



DOSHER Physical Therapy



TYPE ONE ROTATOR CUFF REPAIR SMALL TEAR LESS THAN 1cm

The guidelines of rehabilitation are based on scientific data related to the operative procedure performed and the phases of healing which are the inflammatory response phase, fibroblastic repair and maturation-remodeling phase.

I. PHASE ONE - PROTECTIVE PHASE (WEEK 0-6)

(Patient to be seen approximately one-three times a week for first four weeks)

GOALS:

- 1. Gradual return to full ROM**
- 2. Increase shoulder strength/prevent muscular inhibition**
- 3. Decrease pain and inflammation**
- 4. Maintain integrity of repair**
- 5. Maintain / improve aerobic condition**

PRECAUTIONS:

- 1. No lifting of objects**
- 2. No excessive shoulder extension**
- 3. No excessive stretching or sudden movements**
- 4. No supporting of body weight**
- 5. Keep incision clean and dry**

A. Week 0-3

1. Sling /brace for comfort depending on physician (2-4 weeks)
2. Pendulum exercises : start immediately post-op in hospital
3. Passive range of motion- external rotation/internal rotation at least 45degrees (90 degrees shoulder abd) – progress as tolerated
4. Active Assisted ROM exercises, external and internal rotation performed in scapular plane. (therapist progress to independence)
5. Rope and Pulley for flexion (only)
6. Elbow ROM, Hand gripping
7. Strengthening exercise – start @ 2weeks
 - a. tubing internal/external (submax and painfree),prone rows, rhythmic stabilization (supine flexion 90-125 degrees)
8. Isometrics (submaximal with elbow flexed 90 degrees, nonpainful)
 - a. Abductors/add/extensors
 - b. External Rotators
 - c. Internal Rotators
 - d. Elbow Flexors
9. Pain control modalities/E-stim
 - Range of motion exercises are employed in a non-painful range, gently, and gradually increase motion to tolerance
 - Electrical stimulation to rotator cuff

B. Week 3-6

1. Progress all exercises (Continue all above exercises)
2. PROM exercise – flexion -160-180 degree,external rotation 75-90 (90 abduction),internal rotation 50-55 (90 degrees abduction)
3. AAROM exercises working toward full range of motion by week 6
4. AROM-shoulder flexion in scapular plane,shoulder abduction
5. Surgical tubing ER/IR (arm at side)
6. Continue humeral head stabilization exercises
7. Patient can perform pool exercise for light active range of motion exercise

II. PHASE TWO – INTERMEDIATE PHASE (WEEK 7-12)

Goals:

- 1. Full, non-painful ROM**
- 2. Improvement of strength and power**
- 3. Increasing functional activities; decreasing residual pain**
- 4. Dynamic shoulder stability**

A. Week 7-10

1. ACTIVE assisted range of motion exercises
 - a. Flexion to 170-180 degrees
 - b. ER/IR to within normal limits (90 degrees abduction of shoulder)
2. Strengthening exercises for shoulder
 - a. exercise tubing ER/IR arm at side
 - b. Isotonics dumbbell exercises for:
 - Deltoid
 - Elbow Flexion/extension
 - Scapular muscles- prone rowing, horizontal abduction and prone extension (painfree)
 - Full can in scapular plane without substitution.(painfree)
 - Upper body ergometer
 - starting week 10 can use 1 lb weight for flexion –without substitution
 - PNF diagonals D2 flex/ext,int ext rot strengthening A 90 abd,modified bar push-up.

B. Week – 12

1. Continue all above exercises
2. Progress strength exercise program
3. Continue range of motion and flexibility exercise

III. PHASE THREE- ADVANCED STRENGTHENING PHASE (WEEK 13-21)

GOALS:

- 1. Maintain full, non-painful ROM**
- 2. Improve shoulder complex strength**
- 3. Improve neuromuscular control**
- 4. Gradual return to functional activities**

A. Week 13-18

1. Active stretching program for the shoulder
 - AAROM L – Bar Flexion, ER, IR
2. Capsular stretches
3. Aggressive strengthening program (Isotonic Program)
 - a. Shoulder flexion
 - b. Shoulder Abduction
 - c. Supraspinatus

- d. ER/IR
- e. Elbow Flexors / Extensors
- f. Scapular Muscle
- 4. General conditioning program
- 5. Golfers can initiate putting chipping, tennis players can volley ball against wall.

