

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 Criteria  Progression 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 |