



Distal Triceps Repair Rehabilitation Guideline

This rehabilitation program is designed to return the individual to their activities as quickly and safely as possible. It is designed for rehabilitation following distal triceps repair. Modifications to this guideline may be necessary depending on physician-specific instructions, location and type of repair, concomitant injuries or procedures performed. This evidence-based distal triceps repair is criterion-based. Time frames and visits in each phase will vary depending on many factors – including patient demographics, goals and individual progress. This guideline is designed to progress the individual through rehabilitation to full sport and activity participation. The therapist may modify the program appropriately depending on the individual's goals for activity following distal triceps repair.

This guideline is intended to provide the treating clinician with a frame of reference for rehabilitation. It is not intended to substitute clinical judgment regarding the patient's post-operative care based on exam or treatment findings, individual progress and/or the presence of concomitant procedures or post-operative complications. If the clinician should have questions regarding post-operative progression, they should contact the referring physician.

General Guidelines/Precautions:

- No aggressive stretching of the triceps.
- Splint wear for 2 weeks followed by hinged elbow brace for 4 weeks.
- Elbow brace locked in range-of-motion restrictions per physician's discretion.
- No active elbow extension for 6 weeks.
- Passive shoulder flexion limited to 90° for 4 weeks.
- No resisted elbow extension or shoulder extension for 12 weeks.
- No UE weight bearing through surgical extremity (pushing up from chair, pushing open door, etc.) for 12 weeks.
- Plyometric training is expected around 16 weeks, with return-to-sport-specific activities/throwing at 5-6 months.

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PHASE	SUGGESTED INTERVENTIONS	GOALS/MILESTONES FOR PROGRESSION
<p>Phase I <i>Patient Education Phase:</i></p> <p><i>Weeks: 0-2</i></p>	<p>Discuss: Anatomy, existing pathology, post-op rehab schedule and expected progressions</p> <p>Immediate Post-Operative Instructions:</p> <ul style="list-style-type: none"> • Wrist and hand AROM • Bracing • Splinting for the first two weeks • Post-operative precautions and contraindications <ul style="list-style-type: none"> ◦ No weight bearing through UE (bed mobility, opening doors, etc.) 	<p>Goals of Phase:</p> <ol style="list-style-type: none"> 1. Appropriate expectations for post-operative rehabilitation
<p>Phase II <i>Acute Phase: Protected range of motion</i></p> <p><i>Weeks: 2-6</i></p>	<p>Specific instructions:</p> <ul style="list-style-type: none"> • No active elbow extension for 6 weeks • No soft tissue work or cross-friction massage on scar for 6 weeks • Hinged elbow brace per physician instructions • Limit shoulder flexion range of motion to 90° for 4 weeks <p>Suggested Treatments:</p> <ul style="list-style-type: none"> • Passive elbow range of motion: (gentle non-forceful PROM) • Passive elbow extension to full range (weeks 2-4) • 20° progressing to 90° of elbow flexion (weeks 2-4) • 90°-120° elbow flexion (weeks 4-6) • Shoulder flexion to 90° (active assisted and passive) • Active wrist/hand exercises (gripping, wrist flex/ext, wrist radial and ulnar deviation, pronation/supination) • Self-passive elbow flexion and elbow extension within range of motion restrictions • Gentle shoulder PROM (table slides, pulleys, dowel) within range of motion restrictions. • Light elbow flexion isometrics within range of motion limitations • Shoulder submaximal isometrics with the exception of elbow extension (weeks 4-6) • Active shoulder flexion and extension (weeks 4-6) 	<p>Goals of Phase:</p> <ol style="list-style-type: none"> 1. Provide environment of proper healing of repair site 2. Prevention of post-operative complications 3. Preventing elbow and shoulder contractures 4. Manage inflammation and pain <p>Criteria to Advance to Next Phase:</p> <ol style="list-style-type: none"> 1. Control of post-operative pain and edema 2. Elbow flexion at 120° or greater

