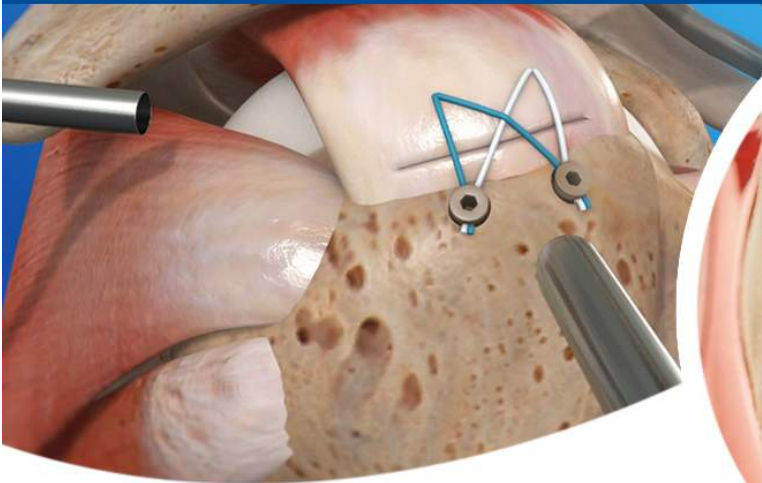




JOSHI HOSPITAL MULTI SUPER SPECIALITY & TRAUMA CENTER



ARTHROSCOPIC RTC TYPE 1 WITH BICEPS TENODESIS

**(Rehabilitation Guidelines
For Arthroscopic Rotator
Cuff Repair With Bicep Tenodesis)**



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Rehabilitation Guidelines for Arthroscopic Rotator Cuff Repair with Bicep Tenodesis

Type 1 Repairs

(+/- subacromial decompression)

The rehabilitation guidelines are presented in a criterion based progression. General time frames are given for reference to the average, but individual patients will progress at different rates depending on their age, associated injuries, pre-injury health status, rehab compliance, and injury severity. Specific time frames, restrictions and precautions may also be given to protect healing tissues and the surgical repair/reconstruction.

Phase 1 (Surgery to Day 14)

APPOINTMENTS	Meet with physician at 1 and 6 weeks post-op Begin physical therapy 7-10 days post-op. Continue 1-2x per week
REHAB GOALS	<ol style="list-style-type: none"> 1. Maximally protect the surgical repair 2. Promote tissue healing 3. Gradually increase passive ROM 4. Diminish pain and inflammation 5. Prevent muscular inhibition 6. Activation of the stabilizing muscles of the gleno-humeral and scapulo-thoracic joints
PRECAUTIONS	<ol style="list-style-type: none"> 1. No lifting of objects 2. No overhead motions 3. No excessive shoulder motions including extension, ER/IR (for 6-8 weeks) 4. No excessive stretching or sudden movements 5. No supporting of body weight by hands 6. Keep incision site clean and dry 7. Sleep in abduction pillow brace until discontinued by MD 8. Sling immobilization required for soft tissue healing 9. Hypersensitivity in axillary nerve distribution is a common occurrence 10. No bicep tension for 6 weeks to protect repaired tissues - this includes avoiding active long lever arm flexion ROM and resisted supination, elbow flexion, and shoulder flexion 11. Limit external rotation to 40° for the first 4 weeks 12. No extension or horizontal extension past body for 4 weeks
ROM EXERCISES	Day 1-6: 30° abduction pillow brace

(Please do not exceed the ROM specified for each exercise and time period)	<ul style="list-style-type: none"> • Hand/wrist/elbow AROM Exercises • Shoulder PROM exercises: <ul style="list-style-type: none"> - Shoulder flexion to tolerance (painful ROM) - 25-30° of ER/IR in scapular plane at 45° (pain free ROM) • Shoulder AAROM exercises: <ul style="list-style-type: none"> - ER/IR at 45° in scapular plane (as above) - Pendulum Exercises <p>Day 7-14: continue use of 30° abduction pillow brace</p> <ul style="list-style-type: none"> • Hand/wrist/elbow AROM Exercises • Shoulder PROM exercises: <ul style="list-style-type: none"> - Flexion to at least 115° - 30-35° ER in scapular plane at 45° abduction - 30-35° IR in scapular plane at 45° abduction • Shoulder AAROM exercises: <ul style="list-style-type: none"> - Flexion to tolerance (PT assists especially with arm lowering) - ER/IR in scapular plane at 45° (see arc above) - Pendulum Exercises
SUGGESTED THERAPEUTIC EXERCISE	<p>Day 1-6:</p> <ul style="list-style-type: none"> - Elbow/hand gripping exercises 4-6x per day - Codman's Pendulum exercises - Submaximal isometrics of shoulder musculature pain free (initiate week 3) <ul style="list-style-type: none"> o ER/IR o abduction/adduction o Cervical spine and scapular AROM o Desensitization techniques for axillary nerve distribution - Cryotherapy for pain and inflammation <p>Day 7-14:</p> <ul style="list-style-type: none"> - Continue elbow/hand gripping exercises - Continue isometrics: submaximal and sub-painful (may apply NMES to shoulder external rotators for muscle re-education) <ul style="list-style-type: none"> o Shoulder add/abd o ER/IR in scapular plane - Initiate Rhythmic Initiation ER/IR at 45° abduction in scapular plane - Cryotherapy for pain and inflammation
CARDIOVASCULAR FITNESS	Walking, stationary bike – brace on. No treadmill (Avoid running and jumping due to the distractive forces that can occur at landing).

