



## **Dr. McGraw Arm/Shoulder Procedures**

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## Bicep Tenodesis

<u>Postop</u>	<u>Goals</u>	<u>Precautions</u>	<u>Exercises</u>
<b>Weeks 0-4</b> PT 1-2x/week HEP daily	Edema and pain control FF140°, ER 40° IR behind back	Sling when not doing exercises No active elbow flexion	PROM of elbow, wrist, hand Codman/Pendulum Shoulder P/AA/AROM as tolerated Gentle isometrics (arm at side) at 2 wks Posterior capsule stretch Posture training
<b>Weeks 4-8</b> PT 2-3x/week HEP daily	FF 160°, ER 60°	No sling No resisted elbow flexion	Advance P/AA/AROM Active elbow flexion (no resistance) Continue isometrics Progress to bands as tolerated Incorporate joint mobilizations Periscapular strengthening
<b>Weeks 8-12</b> PT 1-2x/week HEP daily	Full ROM Return to activity	No sling Strengthening only 3x/week to avoid rotator cuff tendinitis	Continue ROM exercises Advance strengthening as tolerated Begin eccentric resisted motion and closed chain exercises Gentle resisted elbow flexion (8 weeks)
<b>Weeks 12+</b> HEP daily	Maximal ROM Independent HEP	None	Continue above exercises Advance strengthening as tolerated Elbow flexion strengthening (>12 weeks) HEP for maintenance exercises

### MILESTONES TO RETURN TO FULL SPORT, WORK, HOBBIES:

- Clearance from surgeon and therapist
- Minimal to no complaints of pain
- Restoration of sufficient ROM for task completion
- Adequate shoulder girdle endurance for desired activity
- Regular completion of an independent strengthening program at least 3 days per week

## Distal Bicep Tendon Repair

<u>Postop</u>	<u>Goals</u>	<u>Precautions</u>	<u>Exercises</u>
<b>Weeks 0-2</b> HEP daily	Edema and pain control Protect surgical repair Wrist, hand, shoulder ROM	Splint 90° flexion at all times No active supination	Gentle wrist and hand ROM Shoulder pendulum in splint Shoulder PROM exercises
<b>Weeks 2-6</b> PT 2-3x/week HEP daily	Edema and pain control Protect surgical repair ROM 15-130°	Brace locked at 90° Remove for shower & exercises No active elbow flexion No active supination	Gradually increase elbow ROM: <b>Week 2:</b> 45-100° <b>Week 4:</b> 30-115° <b>Week 6:</b> 15-130° Active extension, passive flexion Continue wrist, hand, shoulder ROM Scapular strengthening Gripping exercises Triceps isometrics ( <b>week 5</b> )
<b>Weeks 6-12</b> PT 2-3x/week HEP daily	Full ROM Protect surgical repair	<b>Weeks 6-9:</b> DC brace at 8 weeks No active elbow flexion  <b>Weeks 9-12:</b> No brace No lifting objects >1lb	<b>Weeks 6-9:</b> Full elbow ROM Active extension, AA/P flexion Continue wrist, hand, shoulder ROM Begin cuff/deltoid isometrics  <b>Weeks 9-12:</b> Begin biceps isometrics Active flexion against gravity (week 9) Resistive strengthening cuff/deltoid Upper body ergometry (week 10)
<b>Weeks 12-24</b> PT 1-2x/week HEP daily	Improve strength	No brace	<b>Weeks 12-16:</b> ROM and stretching exercises Elbow flexion resistive strengthening  <b>Weeks 16-24:</b> Progress strengthening as tolerated Plyometrics and sport specific exercises
<b>Weeks 24+</b> HEP daily	Return to play Unrestricted activity	Return to sport (MD directed)	Maintain ROM and strength

