

Chris Miller, M.D.
Kansas Orthopaedic Center
7550 W. Village Circle, Wichita, KS 67205
(316) 838-2020, (800) 937-2020.

Shoulder Posterior Capsular Shift Post-Op Rehabilitation Protocol.

For a posterior capsular shift the surgeon makes an incision in the posterior capsule, pulls it tighter and sutures it again. The following program focuses on maintaining a stable shoulder while returning the patient / athlete to activity or sport as quickly and safely as possible. Shoulder biomechanics, anatomy, sport / activity dynamics and surgical constraints for healing are the core of this program.

Phase I – Protection Phase (Weeks 0-6).

Precautions:

- Post-operative brace in 30 degrees abduction, 15 degrees external rotation for 4-6 weeks. (Gunslinger brace).
- Gunslinger brace must be worn at all times EXCEPT for bathing / dressing and physical therapy exercises.
- Keep arm in brace position when out of brace EXCEPT for physical therapy (ie: changing clothes, etc.)
- Must sleep in brace.
- No overhead activity.

Goals:

1. Allow healing of sutured capsule.
2. Initiate early protected range of motion.
3. Retard muscular atrophy.
4. Decrease pain / inflammation.

I. **Weeks 0-4:**

Exercises:

- Gripping exercises with putty.
- Active elbow flexion / extension and pronation / supination.
- AROM cervical spine.
- Passive ROM progressing to active- assisted ROM:
 - External rotation to 25-30 degrees at 30-45 degrees abduction.
 - Flexion to 90 degrees as tolerated.
 - Internal rotation to 15-25 degrees at 30-45 degrees of abduction.

Week 3:

- Submaximal shoulder isometrics:
 - Flexion.
 - Abduction.
 - Extension.
 - External rotation.
 - Deltoid retraining for stabilization – begin with voluntary isometric contraction of deltoid with arm in brace.

In general all exercises begin with 1 set of 10 repetitions and should increase by 1 set of 10 repetitions daily as tolerated to 5 sets of 10 repetitions.

Modalities for pain and inflammation:

Ice: ice up to 20 minutes before and after exercises.

Pulsed US, and E-Stim.

II. Weeks 4-6.

Goals:

1. Gradual increase in ROM.
2. Normalize arthrokinematics.
3. Improve strength.
4. Decrease pain / inflammation.

- Range of motion exercises.
 - T-Bar or cane active assisted exercises.
 - ER at 45 degrees of shoulder abduction.
 - Shoulder flexion to tolerance.
 - Internal rotation to 35 degrees at 45 degrees of shoulder abduction.
 - Rope and pulley
 - Shoulder abduction to 90 degrees.
 - Shoulder flexion to tolerance.

All exercises should be performed to tolerance. Take to the point of pain and / or tolerance and hold for 5 seconds.

- Gentle self capsular stretches.
- Continue deltoid retraining.
- Gentle joint mobilizations to re-establish normal:
 - Arthrokinematics.
 - Scapulothoracic joint.
 - Glenohumeral joint – Avoid posterior glides.
 - Sternoclavicular joint.

- Strengthening exercises.
 - Active abduction to 45 degrees.
 - Active external rotation neutral to 90 degrees.
 - Elbow / wrist PRE Program.
- Conditioning Program for:
 - Trunk.
 - Lower Extremities.
 - Cardiovascular endurance.
- Decrease pain / inflammation
 - Ice, NSAID, modalities.
- Discontinue brace 5-6 weeks post-surgery per physician directions.

Phase II – Intermediate Phase (Weeks 6-12).

Goals:

1. Full, non-painful ROM at week 8.
2. Normalize arthrokinematics.
3. Increase strength.
4. Improve neuromuscular control.

III. Weeks 6-9.

- Range of motion exercises.
 - T-Bar or cane active assisted exercises.
 - ER to tolerance.
 - Shoulder abduction to tolerance.
 - Shoulder flexion to tolerance.
 - Rope and pulley: flexion / abduction
 - ER at 90 degrees shoulder ABD after week 6.
- Continue joint mobilization.
- Strengthening exercises.
 - Theraband for IR / ER at 0 degrees abduction.
 - Initiate isotonic dumbbell program.
 - Shoulder abduction.
 - Shoulder flexion.
 - Latissimus dorsi.
 - Rhomboids.
 - Biceps curl.
 - Triceps kick- out over table.
 - Shoulder shrugs
 - Push-ups into wall (Serratus anterior).

- Initiate neuromuscular control exercises for scapulothoracic joint (PNF).

IV. Weeks 10-12.

- Continue all exercises listed above.
- Initiate:
 - AROM IR 90 / 90 position.
 - Dumbbells supraspinatus.
 - Theraband exercises for rhomboids, Latissimus dorsi, biceps, and triceps.
 - Progressive push-ups.
 - Week 12 – initiate Plyometrics.

Criteria to enter Phase III:

1. Full, non-painful ROM.
2. No pain / tenderness.
3. Strength 70 degrees contralateral side.

Phase III – Dynamic Strengthening Phase (Week 12-18).

V. Weeks 13-15

Goals:

1. Improve strength / power / endurance.
2. Improve neuromuscular control.

- Emphasis of Phase III:
 - High speed / high energy strengthening exercises.
 - Eccentric exercises.
- Exercises:
 - Continue IR / ER theraband exercises at 0 degrees abduction (arm at side).
 - Theraband for rhomboids, Latissimus dorsi, biceps, triceps, and D2 flexion pattern.
 - Continue dumbbell exercise for supraspinatus / deltoid.
 - Progressive Serratus anterior push-up.
 - Continue trunk / LE strengthening and conditioning exercises.
 - Continue neuromuscular exercises.
 - Continue self capsular stretches.
 - Initiate Ten Thrower Exercises (AMSI Book) Week 12.

VI. Week 16-20

Continue all exercises as above.
Emphasis on gradual return to recreational activities.

Criteria to progress to Phase IV:

1. Full ROM.
2. No pain / tenderness.
3. Satisfactory clinical exam.
4. Satisfactory Isokinetic test (indicated for athletes).

Phase IV – Return to Activity (Week 18-24).

Goal:

1. Progressively increase activities to prepare patient for unrestricted functional return.

Exercises:

- Continue theraband / dumbbell exercises outlined in Phase III.
- Continue ROM exercises.
- Initiate interval program between 24-30 weeks (if patient is a recreational athlete).

Initiate maintenance program:

- Flexibility – shoulder stretches (ASMI Book).
- Isotonic / theraband exercises.
 - IR / ER at 0 degrees abduction.
 - IR / ER at 90 degrees abduction.
 - Flexion / extension/ abduction.
 - Middle trapezius row exercise.