



# Rotator Cuff Repair Protocol Phase 1

Purpose		Precautions	
Maximum Protection	<ul style="list-style-type: none"> <li>No AROM</li> <li>No Passive Extension ROM</li> <li>No ER past 20°</li> <li>No shoulder elevation past 90°</li> <li>Sling use for 4-6 weeks</li> <li>No behind back stretching</li> <li>No lifting, carrying, pushing (WB), pulling, driving, or activities that involve quick/jerking motions</li> </ul>	<b>Supraspinatus Precautions:</b>	<ul style="list-style-type: none"> <li>No passive IR, extension or horizontal adduction</li> </ul>
Typical Time Frame		<b>Subscap Repair Precautions:</b>	<ul style="list-style-type: none"> <li>No ER past neutral</li> <li>No horizontal adduction</li> </ul>
0-4 Weeks		<b>Biceps Tenodesis Precautions:</b>	<ul style="list-style-type: none"> <li>No extension or horizontal abduction</li> <li>No resisted elbow flex, shoulder flex, or supination</li> </ul>

Criteria to Pass
<ul style="list-style-type: none"> <li>0°-90° of shoulder elevation/flexion PROM</li> <li>0°-20° of shoulder PROM ER in scapular plane</li> <li>Pain is controlled and incision is healing properly</li> </ul>

Priority List & Suggested Exercises
<p><b>1. Shoulder ROM</b></p> <ul style="list-style-type: none"> <li>a. PROM <ul style="list-style-type: none"> <li>i. Scapular plane ER &lt; 20°</li> <li>ii. Scapular plane shoulder elevation &lt; 90°</li> </ul> </li> <li>b. Arm hangs outside of the sling &gt; Pendulums (front to back &amp; side to side) - using hips ONLY</li> <li>c. PROM/AROM of the elbow, wrist, hand</li> <li>d. Cervical PROM stretching</li> <li>e. Joint mobilization to 1st rib to decrease inferior glide hypomobility while in sling</li> <li>f. Joint mobilization ~ 3-4 weeks post op (AP, inferior grade 1-2 oscillations for muscle guarding and pain)</li> </ul> <p><b>2. UE Strength</b></p> <ul style="list-style-type: none"> <li>a. Scapular depression, protraction, retraction</li> <li>b. Scapular setting (isometric holds)</li> <li>c. Ball squeezes (grip strength)</li> </ul>

Special Considerations
<ul style="list-style-type: none"> <li>See Surgeon's instructions for specific ROM precautions for patient specific</li> <li>Modalities: Ice regularly and pain meds regularly</li> <li>Incision: inspect frequently to ensure healing and closing</li> <li>Gentle PROM - do not stretch beyond 1st resistance</li> <li>Show caregiver how to perform PROM of shoulder 1-2x/day outside of PT</li> <li>Educated patient to ice 3x/day</li> <li>Reminder that the tendon is ONLY 20% as strong as a normal tendon at 4 weeks</li> </ul>

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# Rotator Cuff Repair Protocol Phase 2

Purpose		Precautions	
Protection	<ul style="list-style-type: none"> <li>No AROM or passive extension</li> <li>Sling use for 4-6 weeks</li> <li>No behind back stretching</li> <li>No lifting, carrying, pushing (WB), pulling, driving, or activities that involve quick/jerking motions</li> </ul> <p><b>Supraspinatus Precautions:</b></p> <ul style="list-style-type: none"> <li>No passive IR, extension or horizontal adduction</li> </ul>	<p><b>Subscap Repair Precautions:</b></p> <ul style="list-style-type: none"> <li>No ER &gt; 10°</li> <li>No horizontal adduction</li> <li>No AROM IR</li> </ul> <p><b>Biceps Tenodesis Precautions:</b></p> <ul style="list-style-type: none"> <li>No extension or horizontal abduction</li> <li>No resisted elbow flex, shoulder flex, or supination</li> </ul>	
Typical Time Frame			
4-8 Weeks			

Criteria to Pass
<ul style="list-style-type: none"> <li>0°-110° of shoulder elevation/flexion PROM</li> <li>0°-30° of shoulder PROM ER in scapular plane</li> <li>0° shoulder PROM IR in scapular plane</li> <li>&lt;4/10 pain</li> </ul>

