

## 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