

Rehabilitation Following Arthroscopic Rotator Cuff Repair Small to Medium Tears in Overhead Athletes

I. Phase I - Immediate Post-Surgical Phase (Days 1-10)

Goals: Maintain Integrity of the Repair.
Gradually Increase Passive Range of Motion.
Diminish Pain and Inflammation.
Prevent Muscular Inhibition.

Days 1-6:

- Abduction pillow brace with 30 degree pillow for 2-4 weeks (physician decision)
- Pendulum Exercises
- Active Assisted ROM Exercise (L-Bar)
 - ER/IR in Scapular Plane at 45 degrees of abduction (pain-free ROM)
- Passive ROM
 - Flexion to tolerance (non-painful ROM)
 - ER/IR in Scapular Plane at 30 and 45 degrees of abduction (pain-free ROM)
- Elbow/Hand Gripping & ROM Exercises
- Submaximal Pain-free Isometrics (initiate days 4-5)
 - Flexion with elbow bent to 90 degrees
 - External Rotation
 - Internal Rotation
 - Elbow Flexors
 - Electrical Muscle Stimulation to ER
- Cryotherapy for Pain and Inflammation
 - Ice 15-20 minutes every hour
- Sleeping
 - Sleep in pillow brace

Days 7-14:

- Continue use of pillow brace
- Pendulum Exercises
- Progress Passive ROM to Tolerance
 - Flexion to at least 115 degrees
 - ER/IR at 30 degrees of abduction to tolerance
 - ER/IR at 45 degrees of abduction to tolerance
- Active Assisted ROM Exercises (L-bar)
 - ER/IR in Scapular Plane at 45 degrees abduction
 - Flexion to Tolerance*

*Therapist Provides Assistance by Supporting Arm (esp. with arm lowering)
- Continue Elbow/Hand ROM & Gripping Exercises

- Continue Isometrics (submaximal and subpainful)
 - Flexion with Bent Elbow
 - Extension with Bent Elbow
 - Abduction with Bent Elbow

 - ER/IR with Arm in Scapular Plane
 - Elbow Flexion
 - Electrical Muscle Stimulation to ER musculature
- Initiate rhythmic stabilization ER/IR at 45 degrees abduction
- Neuromuscular control drills for scapula (seated)
- Continue Use of Ice for Pain Control
 - Use Ice at least 6-7 times daily
- Sleeping
 - Continue Sleeping in Brace until Physician Instructs

Precautions:

1. No Lifting of Objects
2. No Excessive Shoulder Extension
3. No Excessive Stretching or Sudden Movements
4. No Supporting of Body Weight by Hands
5. Keep Incision Clean & Dry

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

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 & Inflammation.

Days 15 – 21:

- Continue Use of Sling or Brace (physician or therapist will determine when to discontinue)
- Passive Range of Motion to Tolerance
 - Flexion to 140-155 degrees
 - ER at 90 degrees abduction to at least 45 degrees
 - IR at 90 degrees abduction to at least 45 degrees
- Active Assisted ROM to Tolerance
 - Flexion (continue use of arm support)
 - ER/IR in Scapular Plane at 45 degrees abduction
 - ER/IR at 90 degrees Abduction
- Strengthening Exercises:
 - Tubing ER/IR
 - Prone Row at 30 degrees
 - Prone Row at 45 degrees
- Dynamic Stabilization Drills
 - Rhythmic Stabilization Drills
 - ER/IR in Scapular Plane
 - Flexion/Extension at 100 degrees Flexion and 125 degrees 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:

At week 4-5:

PROM:

- ER at 90 degrees Abduction to 75-80 degrees
- IR at 90 degrees abduction to 50-55 degrees
- Flexion to 160-170 degrees

- Continue all exercises listed above
- Initiate ER/IR strengthening using exercise tubing at 0 degrees of abduction (use towel roll)
- Initiate Manual Resistance ER Supine in Scapular Plane (light resistance)
- Initiate Prone Rowing to Neutral arm Position
- Initiate prone shoulder extension
- Initiate ER strengthening exercises (Side-lying ER)
- 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 45, 90, 125 degrees) (ER/IR)

Weeks 5 – 6:

Week 6:

- ER at 90 degrees abduction to 90-100 degrees
- IR at 90 degrees abduction to 50-55 degrees
- Flexion to 170-180 degrees

- May use heat prior to exercises
- Continue AAROM and Stretching exercises
 - Especially for movements that are not full
 - Shoulder flexion
 - ER at 90 degrees abduction
- Initiate Active ROM Exercises
 - Shoulder Flexion Scapular Plane
 - Shoulder Abduction
- Progress Isotonic Strengthening Exercise Program
 - ER Tubing
 - Sidelying IR
 - Prone Rowing
 - Prone Horizontal Abduction (bent elbow)
 - Biceps Curls (isotonics)

Precautions:

1. No Heavy Lifting of Objects
2. No excessive behind the back movements
3. No Supporting of Body Weight by Hands & Arms
4. No Sudden Jerking Motions

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:

Week 7-12:

- * ER at 90 degrees abduction: 105-115 degrees
- * Throwers Ten Program
- * Scapular Program

- Continue Stretching & PROM (as needed to maintain full ROM)
- Continue Dynamic Stabilization Drills
- Progress Strengthening Program
 - ER/IR Tubing
 - ER Sidelying
 - Lateral Raises*
 - Full Can in Scapular Plane*
 - 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 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
- Therapist may initiate isotonic resistance (1 lb wt.) during flexion and abduction*
 - *If non-painful normal motion is exhibited!

Weeks 11-14:

- Progress all exercises
 - Continue ROM and flexibility exercises
 - Progress strengthening program (increase 1 lb/10 days *non-painful)

IV. Phase IV – Advanced Strengthening Phase (Weeks 15 - 22)

Goals: Maintain Full Non-Painful ROM.
Enhance Functional Use of UE.
Improve Muscular Strengthen & Power.
Gradual Return to Functional Activities.

Week 15-19:

- Continue ROM & Stretching to maintain full ROM
- Self Capsular Stretches
- Progress Shoulder Strengthening Exercises
 - Fundamental Shoulder Exercises
- Initiate Interval Golf Program (if appropriate)

Weeks 20- 22:

- Continue all exercises listed above
- Progress Golf Program to playing golf (if appropriate)
- Initiate Interval Tennis Program (if appropriate)
- May Initiate Swimming

V. Phase V – Return to Activity Phase (Weeks 23 - 36)

Goals: Gradual Return to Strenuous Work Activities.
Gradual Return to Recreational Sport Activities.

Week 23:

- Continue Fundamental Shoulder Exercise Program (at least 4 times weekly)
- Continue Stretching, if motion is tight
- Continue Progression to Sport Participation