Phase 2 (Post-Op Day 15 to Week 6)

APPOINTMENTS	Meet with physician 6 weeks post-op Physical therapy 1x every 1-2 weeks
REHAB GOALS	<ol style="list-style-type: none"> 1. Allow healing of soft tissue 2. Full AROM, Full Rotator Cuff Strength at neutral 3. Do not overstress healing tissue

	4. Gradually restore full passive ROM (week 4-5) 5. Re-establish dynamic shoulder stability 6. Decrease pain and inflammation
PRECAUTIONS	1. No heavy lifting of objects 2. No carrying objects 3. No excessive behind the back movements 4. No supporting of body weight by hands and arms 5. No sudden jerking motions 6. Begin unweighted elbow AROM 7. No PROM for abduction and external rotation or extension
ROM EXERCISES (Please do not exceed the ROM specified for each exercise and time period)	<p>Week 2-4: Gradually progress ROM</p> <ul style="list-style-type: none"> PROM to tolerance <ul style="list-style-type: none"> - Shoulder flexion to 140-155° - 45-50° shoulder ER at 90° abduction - 30-45° shoulder IR at 90° abduction AAROM to tolerance <ul style="list-style-type: none"> - Shoulder flexion (continue use of arm support as needed) - ER/IR in scapular plane at 45° abduction - ER/IR at 90° abduction <p>Week 4-5:</p> <ul style="list-style-type: none"> Full Shoulder PROM by Week 4 Continue AAROM exercises as above May use pool for light AROM exercises <p>Week 5-6: May use heat prior to exercises</p> <ul style="list-style-type: none"> AAROM exercises especially in planes where limitations exist Initiate AROM exercises <ul style="list-style-type: none"> - Shoulder flexion scapular plane to 90° flexion - Shoulder abduction to 90° abduction
SUGGESTED THERAPEUTIC EXERCISE	<p>Week 2-4:</p> <ul style="list-style-type: none"> Rhythmic stabilization drills <ul style="list-style-type: none"> - ER/IR in scapular plane - Shoulder flexion/extension at 100-125° flexion Continue all isometric contractions Initiate scapular isometrics Continue cryotherapy as needed Maintain all above precautions <p>Week 4-5:</p> <ul style="list-style-type: none"> Continue all exercises listed above Initiate ER/IR strengthening using exercise tubing at 0° abduction (use towel roll) Initiate manual resistance ER supine in scapular plane (light resistance) Initiate prone rowing with the arm at 30° abduction to neutral arm position Initiate ER strengthening Rhythmic Stabilization exercises at varying degrees of shoulder flexion

	Week 5-6: <ul style="list-style-type: none"> • Continue all exercises listed above • ER tubing • ER side-lying • Prone rowing at 45° abduction • Prone horizontal abduction (bent elbow) at 90° abduction
CARDIOVASCULAR FITNESS	Walking, stationary bike. No treadmill walking until cleared by MD. (Avoid running and jumping due to the distractive forces that can occur at landing).