## Rotator Cuff Repair

<u>Postop</u>	<u>Goals</u>	<u>Precautions</u>	<u>Exercises</u>
<b>Weeks 0-4</b> PT 1x/week HEP daily	Edema and pain control Protect surgical repair Sling immobilization	Sling at all times including sleep Remove for hygiene & exercises	Codman & Pendulum Sidelying scapular stabilization Elbow, wrist, hand ROM Gripping exercises Cryotherapy prn PROM as tolerated (except for internal rotation which will start at week 3)
<b>Weeks 4-12</b> PT 2-3x/week HEP daily	Protect surgical repair Restore ROM Gradual return to light ADL's below 90° elevation Normal scapulohumeral rhythm below 90° elevation	Sling except shower & exercises DC sling at 6 weeks No ER >40° until 6 weeks No FF >120° until 6 weeks	<b>Weeks 4-6:</b> Joint mobilizations Scapular stabilization Deltoid, biceps, triceps isometrics Wand activities in all planes with control ( <b>6 weeks</b> ) Begin supine rhythmic stabilization ( <b>week 6</b> )  <b>Weeks 7-12</b> Advance scapular stabilization Improve scapulohumeral rhythm below 90° Progress AA/PROM to FF 155°, ABD 135°, ER 45°, ABER 90°, ABIR 45° AROM plane of scapula (supine → standing) Begin ER & IR isometrics Hydrotherapy if available Incorporate PNF patterns for combined motions
<b>Weeks 12-26</b> PT 2-3x/week HEP daily	Full ROM Normalize scapulohumeral rhythm throughout ROM Restore strength 5/5	Avoid painful ADL's Avoid rotator cuff inflammation Avoid excessive passive stretching OK to begin running/cycling	A/AA/PROM no limits Continue scapular stabilization Advance scapulohumeral rhythm Endurance: upper body ergometer (UBE) Begin resistive strengthening for scapula, biceps, triceps, and rotator cuff Add functional activities /return to function Begin tubing resistance for IR/ER in neutral, progressing to 90/90 IR/ER
<b>Weeks 26+</b> PT 1-2x/week HEP daily	Full ROM and strength Improve endurance Prevent re-injury	Avoid painful activities No contact/racket/throwing sports Return to sport (MD directed)	Advance eccentric training Initiate plyometrics Sport specific activities

## Total Shoulder Arthroplasty

Postop	Goals	Precautions	Exercises
<b>Weeks 0-4</b> PT 1-2x/week HEP daily	Edema and pain control Protect subscap repair Elevation to 90 degrees  <b>Week 1:</b> FF 100°, ER 0° <b>Week 2:</b> FF 120°, ER 10° <b>Week 4:</b> FF 150°, ER 20°	Sling when not doing exercises Limit ER to neutral x2 weeks No ER >20° ( <b>weeks 2-6</b> ) No active IR No backward extension (BE) No scapular retractions Limit abduction 75° No resisted elbow flexion	Elbow, wrist, hand ROM Codman/Pendulum PROM by PT/PTA Scapular mobility and stability (side-lying) Deltoid isometrics Posture training Cryotherapy prn Grip exercises
<b>Weeks 4-8</b> PT 2-3x/week HEP daily	Protect subscap repair FF 160°, ER 45° ( <b>week 6</b> )	DC sling No resisted IR/BE No resisted scapular retractions Avoid painful ADL's	Advance P/AA/AROM Cane/pulley Rhythmic stabilization at 120° Begin AA → AROM IR/BE Submaximal isometrics ER/FF/ABD Closed chain kinetic exercises Scapular stabilization Incorporate gentle joint mobilizations Periscapular strengthening (prone row, serratus punch, prone extensions, etc.)
<b>Weeks 8-12</b> PT 1-2x/week HEP daily	FF 160°, ER 60°, IR T12 Scapulohumeral rhythm UE strength 4/5	No sling Avoid painful ADL's Avoid activities that encourage scapula hiking or poor mechanics Limit strengthening to 3x/week to avoid rotator cuff tendinitis	Progress ROM/flexibility exercises Advance strengthening as tolerated Rhythmic humeral head stabilization Begin resisted IR/BE (isometrics → light bands → weights) Increase end ROM with passive stretch Begin eccentrics, plyometrics, and closed chain exercises when appropriate Begin light functional activities Flexion and extension strengthening/ resistance training to begin at week 10 Incorporate PNF patterns for combined motions- (No combined ER and abduction above 80 degrees)
<b>Weeks 12+</b> HEP daily	Maximal ROM Independent HEP	None	Progress strengthening, flexibility, and endurance Begin light resistance in all planes (initial focus on endurance, progressing to strength) Increase functional activities/ training for

