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Rehabilitation Protocol After Type III Rotator Cuff Repair (Deltoid-Splitting Procedure): Large to Massive Tear (>5 cm)

I. Phase I: Protection Phase (Weeks 0—8)

- A. Weeks 0—4
 1. Brace or sling (as determined by physician)
 2. Pendulum exercises
 3. Passive range of motion to tolerance
 - Flexion
 - External-internal rotation (shoulder at 45° abduction)
 4. Elbow range of motion
 5. Hand-gripping exercises
 6. Continuous passive motion
 7. Submaximal isometrics for abductors, external-internal rotation, elbow flexors
 8. Ice and pain modalities
 9. Gentle active-assisted range of motion with L bar at week 2

- B. Weeks 4—8
 1. Discontinue brace or sling
 2. Active-assisted range of motion with L bar in
 - Flexion to 100°
 - External-internal rotation to 40°, with shoulder at 45° abduction
 3. Continue pain modalities

II. Phase II: Intermediate Phase (Weeks 8—14)

Goals

- Achieve full range of motion (week 12)
- Gradually increase strength
- Decrease pain

- A. Weeks 8—10
 1. Active-assisted range-of-motion exercises with L-bar
 - Flexion to tolerance
 - External-internal rotation to tolerance with shoulder at 90° abduction
 2. Initiate isotonic strengthening
 - Deltoid to 90°
 - External-internal rotation in side-lying
 - Supraspinatus
 - Biceps and triceps
 - Scapulae muscles

- B. Weeks 10—14
 1. Full range of motion desired by weeks 12—14
 2. Continue all exercises listed above
 3. Initiate neuromuscular control exercises

Note: If the athlete is unable to elevate the arm without the shoulder “Hiking” (scapulothoracic substitution) before initiating isotonics, maintain the athlete on humeral head stabilization exercises.

III. Phase III: Advanced Strengthening Phase (Weeks 15—26)

Goals

- Maintain full, nonpainful range of motion
- Improve strength of shoulder complex
- Improve neuromuscular control
- Gradually return to functional activities

A. Weeks 15—20

1. Continue active-assisted range-of-motion exercise with L bar in flexion, and external-internal rotation
2. Self-capsular stretches
3. Aggressive strengthening program (isotonic program)
 - Shoulder flexion
 - Shoulder abduction to 90°
 - Supraspinatus strengthening
 - External-internal rotation
 - Elbow flexors and extensors
 - Scapulae muscles
4. General conditioning program

B. Weeks 21—26

1. Continue all exercises listed above
2. Isokinetic test (modified neutral position) for external-internal rotation at 180° / sec and 300° /sec
3. Initiate interval training program for sport

IV. Phase IV: Return-to-Activity Phase (Weeks 24—28)

Goals

- Gradually return to sports activities
- Continue all strengthening exercises
- Continue all flexibility exercises
- Continue progression on interval training program