



THE ORTHOPEDIC PARTNERS
AN RCM CLINIC

PARK CITY • HERBER CITY • SALT LAKE CITY

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Rehabilitation Protocol for Achilles Tendon Repair

This protocol is intended to guide clinicians through the post-operative course for Achilles Tendon Repairs. This protocol is time based as well as criterion based. Specific intervention should be based on the needs of the individual and should consider exam findings and clinical decision making.

Many different factors influence the post-operative Achilles tendon rehabilitation outcomes, including type and location of the Achilles tear and repair. Consider taking a more conservative approach to range of motion, weight bearing and rehabilitation progression.

PHASE I: IMMEDIATE POST-OP (0-3 weeks AFTER SURGERY)

Rehabilitation Goals	<ul style="list-style-type: none">• Protect repair• Maintain strength of hip, knee and core• Manage swelling• Pain management
Weight Bearing Status	Walking <ul style="list-style-type: none">• Non-weight bearing (NWB) with crutches in walking boot
Intervention/Suggested Therapeutic Exercises	Range of motion/Mobility <ul style="list-style-type: none">• Passive hamstring stretch Strengthening (while in boot) <ul style="list-style-type: none">• Quad sets• Straight leg raise• Abdominal strengthening• Side-lying hip external rotation – clamshell• Prone hip extension• Prone hamstring curls
Criteria to Progress	<ul style="list-style-type: none">• Decrease swelling• Decrease pain• Continue to protect repair

PHASE II: INTERMEDIATE POST-OP (4-6 WEEKS AFTER SURGERY)

Rehabilitation Goals	<ul style="list-style-type: none">• Continue to protect repair• Avoid over-elongation of the Achilles• Decrease pain• Minimize swelling• Improve scar mobility once incision is healed• Restore ankle range of motion, limited on dorsiflexion• Begin to normalize gait as much as possible and as tolerated
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<p>Precautions</p>	<p>Walking</p> <ul style="list-style-type: none"> • Week 4: Begin partial progressive weight-bearing with the use of an assisted device in an Achilles Boot <ul style="list-style-type: none"> ◦ <i>Gradual progress weight-bearing by 25% of body weight per week as tolerated until full weight-bearing is achieved without pain</i> • Remove one wedge every 3-7 days in the walking boot
<p>Intervention/Suggested Therapeutic Exercises</p>	<p>Range of motion/Mobility</p> <ul style="list-style-type: none"> • Initiate ankle passive range of motion, active assisted range of motion and active range of motion – DO NOT dorsiflex ankle past 0 degrees <ul style="list-style-type: none"> ◦ Ankle pumps ◦ Ankle circles ◦ Ankle inversion ◦ Ankle eversion ◦ Seated heel-slides for ankle dorsiflexion range of motion not past 0 degrees • Foot and ankle joint mobilizations – per therapist discretion <ul style="list-style-type: none"> ◦ Modify hand placement to avoid pressure on healing incision • May begin gentle scar mobilization once incision is healed – NO instrument assisted soft tissue mobilization directly on tendon until at least 16 weeks post-op <p>Cardio</p> <ul style="list-style-type: none"> • Upper body ergometer <p>Strengthening</p> <ul style="list-style-type: none"> • Continue proximal lower extremity strengthening as in Phase I • Lumbopelvic strengthening in boot • Once able to sit with flat foot on the floor with ankle close to neutral dorsiflexion <ul style="list-style-type: none"> ◦ Seated heel raises ◦ Seated arch domign ◦ Exercises for foot intrinsic muscles to minimize atrophy while in boot
<p>Criteria to Progress</p>	<ul style="list-style-type: none"> • Minimize pain • Minimize swelling • Full range of motion in plantar flexion, eversion, inversion • Dorsiflexion to neutral

PHASE III: LATE POST-OP (7-8 WEEKS AFTER SURGERY)

<p>Rehabilitation Goals</p>	<ul style="list-style-type: none"> • Continue to protect repair • Avoid over-elongation of the Achilles. No over stretching of the Achilles • Normalize gait in boot without wedges • Restore full range of motion, including dorsiflexion • Safely progress strengthening • Promote proper movement patterns • Avoid post exercise pain and swelling
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	<ul style="list-style-type: none"> • Full weight-bearing in boot without crutches
Weight Bearing Status	Walking <ul style="list-style-type: none"> • Remove final heel wedge if any remain <ul style="list-style-type: none"> ◦ Weight-bearing as tolerated/full weightbearing with one crutch or no crutch for normalized gait pattern
Intervention/Suggested Therapeutic Exercises	Range of motion/Mobility <ul style="list-style-type: none"> • Continue seated heel-slides for dorsiflexion range of motion to tolerance <ul style="list-style-type: none"> ◦ Dorsiflexion no longer restricted but continue gentle progress • Gentle stretching of proximal muscle groups as indicated • Ankle/foot mobilizations • No over stretching of the calf Cardio <ul style="list-style-type: none"> • Stationary bike in Achilles boot Strengthening <ul style="list-style-type: none"> • 4 way ankle with appropriate resisted band • Lumbopelvic strengthening • Hip abductor and adductor machine • Hip extension machine <ul style="list-style-type: none"> ◦ Progress tensity and duration of all exercises
Criteria to Progress	<ul style="list-style-type: none"> • No swelling or pain after performing exercises • Normal gait in boot without wedges or need for an crutches • Range of motion equal to contralateral

