

Rehabilitation Following Arthroscopic Rotator Cuff Repair of Small Tears (Type I)

I. Phase I - Immediate Post-Surgical Phase (Days 1-14)

Precautions:

1. No lifting of objects
2. No excessive shoulder extension
3. No excessive arm motions
4. No overhead motions
5. Wear shoulder brace or sling for 4-6 weeks until Physician or Physical Therapists instructs
6. No excessive external rotation (ER)/internal rotation (IR) range of motion (ROM) for 6-8 weeks unless directed by Physician
7. No excessive stretching or sudden movements
8. No supporting of body weight by hands
9. Keep incision clean and dry

Goals: Maintain integrity of the repair.
Promote tissue healing.
Gradually increase passive ROM.
Diminish pain and inflammation.
Prevent muscular inhibition.

Days 1 to 6:

- 30° abduction pillow brace
- Pendulum exercises
- Active Assisted ROM Exercises (L-Bar)
 - ER/IR in Scapular Plane at 45° of abduction (pain-free ROM)
- Passive ROM
 - Flexion to tolerance (painful ROM)
 - ER/IR in scapular plane at 45° of abduction (pain-free ROM)
 - * Limit ER and IR ROM to 25-30°
- Elbow/hand gripping and ROM exercises – perform 4-6 times per day
- Submaximal painfree shoulder isometrics (initiate days 4-5)
 - Flexion with elbow bent to 90°
 - ER
 - IR
 - Elbow flexors
- Cryotherapy for pain and inflammation
 - Ice 15-20 minutes approximately 4-6 times per day –or as pain determines
- Sleeping
 - Sleep in pillow brace until instructed to discontinue

Days 7 to 14:

- Continue use of pillow brace
- Pendulum exercises
- Progress passive ROM to tolerance
 - Flexion to at least 115°
 - ER in scapular plane at 45° abduction to 30-35°
 - IR in scapular plane at 45° abduction to 30-35°

- Active assisted ROM exercises (L-bar)
 - ER/IR in scapular plane at 45° abduction
 - Flexion to tolerance*
*Therapist provides assistance by supporting arm (especially with arm lowering)
- Continue elbow/hand ROM and gripping exercises
- Continue isometrics (submaximal and subpainful)
 - * May apply electrical muscle stimulation to shoulder external rotators for muscle re-education
 - Flexion with bent elbow
 - Extension with bent elbow
 - Abduction with bent elbow
 - ER/IR with arm in scapular plane
 - Elbow flexion
- Initiate rhythmic stabilization ER/IR at 45° abduction
- Continue use of ice for pain control
 - Use ice at least 6-7 times daily
- Sleeping
 - Continue sleeping in brace until physician Instructs when to discontinue

II. Phase II - Protection Phase (Day 15 – Week 6)

Precautions:

1. No heavy lifting of objects
2. No carrying heavy objects
3. No excessive behind the back movements
4. No supporting of body weight by hands and arms
5. No sudden jerking motions

Goals: Allow healing of soft tissue
Do not overstress healing tissue
Gradually restore full passive ROM (Week 4-5)
Re-establish dynamic shoulder stability
Decrease pain and inflammation

Days 15 – 28:

- Continue use of sling or brace (physician or therapist will determine when to discontinue)
- Passive ROM to **tolerance**
 - Flexion to 140-155°
 - ER at 90° abduction to 45-50°
 - IR at 90° abduction to 30-45°
- Active assisted ROM to tolerance
 - Flexion (continue use of arm support)
 - ER/IR in scapular plane at 45° abduction
 - ER/IR at 90° abduction
- Rhythmic stabilization drills
 - ER/IR in scapular plane
 - Flexion/extension at 100° flexion and 125° flexion
- Continue all isometric contractions
- Initiate scapular isometrics
- Continue use of cryotherapy as needed

- Continue all precautions
 - No lifting
 - No excessive motion

Weeks 4 - 5:

