Emphasize need of patient to use pain as guideline. If in pain back off activities and weight bearing.

4-6 weeks

- Continue weight –bearing as tolerated
- Continue 2-4 week protocol
- Progress EMS to calf with lying calf raises on shuttle with no resistance as tolerated around week 5-6.
Please ensure that ankle does not go past neutral while doing exercises.
- Continue with physiotherapy 2-3 times per week.
- Emphasize patient doing non-weight bearing cardio activities as tolerated with bootwalker on.

6-8 weeks

- Continue physiotherapy 2 times a week
- Continue with modalities for swelling as needed.
- Continue with EMS on calf with strengthening exercises. **Do not go past neutral ankle position.**
- Remove heel lifts in stages dependent on Achilles length. Remove one lift daily as tolerated. Always leave one lift in at all times to represent regular shoe lift.
- Weight – bearing as tolerated, usually 100% weight bearing in boot walker at this time.

- 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

8-12 weeks

**** Ensure patient understands that tendon is still very vulnerable and patients need to be diligent with activities of ADL and exercises. Any sudden loading of the Achilles (e.g. Trip, Step up stairs etc.) may result in a re-rupture****

- Wean off boot (usually over 2-5 day process – varies per patient)
- Wear Achillo Train™ Compression ankle brace to provide extra stability and swelling control once Bootwalker removed.
- Return to crutches/cane as necessary and gradually wean off. Have patient always wear shoes limiting time in bare/sock feet.
- Continue to progress range of motion, strength, proprioception exercises
- Add exercises such as stationary bicycle, elliptical, 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.

12-16 weeks

- Continue to progress range of motion, strength, and proprioception exercises
- Retrain strength, power, endurance
Ensure patient understands that tendon is still very vulnerable and patients need to be diligent with activities of ADL and exercises. Avoid lunges, squats etc. as these place excessive stretch on tendon.

16 weeks plus

- Increase dynamic weight bearing exercise, including Sport specific retaining, ie. Jogging, weight training

6-9 months

- Return to normal sporting activities that do not involve contact or sprinting, cutting jumping etc. if patient has regained 80% strength.

12 months

- returnReturn to sports that involve running/jumping as directed by medical team and tolerated if patient has regained 100 % strength.

1. This Protocol is a modified Version of the Protocol used in:

Operative versus Nonoperative Treatment of Acute Achilles Tendon Ruptures: A Multicenter Randomized Trial Using Accelerated Functional Rehabilitation: Kevin Willits, MA, MD, FRCS1; Annunziato Amendola, MD, FRCS2; Dianne Bryant, MSc, PhD3; Nicholas G. Mohtadi, MD, MSc, FRCS4; J. Robert Giffin, MD, FRCS1; Peter Fowler, MD, FRCS1; Crystal O. Kean, MSc, PhD1; Alexandra Kirkley, MD, MSc, FRCS5