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  | 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  | 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)

| SUGGESTED THERAPEUTIC EXERCISE | Day 1-6:  
- Elbow/hand gripping exercises 4-6x per day  
- Codman’s Pendulum exercises  
- Submaximal isometrics of shoulder musculature pain free (initiate week 3)  
  o ER/IR  
  o abduction/adduction  
  o Cervical spine and scapular AROM  
  o Desensitization techniques for axillary nerve distribution  
- Cryotherapy for pain and inflammation |
| | Day 7-14:  
- Continue elbow/hand gripping exercises  
- Continue isometrics: submaximal and sub-painful (may apply NMES to shoulder external rotators for muscle re-education)  
  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 distracting 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 | 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  | **Week 2-4:** Gradually progress ROM
- PROM to tolerance
  - Shoulder flexion to 140-155°
  - 45-50° shoulder ER at 90° abduction
  - 30-45° shoulder IR at 90° abduction
- AAROM to tolerance
  - Shoulder flexion (continue use of arm support as needed)
  - ER/IR in scapular plane at 45° abduction
  - ER/IR at 90° abduction
| **Week 4-5:**
- Full Shoulder PROM by Week 4
- Continue AAROM exercises as above
- May use pool for light AROM exercises |
| --------------|-------------------------------------------------|

| SUGGESTED THERAPEUTIC EXERCISE | **Week 2-4:**
- Rhythmic stabilization drills
  - 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
| **Week 4-5:**
- 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:** | 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.)

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**Phase 3 (Post-Op Week 7 – Week 14)**

| **APPOINTMENTS** | Meet with physician at 12 weeks post op
|                 | Physical therapy 1-2x weeks

| **REHAB GOALS** | 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** | 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 isotonics. 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:**
|                  | Continue stretching and passive ROM as needed to maintain full PROM
|                  | Continue to progress AROM
| **Week 8-10:** | Full AROM should be achieved
| **Week 10-14:** | Continue stretching/soft tissue work to maintain tissue integrity as needed

| **SUGGESTED THERAPEUTIC EXERCISE** | **Week 7:**
|                                    | 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:** | 45° abduction
|               | 90° abduction
|               | 90° abduction
- 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

**Week 10:**
- Continue all exercises listed above
- Initiate isotonic resistance during shoulder flexion and abduction if non-painful normal motion is achieved without muscular substitution patterns

**Week 11-14**
- 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**
1. Maintain full non-painful ROM
2. Enhance functional use of upper extremity
3. Improve muscular strength and power
4. Gradual return to functional activities
5. Patient to demonstrate stability with higher velocity movements and change of direction movements
6. 5/5 rotator cuff strength with multiple repetition testing at 90° abduction in the scapular plane

**PRECAUTIONS**
1. Ensure all Phase 3 goals are met before beginning Phase 4
2. 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**
- Week 15-24:
  - 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
    - 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           | 1. Gradual return to strenuous work activities
|                       | 2. Gradual return to recreational sport activities
|                       | 3. Maintain integrity of rotator cuff repair
|                       | 4. No apprehension or instability with high velocity overhead movements
|                       | 5. Improve core and hip strength and mobility to eliminate any compensatory stresses to the shoulder
| PRECAUTIONS           | 1. Ensure all Phase 4 goals are met before beginning Phase 5
| ROM EXERCISES         | • Continue all flexibility and mobility exercises
| SUGGESTED             | • Continue fundamental shoulder exercise program at least 4 times weekly (should continue shoulder program until at least 12 months following surgery or instructed otherwise
| THERAPEUTIC EXERCISE  | • 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