- Continue shoulder brace/sling until Physician or Physical Therapist instructs you to discontinue
- Patient should exhibit full passive ROM by week 4
- Continue all exercises listed above
- Initiate ER/IR strengthening using exercise tubing at 0° of abduction (use towel roll)
- Initiate manual resistance ER supine in scapular plane (light resistance)
- Initiate prone rowing with arm at 30° of abduction to neutral arm position
- Initiate prone shoulder extension with elbow flexed to 90 degrees
- Initiate ER strengthening exercises
- Initiate isotonic elbow flexion
- Continue use of ice as needed
- May use heat prior to ROM exercises
- May use pool for light AROM exercises
- Rhythmic stabilization exercises (flexion at 45, 90, 125° and ER/IR)

Weeks 5 – 6:

- May use heat prior to exercises
- Continue active assisted ROM and stretching exercises, especially for movements that are not full
 - Shoulder flexion
 - ER at 90° abduction
- Initiate Active ROM Exercises
 - Shoulder flexion scapular plane to 90 degrees of flexion
 - Shoulder abduction to 90 degrees of abduction
- Progress isotonic strengthening exercise program
 - ER tubing
 - Sidelying ER
 - Prone rowing at 45° of abduction
 - Prone horizontal abduction (bent elbow) at 90° of abduction
 - Biceps curls (isotonics) (very light resistance)

III. Phase III – Intermediate Phase (Weeks 7-14)

Goals: Full active ROM (Week 8-10)
Maintain full passive ROM
Dynamic shoulder stability
Gradual restoration of shoulder strength
Gradual return to functional activities

Week 7:

- Continue stretching and passive ROM (as needed to maintain full ROM)
- Continue dynamic stabilization drills
- Progress active ROM **and light** strengthening program
 - ER/IR tubing
 - ER sidelying
 - Lateral raises* to 90 degrees of abduction
 - Full can in scapular plane* to 90 degrees of elevation
 - Prone rowing

- Prone horizontal abduction
- Prone extension
- Elbow flexion
- Elbow extension

*Patient must be able to elevate arm without shoulder or scapular hiking before initiating isotonic; if unable, continue dynamic rhythmic stabilization glenohumeral joint exercises.

Week 8-9:

- Continue all exercise listed above
- If physician permits, may initiate **light** functional activities

Week 10:

- Continue all exercise listed above
- Progress to fundamental shoulder exercises – see attachment
- Therapist may initiate isotonic resistance (0.5 kg weight) during flexion and abduction*

*If non-painful normal motion is exhibited and no substitution patterns

Weeks 11-14:

- Progress all exercises
 - Continue ROM and flexibility exercises
 - Progress strengthening program (increase 0.5 kg/10 days *non-painful)

IV. Phase IV – Advanced Strengthening Phase (Weeks 15 - 24)

Goals: Maintain full non-painful ROM
Enhance functional use of upper extremity
Improve muscular strength and power
Gradual return to functional activities

Week 15-19:

- Continue ROM and stretching to maintain full ROM
- Self capsular stretches
- Progress shoulder strengthening exercises
 - Fundamental shoulder exercises
- Initiate interval golf program (if appropriate)

Weeks 20- 24:

- Continue all exercises listed above
- Progress golf program to playing golf (if appropriate)
- Initiate interval tennis program (if appropriate) – week 24 (may wait till 6 months to initiate- Physician will determine)
- May initiate swimming – week 26

V. Phase V – Return to Activity Phase (Weeks 24 - 36)

Goals: Gradual return to strenuous work activities
Gradual return to recreational sport activities
Maintain integrity of rotator cuff repair

- Continue fundamental shoulder exercise program (at least 4 times weekly)
 - Continue stretching, if motion is tight
 - Continue progression to sport &/or work activity/participation
- * Should continue Fundamental Shoulder Exercise program until 12 mos following surgery or until instructed to discontinue