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<p>Phase III <i>Post-acute phase: AROM and light strengthening</i></p> <p><i>Weeks: 6-12</i></p>	<p>Specific instructions:</p> <ul style="list-style-type: none"> • Progression of active and passive range of motion at shoulder • Begin sub-max and pain-free elbow extension isometrics at week 8 • Elbow brace discharged (per physician) <p>Suggested Treatments:</p> <ul style="list-style-type: none"> • Shoulder AROM with focus on endurance (high rep/ low weight) • Elbow active range of motion <ul style="list-style-type: none"> ◦ Start concentric only (weeks 6-8) progressing into eccentric muscle activation (weeks 8-12) • Prone scapular exercises (week 8) • Biceps strengthening (week 8) <p>Manual Therapy: Gentle STM and scar tissue massage</p> <p>Exercise Examples:</p> <ul style="list-style-type: none"> • UBE for ROM (no resistance) • Shoulder raises (arm weight progressing to light resistance) • Shoulder ER with light resistance starting with elbow at side and progressing into degrees of shoulder abduction • Elbow extension isometrics (25%-50% effort) without pain <ul style="list-style-type: none"> ◦ Various angles (30°, 60°, 90°, 120°) • Rhythmic stabilization shoulder • Serratus anterior punches • Prone Y, T, I rows 	<p>Goals of Phase:</p> <ol style="list-style-type: none"> 1. Gradual return of shoulder and elbow range of motion 2. Reduction of post-operative swelling and inflammation (none to trace effusion) 3. Tolerance to elbow AROM. 4. Gain shoulder motor control/ strength in preparation for return to sport/recreational activities. <p>Criteria to Advance to Next Phase:</p> <ol style="list-style-type: none"> 1. Full, pain-free, range of motion of the shoulder, elbow, wrist and hand 2. 5/5 MMT for shoulder complex
<p>Phase IV <i>Advanced strengthening</i></p> <p><i>Weeks 12-16</i></p>	<p>Specific instructions:</p> <ul style="list-style-type: none"> • Progress triceps isotonic strengthening • UE CKC strength training • Return to light pressing activities <p>Suggested Treatments:</p> <ul style="list-style-type: none"> • CKC activities <ul style="list-style-type: none"> ◦ Weight-bearing quadruped proprioceptive exercises at week 12 <ul style="list-style-type: none"> ▪ Quadruped shoulder taps, weight shifts, etc. ◦ Wall push-ups at week 14 ◦ Incline push-up at week 15 ◦ Progress incline push-up towards neutral at week 16 	<p>Goals of Phase:</p> <ol style="list-style-type: none"> 1. Maintain full and pain-free ranges of motion 2. Progress isotonic strength of triceps 3. Introduction of pressing activities, strength training and UE closed-chained positioning <p>Criteria to Advance to Next Phase:</p> <ol style="list-style-type: none"> 1. Full and painless range of motion of elbow, shoulder, wrist and hand 2. Proper scapulothoracic mechanics

<p>Phase V <i>Return-to-sport or recreational activity</i></p> <p><i>Weeks: 16+</i></p>	<p>Specific instructions:</p> <ul style="list-style-type: none"> • Return-to-sport activities • Begin Interval Throwing Program (see guideline) or appropriate sport-specific interval program <ul style="list-style-type: none"> o Modified-depth push-up with a plus, DB floor press at week 18 o DB bench, full push-up at week 20 o Barbell bench, shoulder press at week 22-24, progressively increasing depth to full after six months • Plyometric training at week 16 <ul style="list-style-type: none"> o Start below shoulder and height and work to overhead <ul style="list-style-type: none"> ▪ Trampoline chest pass, side, overhead tosses, 90°/90° toss o Progress to closed chain when they can tolerate full weight bearing (around week 18) 	<p>Goals of Phase:</p> <ol style="list-style-type: none"> 1. Maintain full and pain-free ranges of motion 2. Progress weight-bearing and advanced strength of triceps and the entire arm 3. Return to sport-specific movements and forces (throwing, swimming and lifting). 4. Progression of pressing activities, strength training and UE closed-chained positioning <p>Criteria to Advance to Next Phase:</p> <ol style="list-style-type: none"> 1. Full Triceps strength against gravity (5/5 MMT vs. HHA dynamometer 10% or less discrepancy) 2. Proper scapulothoracic mechanics 3. Upper extremity return-to-sport testing for discharge <p>Overhead throwing program progression, if needed</p>
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REFERENCES:

1. Kocialkowski C, Carter R, Peach C (2018). Triceps Tendon Rupture: Repair and Rehabilitation. *Shoulder and Elbow*, 10 (1): 62-65.
2. Blackmore SM, Jander RM, Culp RW. Management of distal biceps and triceps ruptures. *Journal of Hand Therapy*. 2006; 19 (2): 154-169. DOI 10.119

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