PHASE IV: TRANSITIONAL (9-10 WEEKS AFTER SURGERY)

Rehabilitation Goals	<ul style="list-style-type: none"> • Maintain full range of motion • Normalize gait in supportive sneaker with heel lift • Avoid over-elongation of the Achilles • Safely progress strengthening • Promote proper movement patterns • Avoid post exercise pain and swelling
Weight Bearing Status	Walking <ul style="list-style-type: none"> • Transition to sneaker with heel lift • Full weight-bearing
Intervention/Suggested Therapeutic Exercise	Range of motion/Mobility <ul style="list-style-type: none"> • Ankle/foot mobilization as indicated • Continue seated ankle heel slides for dorsiflexion <ul style="list-style-type: none"> ◦ Progress to standing ankle dorsiflexion on step

	<p>Cardio</p> <ul style="list-style-type: none"> • Stationary bike, flutter kicks in swimming pool, pool jogging <ul style="list-style-type: none"> ○ Can only get in the swimming pool in incision is fully healed <p>Strengthening</p> <ul style="list-style-type: none"> • Begin standing calf raise progression <ul style="list-style-type: none"> ○ Bilateral standing heel raises – 25% body weight through involved leg ○ Bilateral standing heel raises – 50% equal body weight through both legs ○ Bilateral standing heel raises – 75% body weight through involved leg • Seated hamstring curl machine • Leg press machine <p>Balance/Proprioception</p> <ul style="list-style-type: none"> • Double limb standing balance utilizing uneven surfaces • Single leg limp balance – progress to uneven surface including perturbation training
Criteria to Progress	<ul style="list-style-type: none"> • No swelling or pain after exercise • Normal gait in supportive sneaker with heel lift

PHASE V: TRANSITIONAL (11-12 WEEKS AFTER SURGERY)

Rehabilitation Goals	<ul style="list-style-type: none"> • Maintain full ROM • Normalize gait in supportive sneakers without heel lift • Avoid post exercise pain and swelling
Weight Bearing	<p>Walking</p> <ul style="list-style-type: none"> • Wean off heel lift from sneaker • Normalize gait patterns
Intervention/Suggested Therapeutic Exercises	<ul style="list-style-type: none"> • Continue to progress with intervention for range of motion, strengthening, balance and proprioception from previous phases as indicated
Criteria to Progress	<ul style="list-style-type: none"> • No swelling or pain after exercise • Full range of motion during standing bilateral concentric calf raises with equal weight bearing through both legs • Normal gait in supportive sneakers

PHASE VI: ADVANCED POST-OP (3-6 MONTHS AFTER SURGERY)

Rehabilitation Goals	<ul style="list-style-type: none"> • Safely progress strengthening • Promote proper movement patterns • Avoid post exercise pain and swelling • Avoid over elongation of the Achilles • Good tolerance with progression into agility training
Intervention/Suggested Therapeutic Exercise	<p>Walking</p> <ul style="list-style-type: none"> • Continue standing ankle dorsiflexion mobilization on step

	<p>Cardio</p> <ul style="list-style-type: none"> • Elliptical • Stair climber <p>Strengthening</p> <ul style="list-style-type: none"> • If able to perform bilateral standing heel raises with 75% of body weight through full range of motion on involved limb <ul style="list-style-type: none"> ○ Progress to eccentric calf raises on level surface followed by progression to unilateral heel raises • Seated calf raises • Hip hike • Forward lunges • Lateral lunges • Bilateral squats • Single leg progression <p>Plyometrics</p> <ul style="list-style-type: none"> • Rebounding heel raises bilateral stance • Rebounding unilateral heel raises • Hopping in place bilateral stance • Unilateral hopping in place
Criteria to Progress	<ul style="list-style-type: none"> • No swelling/pain after exercise • No swelling or pain with 30 minutes fast paced walking • Good tolerance and performance with plyometrics

PHASE VII: EARLY TO UNRESTRICTED RETURN TO SPORT (6+ MONTHS AFTER SURGERY)

Rehabilitation Goals	<ul style="list-style-type: none"> • Continue strengthening and proprioceptive exercises • Safely initiate sport specific training program • Symmetrical performance with sport specific drills • Safely progress to full sport
Intervention/Suggested Therapeutic Exercise	<p>Range of Motion/Mobility</p> <ul style="list-style-type: none"> • Gentle standing gastric stretch and soleus stretch <p>Running</p> <ul style="list-style-type: none"> • Interval walk/jog program • Slow progression into running <p>Plyometrics and Agility</p> <ul style="list-style-type: none"> • Continue to progress through plyometrics exercises to tolerance
Criteria to Discharge	<ul style="list-style-type: none"> • ALL milestones have been met