

ACHILLES TENDON REPAIR PROTOCOL

* Actual timelines may vary per physician instruction.*

Phase 1 – Maximum Protection Phase (0-2 weeks)

Goals for Phase 1

- Protect integrity of repair
- Minimize effusion
- ROM per guidelines listed

Precautions

- No ankle PROM/AROM

Immobilization/Weight Bearing/ROM

- No ankle PROM/AROM
- Immobilization in post-op bracing/boot
- Non-weight bearing for 2 weeks

Brace

- 0-6 weeks:** Walking boot to be worn at all times, including while sleeping

Manual Therapy

- Manual soft tissue
- techniques for lower extremity musculature

Strengthening

- Quadriceps, glute, and hamstring setting
- Hip strengthening
 - **0-2 weeks:** Multi-plane OKC SLR, etc.

Modalities

- Vasopneumatic compression for edema management 2-3x/week (15-20 min)
- Cryotherapy at home, 3 x per day for 20 minutes each with ankle elevated above heart



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Phase 2 – Passive/Active Range of Motion Phase (2-6 weeks)

Goals for Phase 2

- Begin Physical Therapy
- Protect integrity of repair
- Minimize effusion
- ROM per guidelines listed
- Scar tissue mobility

Precautions

- No kicking in pool for 10 weeks
- Avoid twisting and pivoting motions for 12 weeks
- Avoidance of impact activity for 12 weeks

Immobilization/Weight Bearing

- Slow progression back to full weight bearing in boot, with body weight percentage increasing by 25% every 3-4 days if patient has controlled pain and controlled effusion
- NWB when not wearing walking boot (bathing, changing attire, etc.)
- PWB with supervision at therapy and while wearing soft ankle brace

Range of Motion

- 2-4 weeks:** DF limited to 0° AROM; PF PROM only, not limited
- 4-6 weeks:** Begin PF AROM to 5° with knee straight, 10° with knee flexed

Brace

- 0-6 weeks:** Walking boot to be worn at all times, including while sleeping

Manual Therapy

- Scar massage when incisions closed
- Manual soft tissue techniques for lower extremity musculature
- Joint mobilization to talocrural joint (Grades I-III)

Strengthening

- 2-4 weeks:** PROM ankle PF, AROM ankle DF to 0°
- 4-6 weeks:** Begin PF AROM to 5° with knee straight, 10° with knee flexed
- Sub-maximal isometrics inversion and eversion
- Stationary bike in boot
- Limited ankle and foot strengthening (towel crunches, marble pick-ups, DF/PF light band strengthening, etc.)
- Lower Extremity Strengthening Program (in boot)
 - Hip strengthening (continue OKC hip strengthening)
 - Quad strengthening (quad sets, leg-press, wall squats, etc.)
 - Hamstring strengthening (prone hamstring curls, physio-ball curls, etc.)
- Initiate core strengthening

Aquatics

- Initiate aquatic therapy program when incisions are closed

Modalities

- Vasopneumatic compression for edema management 2-3x/week (15-20 min)
- Cryotherapy at home, 3 x per day for 20 minutes each with ankle elevated above heart

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Phase 3 – Progressive Stretching and Early Strengthening (6-8 weeks)

Goals for Phase 3

- Protect integrity of repair
- ROM per guidelines listed
- FWB in boot
- Strengthening of ankle/calf musculature

Precautions

- No kicking in pool for 10 weeks
- Avoid twisting and pivoting motions for 12 weeks
- Avoidance of impact activity for 12 weeks

Range of Motion

- DF AROM: limit to 10° with knee straight and 20° with knee flexed
- PF PROM: unlimited, initiate isometrics

Brace

- 6-8 weeks:** Reduce one heel wedge from boot per week, 6 to 8

Manual Therapy

- Restore flexibility – hamstrings, quadriceps
- Begin light terminal stretching in non-weight bearing by week 8
- Joint mobilization to talocrural joint (Grade I-IV)

Strengthening

- Stationary bike in boot
- Initiate resisted dorsiflexion, inversion, and eversion strengthening
- Lower extremity strengthening (in boot)
- Core strengthening

Neuromuscular Control

- Advanced proprioception on un-stable surfaces with perturbations and/or dual tasking, add sport specific balance tasks as able

Modalities

- Cryotherapy after activity

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Phase 4 – Terminal Stretching and Progressive Strengthening (8-12 weeks)

Goals for Phase 4

- Gradually wean out of boot over a 7-10 day period
- Normalize gait

Precautions

- No kicking in pool for 10 weeks
- Avoid twisting and pivoting motions for 12 weeks
- Avoidance of impact activity for 12 weeks

Brace

- Use a heel wedge in a tennis shoe or a boot/shoe with a heel to ease transition

Strengthening

•8-10 weeks

- Stationary bike
- Initiate a light gastrocnemius/soleus stretch in a weight bearing position
- Continue with multi-plane ankle stretching
- Normalize gait
- Continue resisted NWB plantar flexion strengthening
- Begin bilateral heel raises off of the floor progressing to off of a step as tolerated

•10-12 weeks

- Advance PF strengthening to unilateral as tolerated (single leg calf raises, single leg squats, step-up progression, multi-directional lunges)
- Initiate gastroc/soleus strengthening in gym (eccentric leg press)

Aquatics

- **10-12 weeks:** Begin treadmill walking and/or elliptical with progression in intensity as tolerated

Neuromuscular Control

- **8-10 weeks:** Begin unilateral proprioceptive training

Modalities

- Cryotherapy after activity

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Phase 5 – Progressive Strengthening and Return to Function (3-6 months)

Goals for Phase 5

- Return to function

Strengthening

- Continue to increase intensity with progressive resisted exercises
- Increase intensity with Cardiovascular Program
- May begin cycling outdoors
- Begin multi-directional resisted cord program (side stepping, forward, backward, grapevine)
- Initiate impact activities
 - **12+ weeks:** initiation to impact exercise, sub-maximal bodyweight progressing to maximal (pool, GTS, plyo-press, Alter G), sagittal plane jogging only
 - **14+ weeks:** multi-directional agility drills, cutting, pivoting, and plyometrics
- Continue unilateral gym strengthening program (single leg calf raises, single leg squats, eccentric leg press, step-up progression, multi-directional directional lunges)
- Core strengthening

Aquatics

- Begin pool running program progressing as tolerated to dry land running

Neuromuscular Control

- Advanced proprioception on un-stable surfaces with perturbations and/or dual tasking, add sport specific balance tasks as able

Modalities

- Cryotherapy after activity

Return to Function Testing (6 months)

- Follow-up examination with the physician for return to sport
- Return to function testing:** per MD approval. Criteria: pain-free, full ROM, minimal joint effusion, 5/5 MMT strength, jump/hop testing at 90% compared to uninvolved, adequate ankle control with sport and/or work specific tasks

This protocol was updated and reviewed by Dr. Devries and Dr. Scharer of BayCare Foot & Ankle Center and Kelli Holmes PT, DPT on 11/05/15.

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