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Arthroscopic Rotator Cuff Repair Protocol- Massive Tear Size

The rate limiting factor in arthroscopic rotator cuff repair is the biologic healing of the cuff tendon to the humerus, which is thought to be a minimum of 8-12 weeks. Progression of AROM against gravity and duration of sling use is predicated both on the size of tear and quality of tissue and should be guided by referring physician. Refer to initial therapy referral for any specific instructions.

Phase I: Immediate Post Surgical Phase (Weeks 0-8)

Goals

Maintain/protect integrity of repair
Gradually increase PROM
Diminish pain and inflammation
Prevent muscular inhibition
Independence in modified ADLs

Precautions

1. Wear shoulder brace for 8 weeks
2. Sleep in shoulder brace for 8 weeks
3. No active motions away from your body or overhead
4. No lifting objects with your shoulder/arm, reaching behind back, excessive stretching or sudden movements
5. No pushing or pulling motions
6. No support of body weight by hands
7. Physician or Physical Therapist will advise regarding other precautions

Day 1 to 14

Use of Abduction brace/sling (during sleep also) – remove only for exercise
Pendulum exercises
Finger, wrist, and elbow AROM
Gripping exercises
Cervical spine AROM
Shoulder PROM done supine for more patient relaxation; Flexion to 100°
ER/IR in scapular plane $\leq 20^\circ$
Educate patient on posture, joint protection, importance of brace/sling, pain medication use early, hygiene
Cryotherapy for pain and inflammation

Week 2-8

Continue use of abduction sling/brace until the end of week 8.

Pendulum exercises

Begin PROM to tolerance (supine, and pain-free)

Flexion to 130° ER in scapular plane = 30°

- IR in scapular plane to body/chest @ 0° abduction up to 40°
- IR in scapular plane to body/chest in slight (30°) abduction \leq 30°

May use heat prior to ROM

Continue elbow, hand, forearm, wrist and finger AROM

Begin resisted isometrics/isotonics for elbow, hand, forearm, wrist and fingers

Begin scapula muscle isometrics/sets, AROM

Cryotherapy as needed for pain control and inflammation

May begin gentle general conditioning program (walking, stationary bike)

No running/jogging

Aquatherapy may begin approximately 10 **weeks** post operative if wounds healed

Criteria for progression to next phase (II)

Passive forward flexion to \geq 125°

Passive ER in scapular plane to \geq 25° (if uninvolved shoulder PROM > 80°)

Passive IR in scapular plane to \geq 30° (if uninvolved shoulder PROM > 80°)

Passive abduction in scapular plane to \geq 60°

Phase II: Protection and Protected Active Motion Phase (Weeks 8 to 16)

Goals

Allow healing of soft tissue

Do not overstress healing soft tissue

Gradually restore full passive ROM (~ week 12-16)

Decrease pain and inflammation

Precautions

No lifting

No supported full body weight with hands or arms

No sudden jerking motions

No excessive behind back motions

No bike or upper extremity ergometer until week 10

Weeks 8-10

Continue with full time use of sling/brace until end of week 8

Gradually wean from brace starting several hours/day out progressing as tolerated

Use brace sling for comfort only until full DC by end of week 9

Initiate AAROM shoulder flexion from supine position week 8-10

Begin glenohumeral submaximal rhythmic stabilization exercises in balanced position (90-100 degrees of elevation) in supine position to initiate dynamic stabilization

Initiate AAROM with wand

- ER/IR in scapular plane at 30-45 degrees abduction (pain-free)

Initiate gentle Pain-free Isometrics of shoulder

- Flexion with elbow bent to 90 degrees
- Internal and External Rotation with arm at side

Progressive PROM until full PROM by week 12-16 (should be pain-free)

Initiate Prone rowing, prone shoulder extension, prone horizontal abduction

May require use of heat prior to ROM exercises/joint mobilization

Can begin passive pulley use

May require gentle glenohumeral or scapular joint mobilization as indicated to obtain full unrestricted ROM

Continue cryotherapy as needed post therapy/exercise

Week 10-14

Continue PROM, AAROM, and stretching as needed

Begin IR stretching, shoulder extension, and cross body, sleeper stretch to mobilize posterior capsule (if needed)

Continue periscapular exercises progressing to manual resistance to all planes

Seated press-ups

Initiate AROM exercises (flexion, scapular plane, abduction, ER, IR) (should be pain-free) low weight – initially only weight of arm

Do not allow shrug during AROM exercises

If shrug exists continue to work on cuff and do not reach/lift AROM over 90° elevation

Initiate ER and IR with exercise bands/sport cord/tubing

ER isotonic exercises in side lying (low-weight, high-repetition) may simply start with weight of arm

Elbow flexion and extension isotonic exercises

Full can exercise in scapular plane – no weight/load

Week 14-16

Scapular plane elevation to 90° (patient must be able to elevate arm without shoulder or scapular hiking before initiating isotonic exercises. If unable then continue cuff/scapular exercises)

Full can (no empty can abduction exercises)

Lateral Raise

- Progress shoulder and periscapular strengthening- increase 1 lb./10 days (no pain)

Criteria for progression to Phase III

Full AROM

Phase III: Early Strengthening (Weeks 16-22)

Goals

Full AROM (weeks 12-16)

Maintain full PROM

Dynamic shoulder stability (GH and ST)

Gradual restoration of GH and scapular strength, power and endurance

Optimize neuromuscular control

Gradual return to functional activities

Precautions

No lifting objects > 5 lbs, no sudden lifting or pushing

Exercise should not be painful

Week 16

Continue stretching, joint mobilization, and PROM exercises as needed

Dynamic strengthening exercises

Continue exercises as above weeks 9-16; add resistance as able

Week 18

Continue all exercise listed above

May begin BodyBlade, Flexbar, Boing below 45°

Begin light isometrics in 90/90 or higher supine, PNF D2 flexion/extension patterns against light manual resistance

Initiate light functional activities as tolerated

Week 20

Continue all exercises listed above

Progress to fundamental exercises (bench press, shoulder press)

Initiate low level plyometrics (2-handed, below chest level – progressing to overhead and finally 1-handed drills)

Criteria for progression to Phase IV

Ability to tolerate progression to low-level functional activities

Demonstrate return of strength/dynamic shoulder stability

Reestablishment of dynamic shoulder stability 4