

 Rehabilitation Guidelines for

 Achilles Tendon Repair

**Appointments**

• Rehabilitation appointments begin 14-16 days after surgery and continue at 1-2 per week

• Suture removal at 2 weeks (if needed)

**PHASE I** (surgery date to 2 weeks after surgery)

| Precautions | • Protection of the surgically repaired tendon • Wound healing Precautions• Continuous use of the boot in locked plantarflexion (20-30°) • Touchdown weight bearing (TDWB) using axillary crutches • **Keep the incision dry** • Watch for signs of infection • Avoid long periods of dependent positioning of the foot during the first week to assist in wound healing  |
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| Cardiovascular Exercise | • Upper Body Ergometer (UBE) circuit training |
| Progression Criteria | • Two weeks after surgery |

**PHASE II** (begin after meeting Phase 1 criteria, usually 3 -4 weeks after surgery)

| Rehabilitation Goals  | • Normalize gait with weight bearing as tolerated using the boot and axillary crutches • Protection of the post-surgical rep• Active dorsiflexion to neutral |
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| Suggested Therapeutic Exercise Suggested Therapeutic Exercise cont. | • Ankle range of motion (ROM) with respect to precautions • Pain-free isometric ankle inversion, eversion, dorsiflexion and sub-max plantarflexion • Open chain hip and core strengthening Cardiovascular Exercise • Upper extremity circuit training or UBE Progression Criteria • Six weeks post-operatively • Pain-free active dorsiflexion to 0° • No wound complications. If wound complications occur, consult with a physician |

**Phase III** (begin after meeting Phase II criteria, usually 6 to 8 weeks after surgery)

| 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  |
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| Precautions  | • Slowly wean from use of the boot: Begin by 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  |
| Cardiovascular Exercise  | • Upper extremity circuit training or UBE |
| Progression CriteriaProgression Criteria cont.  | • 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 meeting Phase III criteria, usually 8 weeks after surgery)

| 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  |
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| Precautions  | • Avoid forceful impact activities • Do not perform exercises that create movement compensations Rehabilitation Guidelines for Achilles Tendon Repair  |
| 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)

| Rehabilitation Goals  | • Good control and no pain with sport/work specific movements, including impact  |
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| 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 and 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 control with multi-plane activities, without pain or swelling |