Priority List & Suggested Exercises	
<p><b>1. Shoulder ROM</b></p> <ol style="list-style-type: none"> <li>PROM: Scapular plane ER, shoulder elevation, IR</li> <li>AAROM               <ol style="list-style-type: none"> <li>Flexion progression</li> <li>ER progression</li> </ol> </li> <li>AROM of the elbow, wrist, and hand</li> <li>Walking without the sling (avoid extension during arm swing)</li> <li>Pendulums (circles) - using hips ONLY</li> <li>Cervical PROM stretching</li> <li>Joint mobilization to 1st rib to decrease inferior glide hypomobility while in sling</li> <li>Joint mobilization approximately 3-4 weeks post op (AP, inferior grade 1-2 oscillations for muscle guarding and pain)</li> </ol>	<p><b>2. UE Strengthening</b></p> <ol style="list-style-type: none"> <li>Shoulder Doorway isometrics 25-50% contraction (flex, ext (at neutral), abd, IR, ER)</li> <li>Cross Symmetry walk outs (ER, IR, Add, Ext)</li> <li>Scapular rowing off of table</li> <li>Scapular depression, protraction, retraction</li> </ol>

Special Considerations
<ul style="list-style-type: none"> <li>Modalities: Ice at least 1x/day following PT and/or HEP; pain meds as needed</li> <li>Incision should be closed by 6 weeks</li> <li>See Surgeon's instructions for specific ROM precautions for patient specific</li> <li>PROM/AAROM - Do not stretch beyond 1st resistance</li> <li>Reminder that the tendon is ONLY 20% as strong as a normal tendon at 4 weeks</li> </ul>

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# Rotator Cuff Repair Protocol Phase 3

Purpose		Precautions	
Functional Restoration	<ul style="list-style-type: none"> <li>No behind back stretching</li> <li>No rapid movements</li> <li>No lifting &gt;10lbs through week 10</li> </ul>	<b>Subscap Repair Precautions:</b> <ul style="list-style-type: none"> <li>No ER &gt; 30°</li> <li>No horizontal adduction</li> <li>No active IR</li> </ul>	
Typical Time Frame			
6-14 Weeks			
Criteria to Pass			
<ul style="list-style-type: none"> <li>90% AROM of available PROM</li> <li>Able to perform ADLs w/o pain or compensation</li> <li>Functional ER to C-T junction w/o compensation</li> <li>Symmetrical tall plank hold on 18" bench x10sec</li> </ul>		<ul style="list-style-type: none"> <li>15 repetitions of flexion and scaption above shoulder height against gravity at wall</li> <li>15 repetitions of sidelying ER to 30° against gravity at wall</li> </ul>	
Priority List & Suggested Exercises			
<b>1. Shoulder ROM</b> <ol style="list-style-type: none"> <li>PROM: Scapular plane ER, flexion, abduction, scaption, IR, extension</li> <li>AAROM:               <ol style="list-style-type: none"> <li>Standing Flexion progression</li> <li>Advanced ER progression</li> <li>I Y Ts w/slider on the wall</li> </ol> </li> <li>Scar massage/IASTM (ONLY if incision is healed)</li> <li>Joint mobilization to 1st rib to decrease inferior glide hypomobility that could limit flexion or pt complianing of pinching at end range flexion</li> <li>Joint mobilization (Anterior, posterior, inferior) grade III-IV for mobility - Best used approximately 10 weeks and beyond</li> </ol>		<b>2. UE Strength</b> <ol style="list-style-type: none"> <li>AROM               <ol style="list-style-type: none"> <li>Supine: flexion, scaption, searratus punches</li> <li>Sidelying: ER, rotator cuff series</li> <li>PNF Pattern Progression</li> </ol> </li> <li>UBE light resistance with B UE</li> <li>Isometric holds against gravity (keep within ROM for no compensations) in flex, scaption, abd, sidelying ER</li> <li>Light Isotonics (approximately 7-8 weeks)               <ol style="list-style-type: none"> <li>Standing unweighted flex, abd, scaption</li> <li>Band Resisted Ext (to neutral), ER &amp; IR (elbow at trunk)</li> <li>Band Resisted Seated Row</li> <li>Prone Row, Ext, Modified T, &amp; T</li> </ol> </li> <li>Band resisted biceps curls and triceps extensions</li> <li>CKC Progression</li> <li>Push Up Plus Progression</li> </ol>	
Special Considerations			
<ul style="list-style-type: none"> <li>Reminder that the tendon is ONLY 60% as strong as a normal tendon at 12 weeks</li> <li>Programming:           <ul style="list-style-type: none"> <li>Focus on endurance rather than strength.</li> <li>High volume sets 12-15 reps per set). Sets can range from 2-4 as tolerance improves.</li> </ul> </li> <li>Patient can ice after PT session and after HEP (at least 1x/day)</li> </ul>			

