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Posterior Shoulder Stabilization Protocol

This rehabilitation protocol has been developed for the patient following posterior shoulder stabilization surgical procedure. This protocol is for mechanically robust repairs in people without risk factors for impaired healing. The protocol will vary in length and aggressiveness depending on factors such as:

- Size and location of tear
- Quality of the repaired capsulolabral tissue
- Additional surgical procedures
- Degree of shoulder instability/laxity prior to surgery
- Acute versus chronic condition
- Length of time immobilized
- Strength/pain/swelling/range of motion status
- Rehabilitation goals and expectations

Early short arc passive range of motion is highly beneficial to enhance circulation within the joint to promote healing. The protocol is divided into phases. Each phase is adaptable based on the individual and special circumstances. The **overall goals** of the surgical procedure and rehabilitation are to:

- Control pain, inflammation, and effusion
- Regain normal upper extremity strength and endurance
- Regain normal shoulder range of motion
- Achieve the level of function based on the orthopedic and patient goals

Initiation of this protocol may be delayed up to 4 weeks post-op. The supervised rehabilitation program is to be supplemented by a home fitness program where the patient performs the given exercises at home or at a gym facility. **Important post-op signs** to monitor:

- Swelling of the shoulder and surrounding soft tissue
- Abnormal pain response, hypersensitivity, increasing night pain
- Severe range of motion limitations
- Weakness in the upper extremity musculature
- Improper mechanics or scapular dyskinesia
- Core and peri-scapular strength deficits

Return to activity requires both time and clinical evaluation. To safely and most efficiently return to normal or high level functional activity, the patient requires adequate strength, flexibility, and endurance. Functional evaluation including strength and range of motion testing is one method of evaluating a patient's readiness return to activity. Return to intense activities following shoulder stabilization requires both a strenuous strengthening and range of motion program along with a period of time to allow for tissue healing. Symptoms such as pain, swelling, or instability should be closely monitored by the patient and therapist. Specific exercises may be added, substituted, or

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modified where clinically appropriate by experienced sports/shoulder therapists or trainers who have expertise in the care of post-operative shoulder rehabilitation. While patients may be "cleared" to resume full activities at 6+ months following surgery, additional time spent in full activity or sport participation is often necessary to achieve maximal recovery.

Suggestions during rehab:

1. The RC gets a better blood supply when the shoulder is slightly away from the body; in addition, higher EMG activity is elicited at the posterior cuff when the arm is in a slightly abducted position vs by the side; therefore, we advocate the use of a towel roll under the arm when in a resting position or when performing isometric/isotonic RC TB exercises.
2. The RC muscles are very small; therefore, we use lower intensities to isolate each muscle without recruitment from surrounding larger muscles. Focus on hypertrophy initially by high volume ($V = \text{Reps} \times \text{intensity/weight}$). Following the hypertrophy phase, strength is the focus with lower reps and higher intensities/weight.
3. Closed chain rotator cuff exercises facilitate cuff strength and shoulder proprioception. Like closed chain exercises for the knee, these can be safely initiated early in the post op course.
4. Do not exceed ROM guidelines

Posterior Procedure Precautions

Strict SLING use for 6 weeks with shoulder in neutral rotation / gunslinger position,
NOT ACROSS BELLY
No IR/cross body stretch x10-12 weeks
No Horizontal adduction stretching x 10-12 weeks
Avoid IR and avoid horizontal adduction to protect healing tissue
No grade 3 or 4 posterior joint mobilization x12 weeks

PHASE 1: Early Postop Week 1-4

GOALS OF PHASE 1

Protect and promote healing of repaired tissue
Control pain and inflammation
Gradual increase of ROM - do not exceed guidelines
Independent in HEP

BRACE/SLING

To be worn at for 6 weeks per Dr Shybut (default is 6 weeks)
Brace to be worn while sleeping
Can be removed for exercises, hygiene, changing clothes
Ok to remove and write or type if arm is supported and resting on desk

