



OPEN SUBSCAPULARIS REPAIR WITH BICEPS TENODESIS

I. Phase I – Immediate Postoperative Phase

Goals: Protect the surgical procedure
Minimize the effects of immobilization
Diminish pain and inflammation
Establish baseline proprioception and dynamic stabilization

Week 0-2

- Sling for comfort (1 week)
- May wear immobilizer for sleep (2 weeks) **Physician decision
- Elbow/hand ROM
- Gripping exercises
- Passive ROM and active assistive ROM (L-bar)
 - Flexion to tolerance 0-90 degrees week 1, 0-100 degrees week 2
 - ER/IR at 45 degrees abd scapular plane to 0 degrees
- Submaximal isometrics
- No IR isometrics for 3 weeks
- No biceps strengthening, no active elbow flexion
- Rhythmic stabilization
- ER/IR proprioception drills
- Cryotherapy modalities as needed

Week 3-4

- Gradually progress ROM
 - Flexion to 120-140 degrees
 - ER at 45 degrees abd scapular plane to 35-45 degrees
 - IR at 45 degrees abd in scapular plane to 45-60 degrees
- Initiate light isotonic exercises for shoulder musculature
 - Tubing for ER
 - Begin IR isometrics
 - Abduction, full can, sidelying ER, prone rowing
 - Dynamic stabilization exercises, PNF

Week 5-6

- Progress ROM as tolerated
 - Flexion to 160 degrees (tolerance)
 - ER/IR at 90 degrees abduction:
 - IR to 75 degrees
 - ER to 55 degrees
- Joint mobilization as necessary

- Continue self capsular stretching
- Progress all strengthening exercises
 - Continue PNF diagonal patterns
 - Throwers ten program
 - Continue isotonic strengthening
 - Dynamic stabilization exercises
 - Close kinetic chain exercises
 - Wall stabilization
- Progress ROM to:
 - ER at 90 degrees abduction: 75 degrees
 - IR at 90 degrees abduction: 70-75 degrees
 - Flexion: 165-175 degrees

II. **Phase II – Intermediate Phase**

Goals: Reestablish full ROM
Normalize arthrokinematics
Improve muscular strength
Enhance neuromuscular control

Week 8-10

- Progress to full ROM (week 8) – flexion 180 degrees, ER at 90 to 90 degrees, IR 75 degrees
- Continue all stretching exercises
 - Joint mobilization, capsular stretching, passive and active stretching
- In overhead athletes, maintain 90-100 degrees ER
- Continue strengthening exercises
 - Throwers ten program (for overhead athlete)
 - Isotonic strengthening for entire shoulder complex
 - May begin light biceps and IR isotonic
 - PNF manual technique
 - Neuromuscular control drills
 - Isokinetic strengthening

Week 10-14

- Continue all flexibility exercises
- Continue all strengthening exercises
 - May begin to increase weight for biceps and IR
- May initiate light isotonic machine weight training (week 16)

III. **Phase III – Advanced Strengthening Phase (Months 4-6)**

Goals: Enhance muscular strength, power and endurance
Improve muscular endurance
Maintain mobility

Criteria to Enter Phase III

- 1) Full range of motion
- 2) No pain or tenderness
- 3) Satisfactory stability
- 4) Strength 70-80% of contralateral side

Week 14-20

- Continue all flexibility exercises
 - Self capsular stretches (anterior, posterior, and inferior)
 - Maintain ER flexibility
- Continue isotonic strengthening program
- Emphasis muscular balance (ER/IR)
- Continue PNF manual resistance
- May continue plyometrics
- Initiate interval sport program (physician approval necessary) week 16

Week 20-24

- Continue all exercise listed above
- Continue and progress all interval sport program (throwing off mound)

IV. Phase IV – Return to Activity Phase (Months 6-9)

Goals: Gradual return to sport activities
Maintain strength and mobility of shoulder

Criteria to Enter Phase IV

- 1) Full non-painful ROM
- 2) Satisfactory stability
- 3) Satisfactory strength (isokinetics)
- 4) No pain or tenderness

Exercises:

- Continue capsular stretching to maintain mobility
- Continue strengthening program
 - Either throwers ten or fundamental shoulder exercise program
- Return to sport participation (unrestricted)