

## Arthroscopic Rotator Cuff Repair Protocol For Medium to Large Sized Tears

The rate limiting factor in arthroscopic rotator cuff repair is the biologic healing of the cuff tendon to the humerus, which is thought to be a minimum of 8-12 weeks.

Progression of AROM against gravity and duration of sling use is predicated both on the size of tear and quality of tissue and should be guided by referring physician. Refer to initial therapy referral for any specific instructions.

### Phase I: Immediate Post Surgical Phase (Weeks 0-6)

#### Precautions:

1. Wear shoulder brace for 6 weeks
2. Sleep in shoulder brace for 6 weeks
3. No active motions away from your body or overhead
4. No lifting objects with your shoulder/arm, reaching behind back, excessive stretching or sudden movements
5. No pushing or pulling motions
6. No support of body weight by hands
7. Physician or Physical Therapist will advise regarding other precautions

#### Goals:

Maintain/protect integrity of repair  
Gradually increase PROM  
Diminish pain and inflammation  
Prevent muscular inhibition  
Independence in modified ADLs

#### Day 1 to 6

Use of Abduction brace/sling (during sleep also) – remove only for exercise  
Pendulum exercises  
Finger, wrist, and elbow AROM  
Grip strength exercises  
Cervical spine AROM  
Passive shoulder ROM done supine for more patient relaxation

- Flexion to 110°
- ER/IR in scapular plane < 30°

Cryotherapy for pain and inflammation

#### Day 7 to 42

Continue appropriate exercises from day 1-6  
Begin PROM to tolerance (supine, and pain-free)  
Flexion to tolerance  
ER in scapular plane  $\geq$  30°

IR in scapular plane to body/chest

Gentle scapular plane abduction: begin 0-30° and progress to 0-90° by end of week 7.

Initiate AAROM with wand

- ER/IR in scapular plane at 30-45 degrees abduction (pain-free)

Initiate gentle Pain-free Isometrics of shoulder

- Flexion with elbow bent to 90 degrees
- Internal and External Rotation with arm at side

Continue elbow, hand, forearm, wrist and finger AROM

Begin resisted isometrics/isotonics for elbow, hand, forearm, wrist and fingers

Begin scapula muscle isometrics/sets, AROM

Rhythmic stabilization exercises

Initiate AAROM shoulder flexion from supine position week 5-6

Initiate Prone rowing, prone shoulder extension, prone horizontal abduction week 5-6

Initiate sidelying ER AROM week 6-7

May begin gentle general conditioning program (walking, stationary bike) with caution if unstable from pain medications

No running/jogging

Aquatherapy may begin approximately 6 weeks post operative if wounds healed

#### Criteria for progression to next phase (II)

Passive forward flexion to  $\geq 125^\circ$

Passive ER in scapular plane to  $\geq 60^\circ$  (if uninvolved shoulder PROM  $> 80^\circ$ )

Passive IR in scapular plane to  $\geq 60^\circ$  (if uninvolved shoulder PROM  $> 80^\circ$ )

Passive abduction in scapular plane to  $\geq 90^\circ$

#### **Phase II: Protection and Protected Active Motion Phase (Weeks 7 to 12)**

##### Goals:

Allow healing of soft tissue

Do not overstress healing soft tissue

Gradually restore full passive ROM (~ week 8)

Decrease pain and inflammation

##### Precautions:

No lifting

No supported full body weight with hands or arms

No sudden jerking motions

No excessive behind back motions

No bike or upper extremity ergometer until week 8

##### Weeks 7-8

Gradually wean from brace starting several hours/day out progressing as tolerated

Use brace sling for comfort only until full DC by end of week 7

Progressive PROM until full PROM by week 8 (should be pain-free)

May require use of heat prior to ROM exercises/joint mobilization

Can begin passive pulley use

Initiate isotonic elbow flexion strengthening

Initiate ER/IR strengthening using exercise tubing with arm at side (towel roll) week 7-8

Initiate AROM exercises for flexion, scapular plane, abduction, ER, IR (initially in gravity-eliminated positions) and must be pain-free

Do not allow shrug during AROM exercises  
If shrug exists continue to work on cuff and do not reach/lift AROM over 90° elevation  
Continue cryotherapy as needed post therapy/exercise

#### Weeks 8-12

Continue AROM, AAROM, and stretching as needed  
Initiate limited strengthening program in Week 9-10

- low weight –initially only weight of arm and in gravity eliminated/reduced positions

Remember RTC and scapular muscles small and need endurance more than pure strength  
shoulder flexion, abduction  
May require gentle glenohumeral or scapular joint mobilization as indicated to obtain full unrestricted ROM  
Begin IR stretching, shoulder extension, and cross body, sleeper stretch to mobilize posterior capsule (if needed)  
Initiate Seated press-ups

#### **Phase III: Early Strengthening (Weeks 12-18)**

##### Goals:

Full AROM (weeks 12-14)  
Maintain full PROM  
Dynamic shoulder stability (GH and ST)  
Gradual restoration of GH and scapular strength, power and endurance  
Optimize neuromuscular control  
Gradual return to functional activities  
Precautions  
No lifting objects > 5 lbs, no sudden lifting or pushing  
Exercise should not be painful

#### Week 12

Continue stretching, joint mobilization, and PROM exercises as needed  
Dynamic strengthening exercises  
Continue exercises as above from weeks 7-12  
Progress shoulder and periscapular isotonic strengthening- increase 1 lb./10 days (no pain)  
Begin light isometrics in 90/90 or higher supine, PNF D2 flexion/extension patterns against light manual resistance

#### Week 14

Continue all exercise listed above  
May begin BodyBlade, Flexbar below 45°  
Initiate light functional activities as tolerated

#### Week 16

Continue all exercises listed above  
Progress to fundamental exercises (bench press, shoulder press)  
Initiate low level plyometrics (2-handed, below chest level – progressing to overhead and finally 1-handed drills)

#### Criteria for progression to Phase IV

Ability to tolerate progression to low-level functional activities  
Demonstrate return of strength/dynamic shoulder stability

Reestablishment of dynamic shoulder stability  
Demonstrated adequate strength and dynamic stability for progression to more demanding work and sport specific activities

**Phase IV: Advanced Strengthening Phases (Weeks 18-24)**

Goals:

Maintain full non-painful AROM  
Advanced conditioning exercise for enhanced functional and sports specific use  
Improve muscular strength, power and endurance  
Gradual return to all functional activities

Week 20:

Continue ROM and self-capsular stretching for ROM maintenance  
Continue progressive strengthening  
Advanced proprioceptive, neuromuscular activities  
Light isotonic strengthening in 90/90 position  
Initiation of light sports (golf chipping/putting, tennis ground strokes) if satisfactory clinical exam

Week 24:

Continue strengthening and stretching (at least 4 days/week)  
Continue joint mobilization and stretching if motion is tight  
Initiate interval sports program (eg, golf, doubles tennis) if appropriate  
May initiate swimming