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ACHILLES TENDON REPAIR REHAB GUIDELINES

The intent of this protocol is to provide the therapist and patient with guidelines for the post-operative rehabilitation course after achilles tendon repair. This protocol is based on a review of the best available scientific studies regarding achilles tendon repair. It is by no means intended to serve as a substitute for one's clinical decision making regarding the progression of a patient's post-operative course. It should serve as a guideline based on the individual's physical exam/findings, progress to date, and the absence of post-operative complications. If the therapist requires assistance in the progression of a post-operative patient they should consult with Dr. Seneviratne.

WEEK 1 – 3

GOALS:

- Protect the repair
- Minimize scar tissue formation
- Decrease swelling

Keys to Treatment

- ✓ **No Passive Dorsiflexion Stretching past initial tendon tension**
- ✓ **Initiate active dorsiflexion; gravity assisted plantar flexion (healed incision)**
- ✓ **Prevent wound infection**

- Patient Education – use of rocker boot with crutches/ non-weight bearing
- Immobilized @ 10° compared to contralateral side
- 1 to 1 ½ inch heel lift in rocker boot and contralateral sneaker
- Gait, transfer, stair training
- Gentle scar tissue mobs along Achilles tendon (healed incision)
 - Moist heat after 2 weeks post-op
- Edema Control (Hi-volt, interferential, cryocuff)
- AROM – ankle dorsiflexion from seated position
- PROM – gravity assisted plantar flexion from seated position
 - Cyclic loading to initial tendon tension
- Proximal kinetic chain strengthening program
 - SLRs (hip abd/add/flex/ext)
 - Stationary bike (with use of rocker boot)
 - Intrinsic strengthening ex's (towel curls, marbles, etc)
 - Prone hamstring curls
 - Upper body conditioning program

WEEK 4 – 6

GOALS:

- Continue to protect repair
- Increase plantarflexion strength



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- Do not over stretch healing tendon

Keys to Treatment

- ✓ **No Passive Dorsiflexion Stretching**
- ✓ **Progress cyclic motion (active DF/ gravity assisted PF)**
- ✓ **Initiate weight bearing program**
- Scar tissue mobilization
- Edema control
- Weight bearing progression
 - Week 4
 - Standing bilateral weight shift w/ towel roll under heels (no boot)
 - Week 5
 - Standing bilateral weight shifting w/ boot
 - Progress to staggered stance weight shifting (walking progression)
 - Week 6
 - Initiate gait in boot w/o crutches (sneakers w/ heel lift on contralateral)
 - Early strengthening
 - Sub maximal isotonic ankle dorsi/plantarflexion and eversion
 - Prone active plantarflexion w/ flexed knee
 - Seated BAPS board

WEEK 7 - 9

GOALS:

- Improve fitness
- Moderate gastroc/soleus muscle control
- Ambulate w/o boot

Keys to Treatment

- ✓ **No Passive Dorsiflexion Stretching**
- ✓ **Progress cyclic muscle strengthening**
- ✓ **Stress plantarflexion end range strengthening (0° - 30°)**
- ✓ **Lower heel lifts 25%**
- Weight bearing/Gait training
 - Week 7
 - At Clinic: bilateral weight bearing w/ sneakers and heel lifts
 - At Home: still ambulate w/ boot
 - Week 8
 - At Clinic: ambulate w/ sneakers and heel lifts
 - At Home: ambulate w/ sneakers and heel lifts
 - Outside: ambulate w/ boot
 - Week 9
 - DC boot: ambulate w/ sneakers and heel lifts
 - Do not ambulate bare foot
- AROM – dorsi/plantarflexion, inversion, eversion



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- Balance - bilateral
- Strengthening
 - T-band all planes
 - End range isometrics
 - Leg press calf raise (week 8)
 - Step-ups 4-6" (back down w/ NI)
 - Swimming (no fins)

WEEK 9 - 12

GOALS:

- Restore normal gait
- Full active plantarflexion ROM
- Continue to progress gastro/soleus strength

Keys to Treatment

- ✓ **No Passive Dorsiflexion Stretching**
- ✓ **Progress cyclic muscle strengthening**
- ✓ **Stress plantarflexion end range strengthening (0° - 30°)**
- ✓ **Lower heel lifts another 25% (50% total)**

- Gait Training
 - Patient will still ambulate w/ ↓ push-off
 - Marching
 - Lateral walking
 - Stairmaster (pushing through forefoot)
 - Retro Treadmill
 - Calf raises and eccentric calf lowering
- Progress from supine position (on leg press with bilateral to unilateral support) to standing (bilateral to unilateral)
- Single leg balance
 - BAPS
 - Decline board
- Steps
 - Lateral step-ups 6-8"
 - Descend 4" step w/ NI
- Isokinetics
 - Concentric (0° - 30°) plantarflexion
 - Eccentric (0° - 30°) plantarflexion
- End range Strengthening
 - Bilateral decline board calf raise
 - Prone isometrics, isotonic
 - Leg Press calf raises; begin w/ foot on plate @ neutral

WEEK 13 - 20

GOALS:



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- Cross-over stair descent
- Jogging
- Full ROM

Keys to Treatment

- ✓ **Initiate passive dorsiflexion stretching**
- ✓ **Progress full ROM muscle strengthening**
- ✓ **Stress plantarflexion end range strengthening (0° - 30°)**
- ✓ **Lower heel lifts another 25%**
- ✓ **Functional training**
- Jogging/retro jogging
- End range plantarflexion strengthening
 - Continue w/ leg press calf raise
 - Single limb decline board calf raise (may only be an isometric)
- Jump progression
 - Single limb leg press hopping; landing on forefoot
 - Bilateral mini hops
 - Unilateral mini hops (week 20)
- Trampoline hopping
- Forward, lateral stopovers (on box)
- Sub maximal agility training (figure 8's, kareokees, shuffles)
- Regular biking

WEEK 20 to 1 year

GOALS:

- Plyometrics
- Running, agility drills
- Return to sports

Keys to Treatment

- ✓ **Progress full ROM muscle strengthening**
- ✓ **Functional training**
- ✓ **DC heel lifts**