ATLANTIC ORTHOPAEDIC SPECIALISTS
Leaders in Orthopaedic Health

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Rehabilitation following Arthroscopic Rotator Cuff Repair: Large Tear

Phase I: Immediate Postsurgical/Protection Phase (Days 1 – 6weeks)

Precautions:

- No lifting of objects; No excessive arm motions; No excessive external rotation (ER) or internal rotation (IR) motions; No excessive shoulder extension; No excessive stretching or sudden movements; No supporting of body weight by hands
- Keep incision clean and dry.
- Precautions isolated supraspinatus repair.
    - Caution with excessive* (>25-35°) passive and active IR range of motion (ROM) for 4 weeks.

  Precautions combined supraspinatus and infraspinatus repair.
    - Caution with excessive* (>25-35°) passive and active IR ROM for 4 weeks.

  Precautions isolated/combined subscapularis repair.
    - No ER AROM for 4 weeks; Avoid excessive* (>25-35°) ER PROM
    - No IR AROM for 6 weeks.
    - Progress ER slowly from 4 weeks until 6 weeks.

  Precautions if patient had Bicep Tenodesis procedure. Please refer to BT rehab packet for guidelines.

Goals:

- Maintain integrity of the repair
- Promote tissue healing
- Gradually increase passive ROM
- Diminish pain and inflammation
- Prevent muscular inhibition

Day 1 – 6 weeks

- Elbow/hand gripping and ROM exercises: perform 4-6 times per day (bicep tenodesis precautions if applicable)
- Cryotherapy for pain and inflammation
    - Ice 15-20 min approximately 4-6 times daily
- Sleeping
    - Sleep in pillow brace until instructed to discontinue. (Typically until 6weeks)
    - Wear sling 24/7 except to shower and dress

Weeks 4 – 6

- 30° abduction pillow brace
- Progressive Table Slides to 90° (pain-free/slide to tolerance)
- PROM
    - Flexion to 90° (pain-free ROM)
    - ER/IR in scapular plane at 45° of abduction (pain-free ROM, use towel rolls or therapist assisted hold for support) *
        - Limit ER and IR ROM to 25°-35°; See precautions above
- Submaximal pain-free isometrics (initiate week 6)
    - Flexion with elbow bent to 90°
    - ER
    - IR
    - Elbow flexors

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Weeks 6 – 8

- Discontinue use of pillow brace progressively (6-8weeks post-surgery)
- Table Slide (other closed chain PROM exercises) (increase from 90° to full PROM)
- Progress PROM to tolerance (pain-free ROM)
    - Flexion 150°+
    - ER in scapular plane at 45° abduction to 50°+
    - IR in scapular plane at 45° abduction to 45°+
        - (pain-free ROM, use towel rolls or manual hold for support) *
- Continue elbow/hand AROM and gripping exercises (bicep tenodesis?)
- Continue isometrics (submaximal and sub-painful) *
- AAROM exercises (L-Bar) at 7-8weeks
    - ER/IR in scapular plane at 45° abduction
    - Flexion using L-bar to tolerance*
        - Sub-painful/sub-maximal, gentle and controlled AAROM***

* May apply electrical muscle stimulation to shoulder external rotators for muscle reeducation; initiate at 8weeks postoperatively.

- Flexion with bent elbow
- Extension with bent elbow
- Abduction with bent elbow
- ER/IR with arm in scapular plane
- Elbow flexion

- Initiate rhythmic stabilization (gentle, sub-painful) ER/IR at 45°abduction
- Continue use of ice for pain control
    - Use ice at least 6-7 times daily*
- Sleeping
    - discontinue use of sling if comfortable in this time period

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Phase II: Protection/Intermediate Phase (Weeks 8-12)

Precautions:

- No heavy lifting of objects; No carrying heavy objects; No excessive behind the back movements; No supporting of body weight by hands and arms; No sudden jerking motions

Goals:

- Allow healing of soft tissue
- Do not overstress healing tissue
- Gradually restore full passive ROM (week 6-8)
- Re-establish dynamic shoulder stability
- Decrease pain and inflammation

Weeks 8 – 10

- Continue progressive PROM to full (Table Slides)
    - Flexion 160° - Full
    - ER at 45-90° abduction to 60°+
    - IR at 45-90° abduction to 60°+

