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Post-Operative Rehabilitation Protocol:

Rotator Cuff Repair with Biceps Tenodesis

PHASE I: PROTECTIVE PHASE (WEEKS 0-6)

<u>GOALS</u>: Allow soft tissue healing, diminish pain/inflammation, establish motion, retard muscle atrophy.

I. <u>Immediate Post-Operative to Week 3</u>:

A. General:

- * Sling with abduction pillow
- * Cryotherapy unit or ice 20 minutes/hour

B. Weight Bearing:

* Non-weight bearing

C. Range of Motion Goals:

- * PROM
 - o Forward flexion 0°-70°
 - o Abduction 0°-70°
 - o ER in plane of scapula 0°-30°
 - o IR in plane of scapula 0°-30°
 - o Elbow motion
- * **NO** combined forward elevation and internal rotation

D. Treatment / Exercises:

- * Active elbow and wrist range of motion, hand gripping
- * Cervical AROM
- * Table slides: Forward flexion 0°-70°; Abduction 0°-70°
- * Shoulder shrugs, protraction, retraction
- * **NO** resisted biceps flexion for 6 weeks

II. <u>Weeks 3-6</u>:

A. General:

- * Sling with abduction pillow
- * Discontinue sling at after 6 weeks
- * Cryotherapy unit or ice 20 minutes/hour

B. Weight Bearing:

* Non-weight bearing

C. Range of Motion Goals:

- * Passive, AAROM
 - o Forward flexion 0°-120°
 - o Abduction 0°-120°
 - o ER in plane of scapula 0°-40°
 - o IR in plane of scapula 0°-40°
 - o Elbow ROM
 - * **NO** combined forward elevation and internal rotation

D. <u>Treatment / Exercises</u>:

- * Continue above treatment
- * Pendulum exercises
- * Wall climbs or L-bar for AAROM
- * Rope and pulley for flexion only
- * Isometrics (submaximal, pain-free) abductors, ER, IR, shoulder
- * Active shoulder extension lying prone or standing (forward flexed at waist). Avoid extension of shoulder beyond plane of the body
- * Humeral head stabilization exercises
- * **NO** resisted biceps flexion for 6 weeks

PHASE II - INTERMEDIATE PHASE (WEEKS 6-12)

<u>GOALS</u>: Progress to full motion, decrease pain, increase functional activities. Enter Phase II if:

- ✔ ROM goals above are met
- ✓ Minimal pain/tenderness

III. Weeks 6-10:

A. <u>General</u>:

- * Cryotherapy unit or ice 20 minutes/hour as needed
- *Discontinue Sling

B. Weight Bearing:

* Weight of arm

C. Range of Motion Goals:

- * Progress to full PROM, AAROM, AROM as tolerated
- * Goal of full ROM by Week 8-10

D. Treatment / Exercises:

* Continue above treatment

- * Exercise tubing ER/IR with arm at side
- * Isotonic dumbbell exercises: deltoid, periscapular muscles

IV. Weeks 10-12:

A. <u>General</u>:

* Cryotherapy unit or ice 20 minutes/hour as needed

B. Weight Bearing:

* Weight of arm

C. Range of Motion Goals:

* Progress to full PROM, AAROM, AROM as tolerated

D. Treatment / Exercises:

- * Continue above treatment
- * Initiate isokinetic strengthening (scapular plane)
- * Side-lying ER/IR exercises
- * Initiate neuromuscular periscapular control exercises
- * Tubing and Theraband exercises. Progress to free weights as strength improves.
- * Standing tubing rowing
- * Horizontal abduction (prone lying or bent waist position) to plane of body

PHASE III – DYNAMIC STRENGTHENING PHASE (MONTHS 3-5)

<u>GOALS</u>: Maintain motion, improve strength and neuromuscular control. Enter Phase III if:

- ✓ Full, painless ROM
- ✓ No pain/tenderness
- ✓ Satisfactory arm control without scapular substitution

V. <u>MONTHS 3-4</u>:

A., B., C. As above

D. Treatment / Exercises:

- * Continue above treatment
- * Capsular stretches
- * Initiate isotonic elbow flexion/extension
- * Isotonic program shoulder flexion, abduction, supraspinatus, ER/IR, periscapular muscles
- * Military press, light weight initially. Keep arm anterior to chest

- * Wall push ups. (Emphasize protraction phase.)
- * Progress to floor push up (hands and knees), then standard push up
- * Isokinetic strength and endurance training (high speeds 120°-240° or greater per sec) for shoulder IR/ER (arm at side and elbow flexed 90° in plane of scapula)
 - * Prerequisite strength requirements of the rotator cuff are 5-10 lbs for ER and 10-15 lbs for IR
- * Ergometer exercise
- * Add total body conditioning program

VI. <u>MONTHS 4-5</u>:

A., B., C. As above

- D. <u>Treatment / Exercises</u>:
 - * Continue above treatment
 - * Initiate Interval Sport Program

PHASE IV: RETURN TO ACTIVTY PHASE (MONTHS 5+)

<u>GOALS</u>: Gradual return to recreational or competitive activity.

Enter Phase IV if:

- ✓ Full, painless ROM
- ✓ No pain/tenderness
- ✓ Satisfactory isokinetic test (Flex/Ex, Abd/Add)
- ✓ Satisfactory clinical exam

VII. Weeks 20+:

A., B., C. As above

- D. Treatment / Exercises:
 - * Continue above treatment
 - * Resume normal training
 - * Isokinetic and endurance test to tolerance
 - * Continue basic ten programs for strengthening and flexibility
 - * Sport specific drills
 - * Return to competition if:
 - ✓ Full ROM
 - ✓ No pain/tenderness
 - ✓ Satisfactory strength (at least 95% of uninvolved arm)
 - ✓ Satisfactory clinical exam

* Addendum

This protocol provides general rehabilitation guidelines following Rotator Cuff Repair with Biceps Tenodesis. It is subject to modification depending on the degree of injury, the type and extent of associated surgical intervention, as well as your individual progress post-operatively. For any questions, please call my office at 860-244-1017.