



Subscapularis Repair Post-Operative Care

This protocol was developed to provide the physical therapist with guidelines for treatment of a patient who has undergone surgical repair of the subscapularis. These guidelines are not a substitute for appropriate clinical decision making. It is essential that the therapist take into consideration the size of the tear, tissue quality and individual function in order to obtain optimal outcomes. The protocol is divided into 4 phases. Patients will typically continue with formal physical therapy in some capacity until they are independent with Phase III home exercises (~16 weeks post-op). Anticipated number of visits range from 18 to 27 formal PT sessions. Progression from phases should not occur prior to the appropriate post-op timeframes; however, phase progression should be delayed if the patient does not meet the progression criteria. Tolerance to exercise should be closely monitored. Patients should not have a significant increase in pain after treatment or exercise. If this occurs, treatment is too vigorous and should be modified accordingly. UBE's should not be used during the rehab process due to high injury rates. Heat can be used pretreatment as needed, but no sooner than 2 weeks post-op. The rate of progression may be altered based on acute- vs. chronic-tear repair.

Phase I: Protection Phase **Weeks 0 to 8**

Immobilization:

- Sling worn at all times for 6 weeks post-op, removing only for exercises and showering

Formal Physical Therapy:

- Patients will be scheduled for 1st PT visit on POD 3-5
- Most patients will be seen 2 times a week during Phase I
- If the patient has good PROM, it is appropriate to see the patient 1 time a week for the remainder of Phase I
- If a patient is developing post-op stiffness and cannot safely and properly perform their home ROM program, they can be seen 3 times a week as needed until motion is on schedule

Goals:

- Maintain the integrity of the repair
- Diminish pain and inflammation
- Gradually restore full PROM
- Establish baseline proprioception and dynamic stabilization

Precautions:

- No internal rotation isometrics for 4 weeks
- No external rotation $>0^\circ$ for 4 weeks
- Remove sling only for exercises and showering
- No shoulder extension beyond neutral
 - Place towel under distal humerus when supine
 - Advise patient to always be able to visualize their elbow
- No excessive stretching or sudden motion
- No supporting of body weight with involved extremity
- Keep incisions dry and clean
- No driving until sling is removed, unless cleared by surgeon

Physical Therapy Treatment:Weeks 0 to 2

- PROM/AAROM
 - Forward elevation
 - Week 1: to 90°
 - Week 2: to 100°
 - Internal rotation: PROM only, to tolerance
 - External rotation: to 0°
- Sub-max isometrics
 - Flexion, abduction, ER only
 - No internal rotation isometrics for 4 weeks
- Rhythmic Stabilization
- Elbow PROM
- Wrist and hand AROM
- Grip strengthening
- Monitor cervical ROM
- Self-PROM: Only performed if patient demonstrates good form
 - Supine forward elevation: Patient uses uninvolved extremity to lift involved extremity
 - Supine external rotation: Cane-assisted, to 0° only
 - Horizontal adduction: as tolerated

Weeks 3 to 4

- Continue above exercises as tolerated and appropriate
- PROM/AAROM
 - Forward elevation: to $120-140^\circ$
 - ER at 45° abduction in the scapular plane: to 0°
 - IR at 45° abduction in the scapular plane: to $45-60^\circ$

Weeks 5 to 6

- Continue above exercises as tolerated and appropriate
- Progress ROM
 - Forward elevation: to $165-175^\circ$
 - ER at 45° abduction in scapular plane: to $30-40^\circ$
 - IR at 45° abduction in scapular plane: as tolerated
 - Begin IR at 90° abduction: as tolerated (PROM/AAROM)
- GH/ST joint mobilization as tolerated
- Self-capsular stretching

Weeks 7 to 8

- Continue above exercises as tolerated and appropriate
- Forward elevation AROM
 - Progress from supine/side-lying to standing
- ER at 90° abduction: to 40-45°

Recommended Initial HEP:

- *If the patient cannot demonstrate correct performance of these exercises in the clinic, they should not be performed at home*
- Perform 5 times daily
 - Self-PROM forward elevation: 10 second holds x 5 reps
 - Self-PROM external rotation: 10 second holds x 5 reps
 - Self-PROM horizontal adduction: Hold if anterior shoulder pain occurs
 - Scapular retraction/depression
 - Cervical ROM as needed
 - Elbow and wrist AROM

Criteria for Progression to Phase II:

- Forward elevation PROM: 165°
- External rotation PROM: 40°
- Minimal/no pain
- Satisfactory clinical exam

Phase II: Intermediate Phase

Weeks 9 to 16

Formal Physical Therapy:

- Most patients will schedule 2 times a week until full AROM is achieved, without scapular compensation
- Progression into Phase II activities is delayed if the patient is stiff (defined as not meeting Phase II progression criteria)

Goals:

- Maintain full ROM
- Do not overstress healing tissue
- Normalize arthrokinematics
- Improve strength
- Enhance neuromuscular control

Precautions:

- Avoid frontal plane abduction; perform elevation in the scapular plane

Physical Therapy Treatment:

Weeks 9-10

- Progress to full ROM
 - Forward elevation: 180°
 - External rotation at 90° abduction: 75-80° (90-100° in overhead athletes)
 - Internal rotation: 75°
- Continue all stretching exercises
 - GH/ST joint mobilization
 - Capsular stretching
 - Active and passive stretching
- Initiate light strengthening exercises
 - Strengthening for entire shoulder complex
 - PNF
- Neuromuscular control drills

Weeks 11-16

- Progress/maintain full ROM
- Continue/progress all above exercises as appropriate

Recommended HEP:

- Phase I and II exercises as appropriate

Criteria for Progression to Phase III:

- Full, pain-free AROM without scapular compensation
- Satisfactory stability
- Strength: ≥ 70 -80% of contralateral side
- Satisfactory clinical exam

Phase III: Advanced Strengthening Phase

Months 4 to 5

Formal Physical Therapy:

- Most patients will be discharged by week 16
- Patients may be seen 1 time a week for 2-4 visits to assure independence with a long-term program.

Goals:

- Enhance strength, power, and endurance
- Maintain mobility

Recommended HEP:

- Continue all flexibility exercises
 - Self-capsular stretches (anterior, posterior, inferior)
 - Maintain full external rotation
- Continue/progress all strengthening exercises
- Emphasize muscular balance between ER/IR
- May initiate plyometrics
- Initiate interval sport program (end of month 5)
 - With physician approval

Criteria for Progression to Phase IV:

- Full, pain-free ROM
- No indication of GH instability
- 5/5 strength
- No pain or tenderness

Phase IV: Return to Activity Phase
Month 6 onward

Formal physical therapy:

- Formal physical therapy has been completed
- The patient will be instructed in which exercises to continue and how to progress.

Goals:

- Gradual return to unrestricted sports/preferred recreational activities
- Maintain strength and mobility of shoulder