



Achilles Tendon Repair Protocol

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PHASE I: 0-2 WEEKS AFTER SURGERY

- Appointments:
 - Rehabilitation appointments begin 2 weeks after surgery
- Rehabilitation Goals:
 - Protection of the surgically repaired tendon
 - Wound Healing
- Precautions:
 - Posterior slab splint or continuous use of the Cam Boot.
 - Non-weight bearing with crutches
 - Keep incision dry
 - Watch for signs of infection (redness, warmth, purulent discharge).
- Suggested Therapeutic Exercise:
 - Ankle range of motion with respect to precautions
 - Pain-free isometric ankle inversion, eversion, dorsiflexion, and sub-max plantarflexion (Alphabet range of motion exercise)
 - Open chain hip and core strengthening
- Cardiovascular Exercise:
 - Upper extremity circuit training
- Progression Criteria:
 - 2 weeks after surgery

PHASE II: BEGIN AFTER MEETING PHASE 1 CRITERIA, USUALLY 2-4 WEEKS AFTER SURGERY

- Appointments:
 - Rehabilitation appointments are 1-2 times per week
- Rehabilitation Goals:
 - Normalize gait with weight bearing as tolerated using the boot and crutches
 - Active dorsiflexion to neutral
- Precautions:
 - Placed into walking boot with heel lifts (boot in 20-30° PF)
 - Do not soak the incision (i.e. no pool or bath tub)
 - Watch for signs of poor wound healing
- Suggested Therapeutic Exercise:
 - Ankle range of motion with respect to precautions

- Pain-free isometric ankle inversion, eversion, dorsiflexion, and sub-max plantarflexion (Alphabet range of motion exercise)
- Open chain hip and core strengthening
- Cardiovascular Exercise:
 - Upper extremity circuit training
- Progression Criteria:
 - Six weeks post-operatively
 - Pain-free active dorsiflexion to 0°
 - No wound complications. If complications occur, consult with a physician.

PHASE III: BEGIN AFTER MEETING PHASE II CRITERIA, USUALLY 6-8 WEEKS AFTER SURGERY

- Appointments:
 - Appointments are once a week
- Rehabilitation Goals:
 - Normalize gait on level surfaces without boot or heel lift
 - Single leg stand with good control for 10 seconds
 - Active ROM between 5° of dorsiflexion and 40° of Plantarflexion
- Precautions:
 - Slowly wean from use of the boot: Begin using 1-2 ¼ inch heel lifts in tennis shoes for short distances on level surfaces then gradually remove the heel lifts during the 5th and 8th week
 - Avoid over stressing the repair (avoid large movements in the sagittal plane; any forceful plantarflexion while in a dorsiflexed position; aggressive passive ROM; and impact activities)
- Suggested Therapeutic Exercise:
 - Frontal and sagittal plane stepping drills (side step, cross-over step, grapevine step)
 - Active ankle ROM
 - Gentle gastroc/soleus stretching
 - Static balance exercises (begin in 2 foot stand, then 2 foot stand on balance board or narrow base of support and gradually progress to single leg stand)
 - 2 foot standing nose touches
 - Ankle strengthening with resistive tubing
 - Low velocity and partial ROM for functional movements (squat, step back, lunge)
 - Hip and Core strengthening
 - Pool exercises if the wound is completely healed
 - Upper extremity circuit training
- Cardiovascular Exercise:
 - Upper extremity circuit training or UBE
- Progression Criteria:
 - Normal gait mechanics without the boot

- Squat to 30° knee flexion without weight shift
- Single leg stand with good control for 10 seconds
- Active ROM between 5° of dorsiflexion and 40° of plantarflexion

PHASE IV: BEGIN AFTER PHASE III CRITERIA USUALLY 8 WEEKS AFTER SURGERY

- Appointments:
 - Rehabilitation appointments are once 1-2 weeks
- Rehabilitation Goals:
 - Normalize gait on all surfaces without boot or heel lift
 - Single leg stand with good control for 10 seconds
 - Active ROM between 15° of dorsiflexion and 50° of plantarflexion
 - Good control and no pain with functional movements, including step up/down, squat and lunges
- Precautions:
 - Avoid forceful impact activities
 - Do not perform exercises that create movement compensations
- Suggested Therapeutic Exercise:
 - Frontal and transverse plane agility drills (progress from low velocity to high, then gradually adding in sagittal plane drills)
 - Active ankle ROM
 - Gastroc/soleus stretching
 - Multi-plane proprioceptive exercises – single leg stand
 - 1 foot standing nose touches
 - Ankle strengthening – concentric and eccentric gastroc strengthening
 - Functional movements (squat, step back, lunge)
 - Hip and core strengthening
- Cardiovascular Exercise:
 - Stationary bike, Stair master, swimming
- Progression Criteria:
 - Normal gait mechanics without the boot on all surfaces
 - Squat and lunge to 70° knee flexion without weight shift
 - Single leg stand with good control for 10 seconds
 - Active ROM between 15° of dorsiflexion and 50° of plantarflexion

PHASE V: BEGIN AFTER MEETING PHASE IV CRITERIA USUALLY 4 MONTHS AFTER SURGERY

- Appointments:
 - Rehabilitation appointments are once 1-2 weeks
- Rehabilitation Goals:
 - Good control and no pain with sport/work specific movements, including impact

- Precautions:
 - Post-activity soreness should resolve within 24 hours
 - Avoid post-activity swelling
 - Avoid running with a limp
- Suggested Therapeutic Exercise:
 - Impact control exercises beginning 2 feet to 2 feet, progressing from 1 foot to other then 1 foot to same foot
 - Movement control exercise beginning with low velocity, single plane activities and progressing to higher velocity, multi-plane activities
 - Sport/work specific balance and proprioceptive drills
 - Hip and core strengthening
 - Stretching for patient specific muscle imbalances
- Cardiovascular Exercise:
 - Replicate sport/work specific energy demands
- Progression Criteria:
 - Dynamic neuromuscular with multi-plane activities, without pain or swelling