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# Rotator Cuff Repair Protocol Phase 4

Purpose		Precautions
Progressive Overload	• No rapid movements with weight	
Typical Time Frame		
12-20 Weeks		
Criteria to Pass		
<ul style="list-style-type: none"><li>• AROM = PROM (for all movements)</li><li>• Functional ER to T4 w/o compensation</li><li>• Functional IR to L1 w/o compensation</li><li>• &lt;40% strength deficit for average force with Isometric testing for ER (elbow against trunk) using dynamometer</li></ul>	<ul style="list-style-type: none"><li>• &lt;20% strength deficit for average force with Isometric testing for IR (elbow against trunk) using dynamometer</li><li>• &lt;30% strength deficit for average force with Isometric testing for Flexion &amp; Abduction at 90° using dynamometer</li><li>• Farmer walk with 25% of BW in each hand (50% total) for 250ft or 90 sec whichever comes later</li></ul>	
Priority List & Suggested Exercises		
<b>1. Shoulder ROM</b> <ul style="list-style-type: none"><li>a. Aggressive PROM stretching to achieve full ROM</li><li>b. Flexion: Weighted flexion in supine, PVC pipe flexion into ER, Downward dog Progression, Dead hangs (feet on step)</li><li>c. ER: Weighted ER in supine, Posterior capsule stretching</li><li>d. IR: Behind the back stretch rope, Cable assisted IR, TRX IR Walk outs</li></ul>	<b>3. UE Strength</b> <ul style="list-style-type: none"><li>a. UBE (single arm)</li><li>b. Light to moderate Isotonics: flex, scaption, abd, add, ER, IR, D1, D2 (cable resisted or light DB) (emphasize eccentric control)</li><li>c. Loaded rotator cuff series</li><li>d. Scapular strength: TRX rows, cross symmetry movements, serratus wall slides, scapular clocks, IYTW Progression</li><li>e. Biceps curls and triceps extensions</li><li>f. CKC Progression &gt; Shoulder Taps &gt; Plank Hurdle Walk Overs</li></ul>	
<b>2. Shoulder Motor Control</b> <ul style="list-style-type: none"><li>a. Wall End range isometrics &gt; Eccentric from end range &gt; End range lift offs</li><li>b. Functional ER/IR Breakout Progression</li><li>c. Gross Movements</li><li>d. Shoulder Circle Progression</li></ul>	<b>4. Functional Strength</b> <ul style="list-style-type: none"><li>a. Intro to functional movements<ul style="list-style-type: none"><li>i. Push Up Progression</li><li>ii. Shoulder press</li><li>iii. Bent over rows</li><li>iv. Lat Pull Down</li><li>v. Farmer walks</li></ul></li></ul>	
Special Considerations		
<ul style="list-style-type: none"><li>• Reminder that the tendon is ONLY 80% as strong as a normal tendon at 16 weeks</li><li>• Programming:<ul style="list-style-type: none"><li>◦ Focus on strength with sets of 6-12 reps</li><li>◦ Sets can range from 3-4 as tolerance improves</li></ul></li><li>• Patient can ice after PT session and after HEP (at least 1x/day)</li></ul>		

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# Rotator Cuff Repair Protocol Phase 5

