THE SHOULDER CENTER, PC

ARTHROSCOPIC ROTATOR CUFF REPAIR PROTOCOL

BACKGROUND/RATIONALE: Arthroscopic rotator cuff repair offers the benefit of faster recovery, minimal scarring, and greatly reduced risk of infection and stiffness. However, despite the great benefits of arthroscopic repair, rehabilitation can be very confusing and difficult for patients, partially due to the wide range of recommendations and experiences encountered.

Combining our own published results and experience with the best evidence based research available, this program allows patients to resume regular activities by 12 to 16 weeks, the same amount of time studies suggest that it takes the repaired rotator cuff tendon to reach final tensile strength. High demand overhead sports and other specialized activities typically require greater rehabilitation time.

The program is divided into 3 primary phases:

- Phase 1- Tendon Healing; protect the repair while maximizing passive range-of-motion
- Phase 2- Active ROM; restore full motion and activities of daily living
- Phase 3- Strengthening; restore strength, coordination and endurance

Key principals for rehabilitation include:

While many types of motion and devices are available, the safest types of motion shown in multiple studies to provide minimal stress to the rotator cuff repair during Phase 1 are Codman's pendulum exercises and passive assisted motion below shoulder level. Pulleys, wall-walks, stick exercises, etc. all place higher stress on the repair during Phase 1 and should be avoided.

PERFORM MOTION PROGRAM (PENDULUM AND PASSIVE ASSISTED MOTION) FOR ONLY SHORT PERIODS OF TIME BUT AS OFTEN AS POSSIBLE EACH DAY

PHASES 2 AND 3:

Any exercise that causes shoulder pain, stiffness, or swelling should be discontinued.
Restore full motion before moving forward with strength exercises.
Attempts to strengthen a stiff shoulder can cause pain, subacromial impingement, and excessive stress on the repair.

The four key exercises are external rotation (infraspinatus, teres minor), internal rotation (subscapularis), forward flexion (anterior deltoid, supraspinatus), and rowing motion (posterior deltoid, periscapular muscles). The periscapular muscles and deltoid (anterior and posterior) muscles always should be included as part of a comprehensive program to restore strength and kinematics. A core strengthening program also is encouraged.

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POSTOP: (Day 0)
Initiate passive assisted abduction to a maximum of 90 degrees and IR/ER in abduction while Acute Pain Service Catheter/Block in place.
Safe limits for IR/ER will be determined during surgery.

PHASE 1: (0-6 weeks)

- Preserve rotator cuff repair integrity- verify safe rotational limits
- Maximize passive ROM (IR/ER/ABD to 90) while regional block in place
- Maintain passive ROM during entire healing period
- Diminish pain and inflammation
- Prevent muscle inhibition/minimize muscle tension
- Become independent with modified ADLs
- Abduction brace/sling
- Pendulum exercises- review proper performance
- Finger, wrist, and elbow AROM
- Begin scapula musculature isometrics/sets; cervical ROM
- Begin PROM to tolerance (done supine; should be pain free)
- Passive assisted abduction in scapular plane to less than 90 degrees
- Passive assisted ER an IR in abduction to tolerance and prescribed limits.
- Patient education on posture, joint protection, positioning, hygiene
- **No shoulder AROM, lifting of objects, excessive stretching or sudden movement, supporting of any weight, lifting of body weight by hands**

PHASE 2: (6-10 weeks)

- Do not overstress healing tissue
- ***Maximize PROM and AROM***
- No lifting overhead weights
- No supporting body weight with hands and arms
- No sudden jerking motions
- No excessive behind the back movements
- Initiate AROM exercises (flexion scapular plane, abduction, ER, IR)
- Gentle scapular/glenohumeral joint mobilization as indicated to regain full PROM

PHASE 3: (10-16 weeks)

- Full AROM
- Maintain Full PROM
- Dynamic shoulder stability
- Gradual restoration of shoulder strength, power, and endurance
- Optimize neuromuscular control
- Gradual return to functional activities

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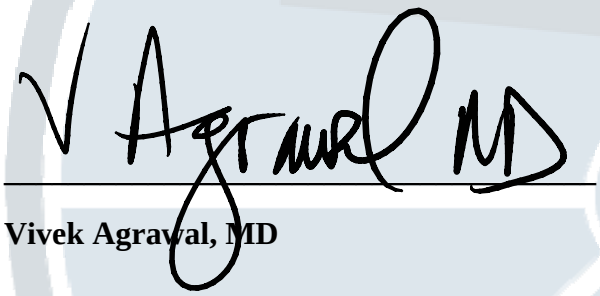
- ER and IR with weights or theraband
- ER side-lying (lateral decubitus)
- Lateral raises* – side lying to 45 degrees preferable
- Full can in scapular plane* (no empty can abduction exercises)
- Prone rowing
- Prone horizontal abduction
- Prone extension
- Elbow flexion
- ***Patient must be able to elevate arm without shoulder or scapular hiking before initiating isotonics; if unable, continue glenohumeral joint exercises**



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