

ACHILLES TENDON REPAIR - CLINICAL PRACTICE GUIDELINE

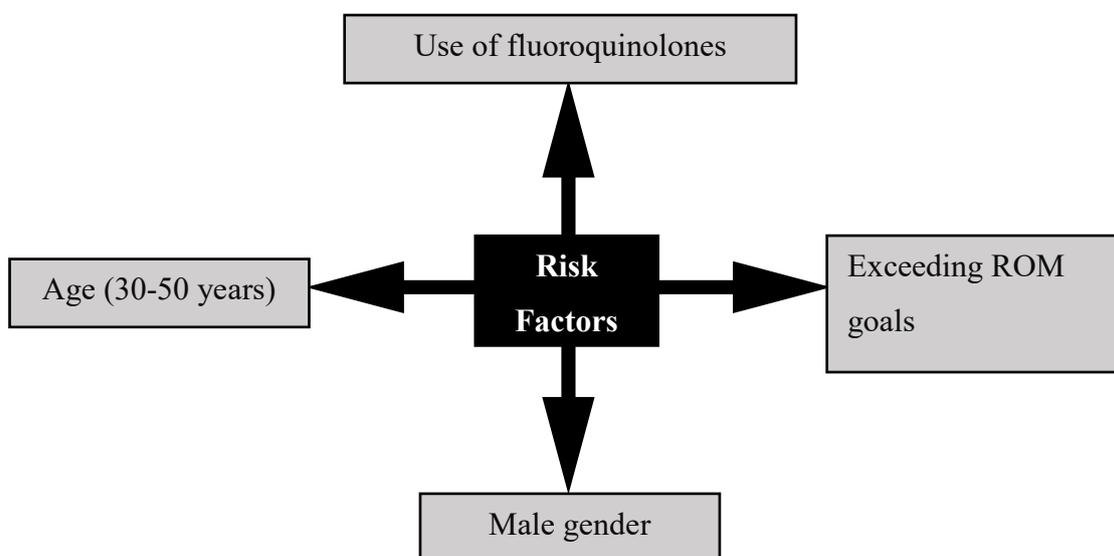
Overview

- Progression is time and criterion-based, depending on soft tissue healing, patient demographics, and clinician evaluation.
- For questions, contact Dr. Sujan Gogu's clinic.

Background

- Achilles tendon repair is necessary following an injury to the Achilles tendon.
- **Characteristics of Injury:**
 - An audible and palpable pop
 - A limited ability to push off the injured limb.
- **Repair time period:** Within 2 weeks post-injury.
- **Recovery time period:** 6 to 9 months.
- **Time period of return to sports:** 9 to 12 months, depending on injury severity and sport type

Recommendation



Corrective Interventions

Pain & Swelling Management: Use of modalities to reduce pain and swelling

Patient Education: Inform patients about the recovery process and necessary precautions

Manual Therapy: Perform PROM, AAROM, and AROM to restore normal ROM as per guidelines

Therapeutic Exercises and Neuromuscular Re-education: Focus on posture, general strength, and stability

Therapeutic Activity: Engage in sport and work-specific activities to progress and prepare for return to work (RTW) or return to sport (RTS).

Precautions and Outcome Measures

Precautions

- Weight-bearing in a protective device is recommended from post-op week 1 (Level 1 evidence, strong).
- Aim for neutral ankle weight-bearing by post-op weeks 4-6.

Outcome Testing

Use the Foot and Ankle Ability Measure (FAAM)

Manual Therapy

- Start PROM and soft tissue mobilization from post-op week 1.
- Perform dorsiflexion PROM to a minimal stretch; avoid aggressive stretching.
- Plantarflexion PROM as tolerated.
- Mobilize subtalar, midfoot, and forefoot joints as tolerated

Criteria for Discharge

Discharge Boot for Shoe
Patient in neutral weight-bearing, able to wear a shoe, and walk without a limp
Return to Running
<ul style="list-style-type: none"> • Achieve 5 x 25 single leg calf raises. • 95% symmetry in ROM (dorsiflexion/plantarflexion). • 95% symmetry in calf circumference (10 cm distal to tibial tubercle).
Return to Sports
<ul style="list-style-type: none"> • 90% symmetry in single-leg hop testing. • 90% symmetry in Y balance testing.