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- AAROM exercises (L-Bar) weeks 9 – 10
  - ER/IR in scapular plane at 45° abduction
  - Flexion to tolerance*
- Rhythmic stabilization drills (minimal force)
  - ER/IR in scapular plane
  - Flexion/extension at 100° and 125° flexion
- Continue all isometric contractions
- Initiate scapular isometrics (minimal; pain-free)
- Continue use of cryotherapy as needed
- Continue all precautions
  - No lifting
  - No excessive motion

Weeks 10 – 12

- Continue all exercises listed above but progressive if tolerated
- Initiate ER/IR strengthening using exercise tubing at 0° of abduction (use towel roll, minimal)
- Initiate manual resistance ER supine in scapular plane (light resistance)
- Initiate prone rowing with arm at 30° abduction (towel roll) to neutral arm position
- Initiate prone shoulder extension with elbow flexed to 90°
- Initiate isotonic elbow flexion (biceps tenodesis?)
- Continue use of ice as needed
- May use heat prior to ROM exercises
- May use pool for light active ROM exercises
- Rhythmic stabilization exercises (flexion at 45°, 90°, 125° and ER/IR at multiple angles)

- Continue AAROM and stretching exercises
  - Especially for movements that are not full
    - Shoulder flexion stopping at 90° in side-lying (gravity eliminated position)
    - ER at 90° abduction (by week 12)
  - Shoulder flexion in scapular plane in side-lying at week 10 (no weight)
  - Shoulder abduction at week 11 (if no substitution pattern or pain is present)
- Progress isotonic strengthening exercise program
  - ER tubing
  - Side-lying ER
  - Prone rowing
  - Prone horizontal abduction (bent elbow)
  - Biceps curls (isotonics) very light weight (Bicep tenodesis?)

Phase III: Intermediate Phase/Early Strengthening phase (Weeks 12-16)

Goals:

- Full AROM (weeks 12 – 14)
- Maintain full PROM
- Dynamic shoulder stability
- Gradual restoration of shoulder strength
- Gradual return to ADL's and light functional activity

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Weeks 12 – 16

- Continue stretching for passive ROM (as needed to maintain full ROM)
- Continue dynamic stabilization drills
- Progress active ROM "light" strengthening program
    - ER/IR tubing
    - ER side-lying
    - Lateral raises to 90° of abduction*
    - Full can in scapular plane to 90° of flexion*
    - 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 isotonics. If unable, continue glenohumeral joint stabilization drills and exercises**

- Continue all exercises listed above
- If physician permits, may initiate light functional activities

Week 14

- Continue all exercises listed above
- Progress to fundamental shoulder exercises
- Therapist may initiate isotonic resistance (0.5-kg weight) during flexion and abduction*
    - If non-painful normal motion is exhibited and no substitution pattern is present

Weeks 15 – 16

- Progress all exercises
- Continue ROM and flexibility exercises
- Progress strengthening program (increase 0.5 kg/10 days if non-painful) *
    - Be sure when progressing patient, no residual pain is present following exercises

Phase IV: Early Strengthening/Advanced Strengthening Phase (Weeks 16-26)

Goals:

- Maintain full non-painful ROM
- Maintain integrity of repair
- Enhance functional use of upper extremity
- Improve muscular strength and power
- Gradual return to functional activities

Weeks 16-20

- Continue ROM and stretching to maintain full ROM
- Self-capsular stretches
- Progress shoulder strengthening exercises
    - Fundamental shoulder exercises
- Initiate interval golf program (if appropriate) week 24

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Weeks 20-26

- Continue all exercises listed above
- Gradually increase resistance but patient should exhibit no pain during or after exercise and no substitution pattern

Phase V: Return to Activity Phase (Weeks 26-36)

Goals:

- Gradual return to strenuous work activities
- Gradual return to recreational sport activities

Week 26

- Continue fundamental shoulder exercise program (at least 4 times weekly) *
- Progress golf program to playing golf (if appropriate)
- Initiate interval tennis program (if appropriate)
- May initiate light swimming (if appropriate), weeks 26-29
- Continue stretching if motion is tight
- Continue progression to sport or work activity
    - Should continue fundamental shoulder exercise program until 12 mo. following surgery or until instructed to discontinue