## Reverse Total Shoulder Arthroplasty

<u>Postop</u>	<u>Goals</u>	<u>Precautions</u>	<u>Exercises</u>
<b>Weeks 0-4</b> PT 1-2x/week HEP daily	Edema and pain control Protect subscap repair Elevation to 90 degrees  <b>Week 1:</b> FF 90°, ER 0° <b>Week 2:</b> FF 120°, ER 0°	Sling when not doing exercises DC sling at <b>4 weeks</b> Limit ER to neutral x2 weeks No ER >30°, active IR ( <b>weeks 2-6</b> ) No backward extension (BE) No scapular retractions Limit abduction 75° No resisted elbow flexion	Grip exercises Cryotherapy prn Elbow, wrist, hand ROM Codman/Pendulum PROM by therapist Scapular mobility and stability (side-lying) Deltoid isometrics Posture training
<b>Weeks 4-8</b> PT 2-3x/week HEP daily	Protect subscap repair FF 150°, ER 45° PROM: flexion to 140 deg, abduction to 120 degrees, internal rotation to 60 degrees Able to actively elevate arm to 90 deg in supine	No resisted IR/EXT Avoid EXT/IR/Adduction No resisted scapular retractions Avoid painful ADL's External rotation ROM limited to 20 degrees at <b>5-6 weeks</b>	Advance P/AA/AROM Cane/pulley Passive IR in 60° abduction Rhythmic stabilization at 120° Submaximal isometrics ER/FF/ABD Closed chain kinetic exercises Scapular stabilization Anterior deltoid/teres strengthening Periscapular strengthening
<b>Weeks 8-12</b> PT 1-2x/week HEP daily	Full ROM Improve strength Improve endurance	No sling Avoid painful ADL's	Begin light functional activities Begin AA → AROM IR/EXT Advance strengthening as tolerated Closed chain scapular rehab Functional strengthening focused on anterior deltoid and teres Maximize scapular stabilization Deltoid strengthening open and closed chain Incorporate PNF patterns for combined motions Begin tubing resistance for IR/ER in neutral Add gym machines as appropriate
<b>Weeks 12+</b> HEP daily	Maximal ROM Independent HEP	None	Progress strengthening, flexibility, and endurance

## SLAP Repair

<u>Postop</u>	<u>Goals</u>	<u>Precautions</u>	<u>Exercises</u>
<b>Weeks 0-4</b> PT 1-2x/week HEP daily	Edema and pain control Protect surgical repair Sling immobilization FF 90°, ER 20°	Sling except shower & exercises Max FF 90°, ER 20° Support elbow during exercises to limit stress on repair	Elbow, wrist, hand ROM, grip AA/PROM FF plane scapula 90° AA/PROM ER 20° arm at side Sidelying scapular stabilization Submaximal deltoid & cuff isometrics Cryotherapy prn Pendulum exercises
<b>Weeks 4-8</b> PT 2-3x/week HEP daily	Protect surgical repair FF 145°, ER 60° Improve IR & ER strength Scapulohumeral rhythm	Sling except shower & exercises DC sling at <b>6 weeks</b> No ER >30° until 6 weeks No backward extension Avoid cuff inflammation	AAROM FF and ER Scapular stabilization Begin pulleys Hydrotherapy Scapular strengthening in protected arcs Humeral head stabilization exercises IR & ER isometrics Begin isotonic IR & ER at 6 weeks Posture training Periscapular strengthening (prone row, serratus punch, prone extensions, etc.)
<b>Weeks 8-14</b> PT 2-3x/week HEP daily	Full ROM Scapulohumeral rhythm Restore strength 5/5	No sling Avoid painful ADL's Avoid rotator cuff inflammation	A/AA/PROM no limits Rotator cuff/periscapular stabilization Humeral head rhythmic stabilization Scapular stabilization/latissimus strength Upper body ergometry Isokinetic training Advance strengthening as tolerated Eccentric and closed chain exercises <b>12wk</b>
<b>Weeks 14-18+</b> PT 1x/week HEP daily	Full ROM and strength Improve endurance Prevent re-injury	No sling Avoid painful activities OK to cycle/run at 12 weeks Pain free plyometrics No contact/racket/throwing sports	Advance UE strengthening as tolerated Begin plyometrics Sport specific activities Throwing/racquet program 4-5 months Functional activities/ return to function
<b>Weeks 18+</b>	Return to play	No restrictions Return to sport (MD directed)	Maintain ROM, strength, and endurance

## Bankart Repair/ Anterior Stabilization

<u>Postop</u>	<u>Goals</u>	<u>Precautions</u>	<u>Exercises</u>
<b>Weeks 0-4</b> HEP daily	Edema and pain control Protect surgical repair Sling immobilization	Sling at all times including sleep Remove to shower (arm at side) ER to neutral	Elbow, wrist, hand ROM Gripping exercises
<b>Weeks 4-8</b> PT 2-3x/week HEP daily	Protect surgical repair FF 145°, ER 30°	Sling except shower & exercises DC sling at <b>6 weeks</b> No ER >30° No backward extension Avoid anterior capsule stretch	AAROM FF and ER Scapular stabilization Submaximal biceps, triceps, deltoid ER, and IR isometrics Gentle gradual ER: 0° abduction → max 30° 90° abduction → max 50° Posture training
<b>Weeks 8-12</b> PT 2-3x/week HEP daily	Full ROM Scapulohumeral rhythm Restore strength 5/5	No sling Avoid painful ADL's Avoid rotator cuff inflammation Avoid excessive passive stretching	AAROM IR Rotator cuff/periscapular stabilization Humeral head rhythmic stabilization Resistive exercise for scapula, biceps, triceps, and rotator cuff below horizontal plane
<b>Weeks 12-18</b> PT 1x/week HEP daily	Full ROM and strength Improve endurance Prevent re-injury	No sling Avoid painful activities OK to cycle/run at 12 weeks No contact/racket/throwing sports	Advance UE strengthening as tolerated ER/IR in 90/90 position Begin upper body ergometer (UBE) Initiate plyometrics Sport specific activities Throwing/racquet program 4-5 months
<b>Weeks 18+</b> HEP daily	Return to play	No restrictions Return to sport (MD directed)	Maintain ROM, strength, and endurance