Phase I: Weeks 0-2- Protection

Post-Operative Care	Maintain post-operative splint.
Manual Therapy	Perform accessory joint mobilizations
Gait	<ul style="list-style-type: none"> • Weight-bearing as tolerated (WBAT) in splint starting post-op week 1, using crutches. • Use 3 heel wedges
Exercises (Pain-Free)	<ul style="list-style-type: none"> • Toe wiggles • Doming • Towel crunches • Ankle AROM/alphabets

Goals

- Reduce edema.
- Ensure incision closure.
- Educate on DVT/thromboembolism prevention.
- Begin ambulation without crutches

Phase II: Weeks 2-6- Return to Walking	
Walker Boot	Begin weaning from heel lift (remove 1 lift every 2 weeks as tolerated)
Mobility	Active ROM up to 15° plantar flexion (PF) without boot
Ankle Strengthening (Protected Position)	<p>After 2 Weeks:</p> <ul style="list-style-type: none"> • Isometrics in all planes. • Active plantar flexion with light T-band up to 15°. • Sitting heel raises (no weight bearing). • Four-way straight leg raises. • Bicycle for ankle ROM in boot. • BAPS (seated to standing) as tolerated. <p>After 4 Weeks:</p> <ul style="list-style-type: none"> • Active ROM up to 10° PF without boot. • Four-way T-band exercises, PF up to 10°. • Seated heel raises with light weight. • Initiate balance/proprioception training on a stable surface once patient can comfortably weight bear in neutral. • Light-weight leg press.
Soft Tissue Mobilization	May initiate after adequate wound closure
Pool Therapy	May begin at post-op week 4 if the wound is closed and weight-bearing is possible in a gravity-minimized position

Phase III: Weeks 6-12

Strength Progression	Transition from Boot to Shoe: <ul style="list-style-type: none">• Wean off boot and initiate walking in shoe with neutral heel position.• Use heel wedges (up to 2) in shoe as needed.• Start with the number of wedges where no pain is felt and patient demonstrates proper gait mechanics
Gait Progression	Normal Gait: <ul style="list-style-type: none">• Pain-free weight-bearing in shoe without heel lift; proceed with rehabilitation. Abnormal Gait: <ul style="list-style-type: none">• Painful weight-bearing in shoe:• Add heel lift initially, wean out with rehabilitation to ensure normalized gait.• Add gait training to correct abnormalities
Initiate Strength Exercises	<ul style="list-style-type: none">• Begin weight-bearing strengthening exercises. Calf Raise Progression: <ul style="list-style-type: none">• Shuttle 2-leg in neutral → shuttle single-leg in neutral → shuttle 2-leg in dorsiflexion (DF) → shuttle single-leg in DF → standing 2-leg calf raise in neutral.• Progression: Increase repetitions daily if pain-free (adapted from Mullaney, 2011).
Other Exercises	<ul style="list-style-type: none">• Continue BAPS for ankle range of motion.• Closed-chain hip/knee strengthening based on patient tolerance.• Repetition progression for calf raises as outlined (adapted

	from Saxena, 2011).
Balance and Proprioception	<ul style="list-style-type: none"> • Initiate balance training on unstable surfaces. • Initiate heel tap exercises.

Phase IV: 12+Weeks	
Return to Sport/Activity	<p>Criteria for Initiating Return to Running (Straight Plane Jogging):</p> <ul style="list-style-type: none"> • Perform 5 sets of 25 single-leg calf raises. • Demonstrate normal landing mechanics. • Complete 20 single-leg squats without compensation. • Achieve 95% symmetry in range of motion (dorsiflexion/plantarflexion). • Ensure 95% symmetry in calf circumference at 10 cm distal to the tibial tubercle (adapted from Saxena, 2011). <p>Return to Sport:</p> <ul style="list-style-type: none"> • Attain 90% symmetry in all single-leg hop tests. • Achieve 90% symmetry in Y balance testing.
Exercise Prescription	<p>Hop Training:</p> <ul style="list-style-type: none"> • Initiate hop training once cleared to return to jogging to improve landing mechanics. <p>Strengthening Emphasis:</p> <ul style="list-style-type: none"> • Focus on strengthening at end range of plantarflexion.

Continued Rehabilitation:

- Continue self-stretching regimen.
- Use joint mobilizations as needed.
- Progress strength, stability, and balance exercises on both stable and unstable surfaces to correct altered mechanics.

Plyometric Progression:

- Progress to single-leg shuttle plyometrics, bilateral lower extremity (LE) straight-plane exercises, bilateral LE diagonal-plane exercises, rotational movements, multi-directional exercises, and tuck jumps.

Sport-Specific Training:

- Introduce resisted jogging in place with resistance in all planes.
- Progress to sports-specific exercises and agility drills, emphasizing proper mechanics.