PRECAUTIONS

No Active shoulder ROM / No shoulder AAROM for 2 weeks
ROM: Gradual \uparrow Passive ROM in scapular plane

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Avoid excessive adduction and IR

EXERCISES

Passive Pendulum exercises – keep circles very small, monitor and teach proper technique

Supine ER with cane

Supine FE to 90

AA flexion supine

Seated scapular retractions – perform every hour

Shoulder shrugs

Active elbow ROM all planes as tolerated

Grip strengthening using ball or putty

MANUAL

STM to decrease pain and muscle spasm

PROM all planes except extension adhering to limitations

MODALITIES

Moist heat 10-15 min prior to exercise

Ice 10-15 min following exercise and as needed

E-stim/TENS for pain as needed

US as needed

CRITERIA TO PROGRESS

90 degrees shoulder PROM forward elevation

Proper sling position and pendulum technique

0 degrees of shoulder PROM IR in the scapular plane

Palpable muscle contraction felt in scapular and shoulder musculature

No complications with Phase I

PHASE 2: WEEK 4-6

GOALS OF PHASE

Control pain and inflammation

Initiate light RC muscle contraction

Gradual increase in ROM: passive supine cane FE to 120

Initiate light scapular stabilizer contraction

Continue to protect surgical repair

Patient education

BRACE/SLING

Per MD discretion (usually d/c at week 6)

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PRECAUTIONS

No lifting of objects
No supporting of body weight with hands

ROM

Pendulum exercise
AA Flexion supine – gradually progress
ER with cane
Anterior capsule stretch
Initiate ER stretching
Rope/Pulley (flex/scaption)

STRENGTH

Continue grip strengthening as needed
Initiate submaximal pain-free isometrics week 4+

MANUAL THERAPY

STM as needed
Continue PROM
Initiate Grade I joint mobilization

MODALITIES

Moist heat 10-15 min prior to exercise
Ice 10-15 min following exercise and as needed
E-stim/TENS for pain as needed
US as needed

CRITERIA TO PROGRESS

120 degrees shoulder PROM forward elevation
Minimal substitution patterns with AAROM
Pain < 4/10
No complications with Phase II

PHASE 3: WEEK 7-10

GOALS OF PHASE

Minimize shoulder pain
Gradually increase shoulder PROM/AAROM
Initiate shoulder AROM
Improve scapular muscle activation

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Patient education

PRECAUTIONS

No heavy lifting, no throwing

ROM

Gradual progression toward full passive supine FE as tolerated

Gradual progression of ER at 90 deg abduction

AAROM -> AROM as tolerated without upper trapezius substitution

STRENGTH

Continue grip strengthening as needed

Continue Phase II exercises

Introduce light upper body exercises

Theraband ER, IR (IR to neutral only), FF, Ext, Abduction

Prone row

Side-lying ER

Periscapular: Resistance band seated rows, extension, depression, horizontal abduction, lawn mowers, robbery, serratus punches

Initiate scapular retraction/depression/protraction

Dynamic resistance with PNF patterns and manual techniques

Rhythmic stabilization in non provocative positions (90 FE, 120 FE, and ER)

Introduce standing scapular retraction for middle trap

Isotonic strengthening at week 8+

MANUAL THERAPY

STM as needed

Continue PROM

Grade I-II joint mobilization

MODALITIES

Moist heat 10-15 min prior to exercise

Ice 10-15 min following exercise and as needed

E-stim/TENS for pain as needed

US as needed

CRITERIA TO PROGRESS

Functional near full fluid FE AROM

Minimal substitution patterns with AROM

Pain < 3/10

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PHASE 4: Week 10-12

GOALS OF PHASE

Gradual increase shoulder PROM / AAROM / AROM to near full

Improve dynamic shoulder stability

Progress periscapular strength

Gradual return to functional ADLs

ROM

Gradual progression to full PROM -> AAROM -> AROM

Terminal ROM stretches except IR and horizontal adduction

Can begin gentle IR/HA stretching

STRENGTH

Continue with all strengthening from previous phases increasing resistance and repetition

