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Repair of Achilles Tendon Rupture

General Principles

- Protect the repair early on
- Prevent stiffness and atrophy
- Gradually restore motion, strength, and gait
- Return to sport/activity safely over several months

Phase I: Immobilization & Protection (Weeks 0–2)

Goals:

- Protect the tendon repair
- Minimize pain and swelling

Precautions:

- Non-weight bearing (NWB) with crutches
- Immobilization in plantarflexion (in cast)

Interventions:

- Elevation and icing
- Active range of motion (AROM) to toes, knee, and hip
- No ankle motion or weightbearing

Phase II: Early Mobilization (Weeks 2–6)

Goals:

- Begin gentle ankle motion
- Controlled partial weightbearing
- Prevent adhesions and stiffness

Precautions:

- Weightbearing as tolerated (WBAT) in a boot with heel wedges (to maintain plantarflexion)
- No active plantarflexion (avoid stressing the tendon)
- No passive dorsiflexion (avoid stretching out the repair)

Interventions:

- Transition to walking boot (with wedges)
- Start gentle ankle AROM:
 - Dorsiflexion to neutral (do not force)
 - Inversion/eversion (small range)
- Isometrics for quadriceps, glutes
- Begin gentle towel scrunches or toe curls

Phase III: Controlled Motion & Strength (Weeks 6–12)

Goals:

- Restore ankle ROM
- Initiate strengthening and improve gait mechanics

Precautions:

- Continue to use wedges in boot
- Avoid forceful stretching into dorsiflexion

Interventions:

- Wean out of boot around weeks 8–10 (as per Dr. Levin)
- Progress AROM in all directions
- Begin light resistance exercises (theraband):
 - Plantarflexion (after ~8 weeks), dorsiflexion, inversion, eversion
- Begin bilateral heel raises and progress to single-leg as tolerated
- Gait training and balance work

Phase IV: Advanced Strengthening (Weeks 12–20)**Goals:**

- Regain full strength, balance, and control
- Normalize functional movement

Interventions:

- Full ankle ROM
- Single-leg balance
- Step-ups
- Eccentric calf strengthening
- Proprioception and dynamic balance drills
- Treadmill walking once strength and gait normalize

Phase V: Return to Sport (Week 20+)

Goals:

- Restore power, agility, and sport-specific skills
- Prevent re-injury

Interventions:

- Jogging
- Plyometrics (jumping, bounding)
- Agility ladders, shuttle runs
- Sport-specific drills (cutting, sprinting)
- Gradual return to full sports participation around 6 months, with continued strengthening