REHABILITATION PROTOCOL AFTER ACHILLES TENDON REPAIR

PHASE I

Weeks 1 and 2
Total nonweight bearing
Keep cast dry

Week 3
Range of Motion Exercise
- Plantar flexion and dorsiflexion to neutral 2 sets of 20 repetitions
- Inversion and eversion 2 sets of 20 repetitions
- Circumduction (both directions) 2 sets of 20 repetitions

Strength Exercise
- Isometric inversion and eversion 2 sets of 20 repetitions (in neutral).
- Toe curls with towel and weight.

Therapy Adjuncts
- Gentle manual mobilization of scar tissue.
- Cryotherapy with caution for any open area of the wound.

Nonweight bearing
Put into Walker Boot when able to get to neutral position comfortably.

PHASE II

Weeks 4 to 6
Weight bearing status
- Progressive partial weight bearing to full load by week 6 in a Walker Boot.

Range of Motion Exercise
- Previous AROM exercise continued
- Begin gentle passive stretching into dorsiflexion with strap or towel
- From week 5, passive stretch continues into dorsiflexion with progressively greater efforts, knee at full extension and flexed to 35 to 45 degrees
Begin standing calf stretch with knee fully extended and flexed at week 6

**Stretch Exercise**

- Isometric inversion and eversion, set of 10 repetitions
- Isometric plantar flexion, set of 10 repetitions
- One rubber band inversion, eversion, dorsiflexion and plantar flexion sets of 10 repetitions. Progress to 3 rubber bands by 5 weeks
- Stationary cycling to 20 minutes with the minimal resistance by week 5

**Conditioning Activities**

- Stationary cycling begins, 7-12 minutes minimal resistance
- Water exercise can begin under totally buoyant conditions with use of a flotation device
- No weight bearing activities can be done in the water

**Therapy Adjuncts**

- Manual mobilization of scar
- Cryotherapy
- From week 5, gentle cross fibre massage to Achilles tendon to release adhesions between tendon and paratenon
- Ultrasound, phonophoresis and electrical stimulation may be added for chronic swelling or excess scar formation.

**PHASE III**

**Week 6-12**

**Weight Bearing Status:**

- Full weight bearing in cowboy boots (1-1.5 heels)

**Range of Motion Exercise:**

- Further progressed with standing calf stretch

**Strength Exercise:**

- Omit isometrics
· Continue 3 rubber band ankle strengthening in all directions
· Begin double legged toe raises with body weight as tolerated
· Balance board exercises are begun for proprioceptive training

Therapy Adjuncts:
· As needed

PHASE IV: Weeks 12 and beyond:

Strength exercises:
· Toe raises should progress to use of additional weight at least as great as body weight and in the case of athletes, up to 1.5 times body weight
· Single legged toe raises are begun as tolerated

Conditioning exercises:
· Progress to jogging on a trampoline and then to treadmill running via a walk-run program
· Eventually perform steady-state outdoor running up to 20 minutes before adding figure eight and cutting drills
· Water exercise performed in shallow water (waist deep)
  In the water, begin to include hopping, bounding, jumping drills

The completely rehabilitated Achilles tendon repair allow 15-20 degrees of dorsiflexion at the ankle, and this must be maintained with regular stretching of the gastrocnemius-soleus group. Strength and endurance are developed to preinjury levels, and continued strength and flexibility work is advised.