Purpose		Precautions
Deceleration		
Typical Time Frame		
16-24 Weeks		
Criteria to Pass		
<ul style="list-style-type: none"><li>• &lt;30% strength deficit for average force with Isometric testing for ER (elbow against trunk) using dynamometer</li><li>• &lt;10% strength deficit for average force with Isometric testing for IR (elbow against trunk) using dynamometer</li><li>• &lt;20% strength deficit for average force with Isometric testing for Flexion &amp; Abduction at 90° using dynamometer</li></ul>	<b>(Use Strengthlevel.com for norms)</b> <ul style="list-style-type: none"><li>• 12 reps at 70% Beginner Single Arm DB Arnold Press</li><li>• 12 reps at 70% Beginner Single Arm DB Bent Over Row on Bench</li><li>• Push Up Test: average norms for age &amp; gender</li></ul>	
Priority List & Suggested Exercises		
<b>1. Functional Strength</b> <ul style="list-style-type: none"><li>a. Horizontal pulls: Bent over row variations, inverted rows, face pulls, horizontal Ts w/ cable</li><li>b. Vertical pulls: lat pulldown, TRX Ys &amp; Ws, TRX eccentric Ts, TRX eccentric Ys, pull up progression</li><li>c. Horizontal pressing: Bench progression, push up progression, single arm pressing variations, horizontal add w/ cable, chest press w/ cable</li><li>d. Vertical pressing: Shoulder press variations</li><li>e. Carries: farmer walk, suitcase carry, front rack, overhead, bamboo bar</li></ul>	<b>2. Deceleration</b> <ul style="list-style-type: none"><li>a. Exxentric machine<ul style="list-style-type: none"><li>i. D2 pattern</li><li>ii. ER (by side; abduction plane)</li><li>iii. IR (by side; abduction plane);</li><li>iv. Flexion/Abduction/scapation</li><li>v. Horizontal: T, Y, chest press, row</li><li>vi. Bent over row</li></ul></li><li>b. Ball drops: prone, Ts, Ys</li><li>c. Over the shoulder weighted ball catch</li></ul>	
Special Considerations		
<ul style="list-style-type: none"><li>• Programming:<ul style="list-style-type: none"><li>◦ Consider tempo of reps 4-1-2 (to focus on eccentric phase)</li><li>◦ Focus on strength with sets of 4-6 reps</li><li>◦ Sets can range from 4-5 tolerance improves</li></ul></li><li>• Patient can ice after PT session and after HEP (at least 1x/day)</li></ul>		

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# Rotator Cuff Repair Protocol Phase 6

Purpose		Precautions
Return to Sport		
Typical Time Frame		
6 Months +		
Criteria to Pass		
<b>(Use Strengthlevel.com for norms)</b> <ul style="list-style-type: none"><li>• 8 reps at 80% at Novice Single Arm DB Arnold Press</li><li>• 8 reps at 80% at Novice Single Arm DB Bent Over Row</li><li>• Push Up Test: above average norms for age and gender</li><li>• Pull Up Test: novice norms for age and gender</li></ul>		<ul style="list-style-type: none"><li>• CKQUEST - 23 reps for female on knees, 21 reps for male</li><li>• Shoulder ASH Test &lt;10% deficit with force plates</li><li>• Score of 48 or &gt; on the Injury-Psychological Readiness to Return to Sport (I-PRRS) Questionnaire</li></ul>
Priority List & Suggested Exercises		
<b>1. Plyometrics</b> <ul style="list-style-type: none"><li>a. Dribble the physio ball from the table in prone position (fast tempo)</li><li>b. Weighted ball taps on the wall (fast tempo)</li><li>c. Plyo variations<ul style="list-style-type: none"><li>i. Explosive push up progression</li><li>ii. push press (double arm)</li><li>iii. barbell inverted row</li></ul></li></ul> <b>2. Deceleration</b> <ul style="list-style-type: none"><li>a. Continue Phase 5 Exercises</li></ul> <b>3. Functional Strength</b> <ul style="list-style-type: none"><li>a. Continue Phase 5 Exercises adding weight</li></ul>		
Special Considerations		
<ul style="list-style-type: none"><li>• Icing: At the end of every session or at home</li><li>• Introduce throwing program for overhead athletes in this phase</li><li>• Programming:<ul style="list-style-type: none"><li>◦ Prioritize Recovery: 2-3 days off/wk</li><li>◦ Slow introduction into plyometrics</li><li>◦ Focus on strength/power w/ sets 4-6 reps</li><li>◦ Sets can range from 3-4 as tolerance improves</li><li>◦ Continue building isolated shoulder strength and improving explosive movements</li></ul></li><li>• Patients should have at least 1 month of sport specific movements before and practice before returning to game play</li><li>• Ramp up conditioning specific to sport</li></ul>		

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