## AC Joint Reconstruction

<u>Postop</u>	<u>Goals</u>	<u>Precautions</u>	<u>Exercises</u>
<b>Weeks 0-4</b> PT 1x/week HEP daily	Edema and pain control Protect surgical repair Sling immobilization	Sling at all times including sleep Remove for hygiene & exercises	Sidelying scapular stabilization Elbow, wrist, hand ROM Gripping exercises
<b>Weeks 4-8</b> PT 1-2x/week HEP daily	Protect surgical repair Restore ROM	Sling except shower & exercises No ER >45° until 6 weeks No FF >120° until 6 weeks	Sidelying scapular stabilization Supine deltoid, biceps, triceps, rotator cuff isometrics (gravity eliminated) Supine PROM: FF 120°, ER 45°
<b>Weeks 8-16</b> PT 2-3x/week HEP daily	Full ROM Normalize scapulohumeral rhythm throughout ROM Restore strength 5/5	DC sling at 8 weeks Avoid painful ADL's Avoid rotator cuff inflammation Avoid excessive passive stretching  OK to cycle/run at 12 weeks	AROM as tolerated in PRONE position AA/PROM no limits Continue scapular stabilization Begin resistive strengthening for scapula, biceps, triceps, and rotator cuff (supine → vertical position at 12 weeks) Endurance: Begin UBE at 12 weeks
<b>Weeks 16-24</b> PT 1-2x/week HEP daily	Full ROM and strength Improve endurance Prevent re-injury	Avoid painful activities  No contact/racket/throwing sports Return to sport (MD directed)	Advance eccentric training Initiate plyometrics Advance endurance training Sport specific activities Throwing/racquet program ~5 months Contact sports 6+ months

## Pec Major Repair

<u>Postop</u>	<u>Goals</u>	<u>Precautions</u>	<u>Exercises</u>
<b>Weeks 0-6</b> PT 1-2x/week HEP daily		<b>0-2 weeks:</b> Immobilized at all times day and night Off for hygiene and gentle exercise according to instruction sheets <b>2-6 weeks:</b> Worn daytime only <b>0-3 weeks:</b> No ROM Limit 90° flexion, 45° ER, 20° extension, 45° abduction	<b>0-2 weeks:</b> Elbow/wrist ROM, grip strengthening at home only <b>2-6 weeks:</b> Begin PROM activities Limit 45° ER, 45° abduction Codman's Posterior capsule mobilizations; avoid stretch of anterior capsule
<b>Weeks 6-12</b> PT 2-3x/week HEP daily	Begin A/AAROM, passive ROM to tolerance full ER, 135° flexion, 120° abduction	No immobilizer No resisted IR/Adduction	Continue previous exercise Begin active assisted exercises Deltoid/rotator cuff isometrics at <b>8 weeks</b> Begin resistive exercises for scapular stabilizers, biceps, triceps and rotator cuff Initiate closed-chain scapula
<b>Weeks 12-16</b> PT 2-3x/week HEP daily	Gradual return to full AROM		Continue and advance previous exercise Emphasize external rotation and latissimus eccentrics, glenohumeral stabilization Plank/push-ups @ <b>16 wks</b> Begin muscle endurance activities (upper body ergometer) Cycling/running okay at <b>12 weeks</b>
<b>Months 4-5</b> PT 1x/week HEP daily	Full and pain-free		Aggressive scapular stabilization and eccentric strengthening Begin plyometric and throwing/racquet program, continue with endurance activities Maintain ROM and flexibility
<b>Weeks 18+</b> HEP daily	Full and pain-free		Progress previous activities Return to full activity as tolerated

Utilize exercise arcs that protect the anterior capsule from stress during resistive exercises and keep all strengthening exercises below the horizontal plane in phase II Limited return to sports activities until cleared by MD.