Manual rhythmic stabilization exercises in standing at 90° flex/scaption

Supine punches with resistance

Prone shoulder extension

Prone scaption

Prone ER and IR with up to 45 deg abduction

Initiate D1/D2 PNF patterns in standing

Push-up progression – start at week 10 on wall

UBE for endurance training

Bicep/Tricep work

Body blade – multi-planar

Continue earlier phase interventions / exercises

MANUAL

Initiate Grade II-IV joint mobs as needed

Continue to gradually progress PROM

Continue STM as needed

MODALITIES

MHP as needed

Ice 10-15 minutes

Ultrasound as needed

CRITERIA TO PROGRESS

Full pain-free PROM / AROM

Minimal to no substitution patterns w shoulder AROM

Perform all exercises with symmetric scapular mechanics and minimal pain (<2/10)

Appropriate scapular posture at rest and dynamic scapular control during exercises & ROM

PHASE 5: WEEK 12-17

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GOALS OF PHASE

Maintain pain free ROM

Increase inferior joint mobs to restore abduction if needed

Begin IR stretching, PROM to restore motion

Build strength, endurance, neuromuscular control, power

Initiate motor control exercise

Enhance functional use of UE

STRENGTH

Advanced isotonic

Closed Kinetic Chain / UE WBEs on wall

Initiate 2-handed plyometrics e.g. chest pass

Periscapular T and Y; W exercise, resistance band Ws, dynamic hug, resistance band dynamic hug

IR and ER in scaption and flex 90-125 rhythmic stabilization

Continue push up progressions (prone pushups at 20+ weeks)

Quadruped alternating isometrics and ball stabilization on wall

PNF D1 diagonal lifts -> D2 diagonal lifts

Light dumbbell pec exercises and seated chest press wk 16+

(Resistance training at 16+ weeks - must have full AROM, full rotator cuff strength and periscapular control, max 3 sets 15 reps. Increase resistance 10-15% every 10-14 days.

Build in recovery weeks with lighter work loads. Return to pre-injury / "top shape" will take 3-6 months. DO NOT train to "muscle failure")

Front pull downs, seated rows at 16+ weeks

CRITERIA TO PROGRESS

Near full pain-free PROM and AROM

ER/IR strength minimum 80% uninvolved arm

ER/IR ratio 60% or more

Negative instability signs

Performs all exercises demonstrating symmetric scapular mechanics

PHASE 6: Weeks 18-24+

ROM / MANUEL

Grade III-IV joint mobs as needed for full ROM

Full PROM

STRENGTH:

Progress strengthening program with increase in resistance and high speed repetition

UBE high resistance for endurance

IR/ER exercises at 90° abduction

Progress rhythmic stabilization activities to include standing PNF patterns with tubing

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Initiate single arm plyotoss (ball toss, ball on wall)

Eccentric RC strengthening

Initiate sport specific drills and functional activities

Initiate interval throwing program week 20+ – consult with Dr. Shybut first*

Initiate light upper body plyometric program

Progress isokinetics to 90° abduction at high speeds

Prone CKC UE WB exercises

Initiate supine bench and military press wk 20+

GOALS

Full functional activities for RTP

Optimize neuromuscular control

Optimize power, strength, endurance

Muscular strength 90+ % of contralateral side

Full functional pain-free AROM

Optimize core stability

Gradual return to strenuous work / sporting activities

Initiate sports specific training/functional training

CRITERIA TO PROGRESS

For athletes and people performing strenuous manual tasks, return-to-sport or return-to-activity decision making should be individualized and based upon factors including level of demand on the upper extremity, contact / collision vs non contact sport, frequency and intensity of participation, etc. We encourage close discussion with the patient and surgeon and physical therapist prior to advancing return to sport progressions. Contact / collision athletes should seek MD clearance at 6+ months postoperative visit.