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ACHILLES TENDON RUPTURE

REHABILITATION PROTOCOL

REHABILITATION PROGRESSION

The following is a general guideline. Please consult Dr. Syal/Dr. Soswa if there is any uncertainty concerning advancement of a patient to the next phase of rehabilitation. Rehabilitation should be individualized according to patient status.

PRECAUTIONS

- wear the Aircast boot 23 hours a day and monitor skin for dampness and hygiene

PHASE I (WEEK 0–2)

- Aircast boot with 2 cm heel lift
- NWB with crutches, encourage ADLs and elevate limb to control swelling

PHASE 2 (WEEKS 2–6)

- Aircast boot with 2 cm heel lift
- 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 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

PHASE 3 (WEEKS 6–8)

- Aircast boot & remove one wedge each week until plantigrade by 8 weeks — WBAT
- Dorsiflexion stretching, slowly, graduated resistance exercises (OKC, CKC, functional)
- Progress EMS to calf with lying calf raises on shuttle with no resistance as tolerated around week 6.
- **Please ensure that ankle does not go past neutral while doing exercises**
- Proprioceptive and gait retraining
- Modalities as indicated, fitness/cardio to include WBAT & hydrotherapy

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PHASE 4 (WEEKS 8–12)

- ** 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 & return to crutches/cane as necessary; then wean off
- Continue to progress ROM, strength, proprioception

PHASE 5 (WEEKS 12+)

- Continue to progress ROM & strength for foot and ankle endurance
- Retrain strength, power, endurance, Increase dynamic WB exercise, include plyometric training
- Sport/work specific retaining, plyometric training

SOURCES:

- Achilles Tendon Rupture – Accelerated Functional Rehabilitation. Fowler Kennedy.
- Rubinger, D. & Glazebrook MS. Accelerated Rehabilitation Program For Non –Operative Treatment of Achilles Tendon Ruptures1.
- Operative versus Non-operative Treatment of Acute Achilles Tendon Ruptures: A Multicenter Randomized Trial Using Accelerated Functional Rehabilitation: Kevin Willits, MA, MD, FRCSC1; Annunziato Amendola, MD, FRCSC2; Dianne Bryant, MSc, PhD3; Nicholas G. Mohtadi, MD, MSc, FRCSC4; J. Robert Giffin, MD, FRCSC1; Peter Fowler, MD, FRCSC1; Crystal O. Kean, MSc, PhD1; Alexandra Kirkley, MD, MSc, FRCSC5