Achilles Tendon Rupture Non-Operative Protocol

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OVERVIEW

This protocol for Achilles tendon rupture provides guidelines for progression of activity. Every patient recovery is different, and the program may be individualized by the physician. Essential to a safe recovery is an understanding of limitations.

Progression of activity should be a relatively pain-free process, especially at the injury site. Lingering pain directly for hours after therapy or activity may be a sign of overuse. Discomfort that resolves quickly after rest is normal.

Remember that the full recovery of tissue and muscle strength can take a year or longer, and temporary aches and pains are not unusual.

PHASE I: IMMEDIATE (WEEKS 0-2)

Immobilization

- Splint or cast in plantar flexion
- Shower or bathe with waterproof cover
- Rest and elevation other than basic activities of daily living (goal of 23-hour elevation)

Weight Bearing

- Non-weight bearing with crutches
- Foot rested on ground for balance
- Crutches, knee scooter

Therapy:

- No motion, strict elevation and edema control

Goals

- Rest and recovery
- Basic activities of daily living (household)
- Swelling and pain control

PHASE II: INTERMEDIATE (WEEKS 2-6)

Immobilization

- Boot with 2-cm heel lift
- Wear boot except when working with therapy or exercises
- Continue boot at night
- May remove for hygiene, maintaining foot position and weight-bearing restrictions

Weight Bearing

- Protected weight bearing with crutches, may go slower if discomfort. Feel foot pressure on bathroom scale with boot.
    - Weeks 2-3: 25% body weight

    - Weeks 3-4: 50% body weight
    - Weeks 4-5: 75% body weight
    - Weeks 5-6: 100% body weight
- Crutches, knee scooter

Therapy

- Gentle active ankle plantarflexion/dorsiflexion below neutral (2 set of 10 repetitions, 3 times per day)
- Physiotherapy
- Seated heel raises calf strengthening
- May work on hip, knee, toe curls. Core strengthening, non-weight bearing cardiovascular exercise. Quadriceps strengthening.
- Edema control

Goals

- Core strength
- Initiate gentle range of motion
- Protection of tendon with boot. Avoidance of stretching and pain
- Swelling control

PHASE III: INTERMEDIATE (WEEKS 6-10)

Immobilization

- Boot with 2-cm heel lift, may remove one wedge or 1-cm per week as determined by pain, if fully weight bearing
- Wear boot except when working with therapy or exercises
- Continue boot at night
- May remove for hygiene, maintaining foot position and weight bearing restrictions

Weight Bearing

- Progress pain-free weight bearing
- Crutches or cane for support as needed

Therapy

- Core strength
- Gait training

Goals

- Core strength
- Gait and
- Protection of tendon with boot. Avoidance of stretching and pain
- Swelling control
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PHASE IV: LATE (WEEKS 10-16)

Immobilization

- Transition to normal shoe after walking comfortably in boot without wedges
- No immobilization at night

Weight Bearing:

- Full weight bearing

Therapy

- Continue previous activity
- Balance, eversion/inversion strength
- Avoid overstretching Achilles tendon, forced dorsiflexion is not a goal of the recovery process and should not be painful

Goals

- Increase ADLs, return to some normal activities
- Protect the repair with mindful, gradual return to activity
- Avoidance of stretching

PHASE V: RETURN TO SPORT (WEEKS 16+)

Immobilization:

- None

Weight Bearing:

- Full weight bearing

Therapy

- Strengthening, balance, proprioception
- Gentle calf stretching
- Gait training
- Heel raises, progress from bilateral to unilateral eccentric as tolerated
- Low-impact cardiovascular exercise with progression to sports specific drills
- Start sport and work specific activity at 4 months
- Start gastrocnemius stretching at 6 months

Goals

- Return to sport and activity
- Avoidance of stretching
- Lower Extremity Functional Tests should be ≥ 90% of the uninjured side before returning to sports (6-12 months)