B. Week 18-21

- 1. Continue all exercises listed above
- 2. Initiate interval sport program – eg. Swimming, tennis volley on court, golfing

IV. PHASE FOUR - RETURN TO ACTIVITY PHASE (WEEK 21-26)

GOAL:

1. Gradual return to recreational sport activities and strenuous work activity.

A. Week 21-26

- 1. Continue to comply to interval sport program
- 2. Continue basic ten program for strengthening and flexibility
- 3. Continue fundamental program at least 4 times per week at home or in recreational facility

**TYPE TWO- ROTATOR CUFF REPAIR
MEDIUM TO LARGE TEAR
(GREATER THAN 1CM AND LESS THAN 5CM)**

I. PHASE ONE - PROTECTIVE PHASE (WEEK 0-6)

(Patient to be seen approximately one time-three times a week for first four weeks)

GOALS:

- 1. Gradual increase in ROM**
- 2. Increase shoulder strength**
- 3. Decrease pain and inflammation**
- 4. Maintain integrity of repair**
- 5. Maintain /improve aerobic conditioning**

PRECAUTIONS:

- 6. No lifting of objects**
- 7. No excessive shoulder extension**
- 8. No excessive stretching or sudden movements**
- 9. No supporting of body weight**
- 10. Keep incision clean and dry**

A. Week 0-3

1. Brace or sling (physician determines)- approximately 4 weeks- 6 weeks
2. Pendulum exercises
3. Active Assisted ROM exercises (wand exercises in supine)
 - a. Start with therapist : patient can perform after demonstrating independence
 - b. Flexion to 145 degrees
 - c. ER/IR (shoulder at 45 degrees abduction in scapular plane elevated on pillows)
4. Passive Range of motion (supine) – flexion -145 degrees, external/internal rotation to 45 degrees (shoulder abduction 90 degrees), adduction and extension to tolerance.
5. Elbow ROM and hand gripping exercises
6. Submaximal Isometrics (elbow @ 90 degrees)
 - a. Flexors/extensors
 - b. Abductors/adductors
 - c. ER/IR
 - d. Elbow Flexors/extensors
7. Scapular stabilization (supine) consisting of ER/IR scapular plane elevated on pillows (submaximal rhythmic stabilization),flexion/extension @ 90 ,100,125 degrees.
8. Ice and pain modalities
 - a. Gently increase Joint Mobilization to grade I-II

B. Week 3-6

1. Discontinue brace or sling (may sleep in for protection)
2. Continue all exercises listed above
3. AAROM exercises
 - a. Flexion to tolerance (achieve full range)
 - b. ER/IR (performed at 90 degrees abduction) range to tolerance
 - c. ER/IR (scapular plane elevated on planes @ 45 degrees abduction)
4. Initiate external rotation strengthening exercise in neutral @ 5-6 weeks
5. Initiate active range of motion in supine progressing to standing @ 5-6 weeks
 - a. flexion in scapular plane
 - b. external and internal rotation in scapular plane
6. Isotonic strengthening (1lb weight) @ 5-6 weeks
 - a. prone rowing
 - b. prone horizontal abduction
 - c. bicep curls/triceps
7. Rythmic stabilization supine- flexion 45/90/125

II. PHASE TWO – INTERMEDIATE PHASE (WEEK 7-14)

Goals:

- 1. Full, non-painful ROM (week 8-10)**
- 2. Gradual increase in strength**
- 3. Decreased pain**
- 4. Gradual return to functional activities**

A. Week 7-10

1. Continue stretching and passive range of motion. Active range of motion without substitution – supine-semireclined-sitting with visual feedback.
2. Continue dynamic stabilization drills
3. Strengthening exercises
 - a. Exercise tubing external/internal rotation shoulder in neutral with pillow, sidelying ER/IR 91 lb wt)
 - b. Progress humeral head stabilizing exercise
 - c. Isonic dumbbell strengthening exercises for:
 - Full can scapular plane
 - Elbow flexion / extension
 - Scapular muscles – prone rows ,horizontal abduction/extension and lateral raises.

B. Week 10-14 (full range of motion desired by week 10-12)

1. Continue all exercise listed above
2. Progress side-lying ER/IR exercises (dumbbell)
3. Progress neuromuscular control exercise for scapula
4. Initiate isotonic resistance (1 lb weight) during flexion and abduction.

Progress strengthening program (1lb every 7 days) pain free Patient must be able to elevate arm without shoulder and scapular substitution with deltoid isotonic strengthening; if unable, maintain on humeral head stabilizing exercises.

