

**Dr. John G. Skedros**

**Rehabilitation Protocol After Type II Rotator Cuff Repair (Deltoid-Splitting Procedure): Medium to Large Tear (1 to 5 cm)**

**I. Phase I: Protective Phase (Weeks 0—6)**

*Goals*

- Achieve gradual increase in range of motion
- Increase shoulder strength
- Decrease pain and inflammation

A. Weeks 0—3

1. Brace or sling (as determined by physician)
2. Pendulum exercises
3. Active-assisted range-of-motion exercises with L bar
  - Flexion to 125°
  - External-internal rotation (shoulder at 40° abduction) to 30°
4. Passive range of motion to tolerance
5. Rope-and-pulley exercises in flexion
6. Elbow range of motion
7. Hand-gripping exercises
8. Submaximal isometrics for flexors, abductors, external-internal rotation, and elbow flexors
9. Ice and pain modalities

B. Weeks 3—6

1. Discontinue brace or sling
2. Continue all exercises listed above
3. Active-assisted range-of-motion exercises
  - Flexion to 145°
  - External-internal rotation performed at 65° abduction through range to tolerance

**II. Phase II: Intermediate Phase (Weeks 7—14)**

*Goals*

- Achieve full, nonpainful range of motion (week 10)
- Gradually increase strength
- Decrease pain

A. Weeks 7—10

1. Active-assisted range-of-motion exercises with L bar
  - Flexion to 160°
  - External-internal rotation performed at 90° shoulder abduction to tolerance (greater than 45°)
2. Strengthening exercises
  - Exercise tubing external-internal rotation, arm at side
  - Initiate humeral head stabilization exercises
  - Initiate dumbbell strengthening exercises for deltoid, supraspinatus, elbow flexion and extension, and scapulae muscles

B. Weeks 10—14 (full range of motion desired by weeks 10—12)

1. Continue all exercises listed above
2. Initiate isokinetic strengthening (scapular plane)
3. Initiate side-lying external-internal rotation exercises (dumbbell)
4. Initiate neuromuscular control exercises for scapulae

*Note:* If the athlete is unable to elevate the arm without the shoulder and scapula "hiking" (scapulothoracic substitution) before initiating isotonic, 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 shoulder flexion, external-internal rotation
2. Self-capsular stretches
3. Aggressive strengthening program (isotonic program)
  - Shoulder flexion
  - Shoulder abduction to 90°
  - Supraspinatus
  - 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)**

#### *Goal*

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