

Conservative Distal Biceps Repair

Clinic Care Guideline

Background

Distal biceps tendon ruptures occur primarily in males and risk factors include smoking, corticosteroid use, and anabolic steroid use. Tears occur secondary to unexpected extension forces and are typically associated with a "pop". Diagnosis and determination of a plan of care is important early on if surgical treatment is necessary. Progression is time and criterion-based, dependent on soft tissue healing, patient demographics and clinician evaluation. Contact Ohio State Sports Medicine at 614-293-2385 if questions arise.

Disclaimer

Progression is time and criterion-based, dependent on soft tissue healing, patient demographics and clinician evaluation. If you are working with an Ohio State Sports Medicine patient and questions arise, please contact the author by calling our office at (614) 293-2385.

***Consult with surgeon regarding specific restrictions and clinical care guideline to follow.**

Summary of Guideline

Outcome Tools	<ul style="list-style-type: none"> • Quick DASH • KJOC
Strength Testing	<ul style="list-style-type: none"> • Hand Held Dynamometry for scapular, rotator cuff musculature no earlier than 12 weeks (>80% compared to contralateral shoulder) • Hand Held Dynamometry for elbow flexors and extensors no earlier than 16 weeks (>80% compared to contralateral shoulder)
Range of Motion	<ul style="list-style-type: none"> • Full, pain-free elbow ROM
Criteria to initiate plyometrics	<ul style="list-style-type: none"> • Time: no earlier than 16 weeks • Pain-free ADL's and strengthening interventions • Strength \geq 4/5 MMT OR \geq 80% of uninvolved shoulder • ROM as noted above • Proper scapular control during interventions
Criteria for return to sport	<ul style="list-style-type: none"> • Clearance from physician • Completion of strengthening and plyometrics • Successful completion of throwing program

RED/YELLOW FLAGS

Red flags are signs/symptoms that require immediate referral for re-evaluation. Yellow flags are signs/symptoms that require modification to plan of care.

Red Flags	<ul style="list-style-type: none"> • Infection • Traumatic event (i.e. fall) • Heterotopic Ossificans
Yellow Flags	<ul style="list-style-type: none"> • Pain following increase in rehab intensity <ul style="list-style-type: none"> ◦ Decrease intensity of therapy interventions, manage pain, education for patient on activity modification, monitor during next visit • Persistent pinching in the elbow with ROM

Phase 1 – Immediate Post-Op Phase

Goals

- 1) Protect healing tissue
- 2) Decrease pain/inflammation

Weeks 1-6	Brace	<ul style="list-style-type: none"> • Per physician guidelines
	ROM	<ul style="list-style-type: none"> • Per physician guidelines for elbow • PROM of elbow, in brace, with extension stop at 20°. • AROM and PROM of wrist and hand
	Strength	<ul style="list-style-type: none"> • Scapular retraction/protraction • Week 4: Shoulder isometrics (ER/IR/ABD) with brace donned • NWB on the surgical UE
	Modalities	<ul style="list-style-type: none"> • Cryotherapy and light compression

Phase 2- Intermediate Phase

Weeks 6-8

ROM	<ul style="list-style-type: none"> • Discharge brace at 6 weeks • Encourage terminal ROM <ul style="list-style-type: none"> ◦ Joint mobilizations as needed at end range with distraction • AAROM progressing to AROM elbow flexion, supination in pain-free range (gravity reduced progressing to against gravity) • AAROM- AROM shoulder flexion (unloaded)
Interventions	<ul style="list-style-type: none"> • Follow physician guidance on weight restrictions • Initiate UBE forward direction, using vertical handholds • Prone scapular stabilizing exercises- retraction, ext, rows, Ts <ul style="list-style-type: none"> ◦ Avoid loading the biceps with a weight during rows • Initiate sub-maximal elbow flexion and supination isometrics • Rhythmic stabilization- supine, multiangle • Side lying or Theraband ER/IR strengthening • Triceps and posterior deltoid strengthening



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Phase 3 – Advanced Strengthening Phase

Weeks 8-16

Interventions	<p>Consult surgeon if considering BFR in this phase</p> <ul style="list-style-type: none"> • AROM elbow flexion, supination • AROM shoulder flexion • If lacking extension range, begin to push stretching into extension • Week 10: Biceps isotonic initiated submaximally • Week 10: Shoulder flexion PRE's initiated • Progress scapular stability • UE weight shifts on table
Goals	<ul style="list-style-type: none"> • 5/5 shoulder flexion, abduction, ER, IR strength • Full ROM of elbow in supination and extension • No reactive effusion/exacerbation with biceps PRE's

Phase 4 – Functional Activity Phase

4+ Months	<ul style="list-style-type: none"> • Continue to strengthen biceps and surrounding musculature • Progress both WB and NWB strengthening activities • Integrate functional strengthening • Week 16: Initiate light plyometrics
RTS Criteria	<ul style="list-style-type: none"> • Clearance from physician • Completion of strengthening and plyometrics • Successful completion of throwing program

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