III. PHASE THREE – ADVANCED STRENGTHENING PHASE (WEEK 15-22)

Goals:

1. Maintain full, non-painful ROM
2. Improve muscle strength and power of shoulder
3. Improve neuromuscular control
4. Enhance functional use of upper extremity

A. Week 15-20

1. Continue Passive, AAROM and AROM
2. Self capsular stretches
3. Progress shoulder strengthening exercise.
4. Initiate interval sport program-If appropriate initiate golf program/interval tennis program/swimming

IV. PHASE FOUR – RETURN TO ACTIVITY PHASE (WEEK 15-26)

Goals:

1. Gradual return to strenuous work and recreational sport activities

B. Week 21-26

1. Continue all exercises listed above
2. Continue progression to sports participation

**TYPE THREE – ROTATOR CUFF REPAIR (DELTOID SPLITTING)
LARGE TO MASSIVE TEAR (GREATER THAN 5 CM)**

I. PHASE ONE – PROTECTIVE PHASE (WEEK 0-8)

(Patient to be seen approximately one time a week for first four weeks)

GOALS:

- 1. Gradual increase PROM per MD**
- 2. Decrease pain and inflammation.**
- 3. Maintain integrity of repair**
- 4. Facilitate full passive range of motion by week 6**
- 5. Maintain muscle activity of rotator cuff /scapular stabilizers.**
- 6. Independent with home exercise program positioning and edema control**
- 7. Improve or maintain cardiopulmonary conditioning levels.**

Precautions:

- 1. No active range of motion**
- 2. No excessive stretching, sudden movements or excessive motions behind the back**
- 3. No supporting of body weight**
- 4. No lifting of objects**

Week 0-4

1. Abduction pillow Brace (determined by physician)
2. Pendulum exercises
3. Mobilization of scapulothoracic and glenohumeral joints grade I-II
4. Passive ROM to tolerance
 - a. Flexion to tolerance
 - b. ER/IR in scapular plane (shoulder at 45 degrees abduction) supported by pillows
 - c. Abduction/adduction to tolerance
5. Elbow ROM
6. Hand gripping exercises
7. Ice and pain modalities
8. Gentle AAROM with wand exercises at **week 2** when therapist determines patient is ready
9. Begin scapular control exercise with brace consisting of scapular protraction/retraction/elevation/depression in sidelying position.
10. Rope and Pulley for flexion (only)
11. Instruct patient in self passive range of motion.

A. Week 4-8

1. Discontinue brace or sling when M. D. specifies
2. AAROM with wand
 - a. Flexion
 - b. ER/IR (shoulder 45 degrees abduction) 40 degrees

3. Continue pain modalities
4. Passive range of motion to within full limits – 6-8 weeks
5. Glenohumeral and scapulothoracic mobilization grade III
6. Initiate gentle submaximal isometrics with shoulder in neutral elbow bent 90 degrees @ 6 weeks
7. Progress scapular stabilization to prone @ 6 weeks
8. Begin rhythmic stabilization supine (gentle)

II. PHASE TWO – INTERMEDIATE PHASE (WEEK 8-14)

GOALS:

- 1. Establish full active range of motion (week 12)**
 - 2. Gradual increase in strength**
 - 3. Decrease pain**
 - 4. Maintain integrity of repair**
 - 5. Maximize strength and scapular stabilizers**
 - 6. Independent with functional activities of daily living**
- Stop**

A. Week 8-10

1. AAROM L-Bar exercises
 - a. Flexion to tolerance
 - b. ER/IR (shoulder 90 degrees abduction) to tolerance
 - c. Biodex PNF Diagonal

2. Initiate isotonic strengthening
 - a. Deltoid to 90 degrees
 - b. ER/IR side-lying
 - c. Supraspinatus
 - d. Biceps/Triceps
 - e. Scapular muscles

3. Week 10-14
 1. Full ROM desired by week 12-14
 2. CONTINUE ALL EXERCISES LISTED ABOVE
 3. Initiate neuromuscular control exercises
 - * If patient is unable to elevate arm without shoulder hiking (scapulothoracic substitution) then maintain on humeral head stabilizing exercises.

III PHASE THREE – ADVANCED STRENGTHENING PHASE (WEEK 15-26)

GOALS:

- 1. Maintain full, non-painful ROM**
- 2. Improve strength of shoulder**

3. Improve neuromuscular control

4. Gradual return to functional activities

A. Week 15-20

1. continue AAROM exercises with wand – flexion, ER, IR
2. Self Capsular stretches
3. Aggressive strengthening program
 - a. Shoulder Flexion
 - b. Shoulder Abduction (to 90 degrees)
 - c. Supraspinatus
 - d. ER/IR
 - e. Elbow flexors /Extensors
 - f. Scapula Strengthening
4. Conditioning program

B. Week 21-26

1. Continue all exercises listed above
2. Isokinetic test (modified neutral position) for ER/IR at 180 and 300 degrees/sec
3. Initiate interval sport program

IV PHASE FOUR- RETURN TO ACTIVITY PHASE (WEEK 24-28)

GOAL:

1. Gradual return to recreational sport activities.

A. Week 24-28

1. Continue all strengthening exercises
2. Continue all flexibility exercises
3. Continue progression on interval programs