

Dr. John G. Skedros

Rehabilitation Protocol After Type I Rotator Cuff Repair (Deltoid-splitting Procedure): Small Tear (< 1 cm)

I. Phase I: Protective Phase (Weeks 0--6)

Goals

- Achieve gradual return to full range of motion
- Increase shoulder strength
- Decrease pain

A. Weeks 0—3

1. Sling for comfort (1-2 weeks)
2. Pendulum exercises
3. Active-assisted range-of-motion exercises with L bar
4. Rope-and-pulley exercises for flexion *only*
5. Elbow range of motion and hand gripping
6. Isometrics (submaximal, subpainful isometrics)
 - Abductors
 - External rotators
 - Internal rotators
 - Elbow flexors
 - Shoulder flexors
7. Pain control modalities (ice, high-voltage galvanic stimulation)

Note: Range-of-motion exercises are employed in a nonpainful range; gently and gradually increase motion to tolerance.

B. Weeks 3—6

1. Progress all exercises (continue all exercises listed above)
2. Active-assisted range-of-motion exercises external-internal rotation (shoulder at 45° abduction)
3. Surgical tubing external-internal rotation (arm at side)
4. Initiate humeral head stabilization exercises

II. Phase II: Intermediate Phase (Weeks 7—12)

Goals

- Achieve full, nonpainful range of motion
- Improve strength and power
- Increase functional activities; decrease residual pain

A. Weeks 7—10

1. Active-assisted range-of-motion exercises with L bar
 - Flexion to 170-180°
 - External-internal rotation performed at 90° shoulder abduction-external rotation to 75-90°; internal rotation to 75-85°
 - External rotation exercises performed at 0° abduction
2. Strengthening exercises for shoulder
 - Exercise tubing external-internal rotation, arm at side
 - Isotonic dumbbell exercises for deltoid, supraspinatus, elbow flexors, and scapulae muscles
3. Initiate upper body ergometer for endurance

B. 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

III. Phase III: Advanced Strengthening Phase (Weeks 13—21)

Goals

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

A. Weeks 13—18

1. Active stretching program for the shoulder (active-assisted range of motion with L bar in flexion, external-internal rotation)
2. Self-capsular stretches
3. Aggressive strengthening program (isotonic program)
 - Shoulder flexion
 - Shoulder abduction
 - Supraspinatus
 - External-internal rotation
 - Elbow flexors and extensors
 - Scapulae muscles
4. Isokinetic test at week 14 (modified neutral position)
 - External-internal rotation at 180° / sec and 300° / sec
5. General conditioning program

B. Weeks 18—21

1. Continue all exercises listed above
2. Initiate interval training program for sport

IV. Phase IV: Return-to-Activity Phase (Weeks 21—26)

Goal

- Gradually return to recreational sports activities
1. Isokinetic test (modified neutral position)
 2. Continue to comply with interval training program
 3. Continue Throwers' Ten Exercise Program (Appendix C) for strengthening and flexibility