Phase 3 (Post-Op Week 7 – Week 14)

APPOINTMENTS	Meet with physician at 12 weeks post op Physical therapy 1-2x weeks
REHAB GOALS	<ol style="list-style-type: none"> 1. Full active ROM (weeks 8-10) in all cardinal planes with normal scapulo-humeral movement 2. Maintain full passive ROM 3. Dynamic shoulder stability 4. Gradual restoration of shoulder strength 5. Gradual return to functional activities 6. 5/5 rotator cuff strength at 90° abduction in the scapular plane 7. 5/5 peri-scapular strength
PRECAUTIONS	<ol style="list-style-type: none"> 1. Ensure all Phase 2 goals are met before beginning Phase 3 2. Patient must be able to elevate arm without shoulder or scapular hiking before initiating isotonic. If unable, continue dynamic rhythmic stabilization glenohumeral joint exercises 3. All exercises and activities to remain non-provocative and low to medium velocity 4. Avoid activities where there is a higher risk for falling or outside forces to be applied to the arm 5. No swimming, throwing or sports
ROM EXERCISES	Week 7-8: <ul style="list-style-type: none"> • Continue stretching and passive ROM as needed to maintain full PROM • Continue to progress AROM Week 8-10: <ul style="list-style-type: none"> • Full AROM should be achieved Week 10-14: <ul style="list-style-type: none"> • Continue stretching/soft tissue work to maintain tissue integrity as needed
SUGGESTED THERAPEUTIC EXERCISE	Week 7: <ul style="list-style-type: none"> • ER/IR tubing • ER side-lying • Lateral raises to 90° abduction • Full can in scapular plane to 90° elevation • Prone rowing/extension/horizontal abduction Week 8-9:

	<ul style="list-style-type: none"> Continue all exercises listed above, and progress patient as able Initiate light functional exercises as permitted by MD Initiate resisted (isometric) elbow flexion from week 9-12 <p>Week 10:</p> <ul style="list-style-type: none"> Continue all exercises listed above Initiate isotonic resistance during shoulder flexion and abduction if non-painful normal motion is achieved without muscular substitution patterns <p>Week 11-14</p> <ul style="list-style-type: none"> Progress all exercises – be sure no residual pain is present following exercises
CARDIOVASCULAR FITNESS	Walking, stationary bike, running, UBE, sport specific interval training NO SWIMMING

Phase 4 (Post-Op Week 15 – Week 24)

APPOINTMENTS	Meet with physician at 18 weeks post-op Physical therapy 1x every 3 weeks
REHAB GOALS	<ol style="list-style-type: none"> Maintain full non-painful ROM Enhance functional use of upper extremity Improve muscular strength and power Gradual return to functional activities Patient to demonstrate stability with higher velocity movements and change of direction movements 5/5 rotator cuff strength with multiple repetition testing at 90° abduction in the scapular plane
PRECAUTIONS	<ol style="list-style-type: none"> Ensure all Phase 3 goals are met before beginning Phase 4 Progress gradually into provocative exercises by beginning with low velocity, known movement patterns
ROM EXERCISES	Week 15-24: Continue flexibility exercises and educate on self-capsular stretches
SUGGESTED THERAPEUTIC EXERCISE	<p>Week 15-24:</p> <ul style="list-style-type: none"> Continue isotonic strengthening program Progress all exercises and emphasize functional movements Initiate isotonic elbow strengthening ranging from week 15-22 Initiate sports specific activities as appropriate <ul style="list-style-type: none"> Golf Program at week 16 Throwing Program at Week 20 Higher velocity strengthening and control, such as the inertial, plyometrics, rapid theraband drills. Plyometrics should start with 2 hands below shoulder height and progress to overhead, then back to below shoulder with one hand, progressing again to overhead
CARDIOVASCULAR FITNESS	Walking, stationary bike, running, UBE, sport specific interval training, NO SWIMMING

Phase 5 (Week 24-36)

APPOINTMENTS	Meet with physician at 24 weeks post-op Physical therapy 1x every 2-3 weeks
REHAB GOALS	<ol style="list-style-type: none">1. Gradual return to strenuous work activities2. Gradual return to recreational sport activities3. Maintain integrity of rotator cuff repair4. No apprehension or instability with high velocity overhead movements5. Improve core and hip strength and mobility to eliminate any compensatory stresses to the shoulder
PRECAUTIONS	<ol style="list-style-type: none">1. Ensure all Phase 4 goals are met before beginning Phase 5
ROM EXERCISES	<ul style="list-style-type: none">• Continue all flexibility and mobility exercises
SUGGESTED THERAPEUTIC EXERCISE	<ul style="list-style-type: none">• Continue fundamental shoulder exercise program at least 4 times weekly (should continue shoulder program until at least 12 months following surgery or instructed otherwise)• Continue progression to sport and/or work activity/participation• High velocity strengthening and dynamic control, such as the inertial, plyometrics, rapid theraband drills• May initiate swimming at week 26
CARDIOVASCULAR FITNESS	Walking, stationary bike, running, UBE, sport specific interval training