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Posterior Labral Repair/Stabilization Rehabilitation Guidelines

This rehabilitation protocol has been developed for the patient following arthroscopic posterior shoulder stabilization surgery (posterior labrum). This protocol will vary in length and aggressiveness depending on factors such as:

- Quality of the repaired tissue
- Presence of additional procedures
- Degree of shoulder instability or generalized laxity prior to surgery
- Acute versus chronic condition
- Length of time immobilized
- Strength/pain/swelling/range of motion status
- Rehabilitation goals and expectations

The therapist should communicate with the physician regarding the above factors to determine proper progression of rehab.

Early 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 swelling
- Regain normal/full upper extremity strength and endurance
- Regain normal/full shoulder range of motion
- Achieve the desired level of function based on the orthopedic and patient goals

Physical therapy should be initiated after the first week 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 arm or shoulder and surrounding soft tissue

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- 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:
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 testi g is o e ethod of ealuati g a patie t's readi ess to return to activity. Return to intense activities following shoulder stabilization requires both a period of time to allow for tissue healing along with a graduated strengthening and range of motion program. Symptoms such as pain or swelling should be closely monitored by the patient and therapist. Specific exercises may be added, substituted, or modified where clinically appropriate by experienced sports/shoulder therapists or trainers who have expertise in the care of post-operative tendon repair procedures. 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. These patients are often not in a lot of pain post-operatively and are able to passively move in wide ranges of motion, if allowed. ROM precautions should be strictly adhered to and the patient must be educated in avoiding overstretching so that the repair can heal, even if motion is pain free. Often, the patient will start to tighte ad the therapist ill feel a chage i the e d feel duri g passi e rage. It is at this point that you may want to start initiating ROM exercises, continuing to adhere to precautions but working to obtain full range by 8-10 weeks postoperatively.
2. The RC gets a better blood supply when the shoulder is slightly away from the body; therefore, advocate the use of a towel roll under the arm when in a resting position.
3. 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= Reps X intensity/weight). Following the hypertrophy phase, strength is the focus with lower reps and higher intensities/weight.
4. 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.

PHASE 1: Post-op – Week 4	*Focus of this phase is protection, decrease symptoms, initiate passive ROM* BRACE/SLING • To be worn for 3-4 weeks even while sleeping • Can be removed for exercises only ROM • NO ACTIVE ROM, passive and active assisted only • Active-assisted flexion/scaption: goal is 60° by week 3 • IR in neutral and scapular plane: goal is to neutral by week 3 • ER in scapular planes to 45° • Exercises o Pendulums small circles (whenever aching) o Supine active assisted flexion using other UE o Cae/ad for ER i eutral a d scaptio supi e o Active ROM elbow/wrist/digits STRENGTH • “eated/supi e scapular retractio s eer hour ca do i sli g • Pain-free submax isometrics with towel under arm and scapula retracted: fl/ext/ER/IR MANUAL • Grade I, II GH joint mobilization • 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 GOALS OF PHASE 1 • Promote healing of repaired tissue • Control pain and inflammation • Gradual increase of ROM • Independent in HEP • Delay muscle atrophy

PHASE 2:
Weeks 4-6
	Focus of this phase is gradual increase in ROM and strength
	
	ROM
	• Discontinue sling/immobilizer
	• Continue therapeutic exercises as above
	• Advance ER PROM to full
	• Begin light Theraband ER strengthening with elbow at side
	• Passive ROM with shoulder pulleys or with wand
	  ○ Flexion to 90° and abduction to full overhead, as tolerated
	  ○ Extension to 30°
	  ○ ER to 45° with arm at side and in 90° of abduction
	  ○ IR to 30° with arm at side and in 90° of abduction
	• Begin standing or supine AAROM with wand
	• Begin wall walks in forward flexion and abduction
	• Moist heat, thermal ultrasound, TENS, other modalities as indicated
	
	MODALITIES
	• Heat prior to exercises
	• Ice following exercises and at end of day
	• Ultrasound to portals or soft tissue if needed
	
	GOALS OF PHASE 2
	• Control pain and inflammation
	• Gradually restore ROM
	• Initiate active muscle contractions
	• Regain proper scapulo-humeral rhythm
	• Initiate joint proprioception training
	• Continue home exercise program

PHASE 3:
WEEK 6-8
	Focus of this phase is full active ROM and RC/Scapular strengthening
	
	Recommendations
	• Continue therapeutic exercises as above
	• Advance ROM to full as tolerated, except limit IR to 45° both with arm at side and with armin 90° of abduction
	  ○ Limit IR to 45° until 12 weeks post-op
	  ○ Strive for glenohumeral:scapular movement of 2:1
	• Begin UBE
	• Begin wall push-ups
	• Begin isotonic rotator cuff strengthening (progress weight/resistance as tolerated up to 6-8lbs)
	  ○ Standing flexion, extension, abduction, and scaption with thumb down (dumbbells or Therabands)
	  ○ Standing IR and ER with Therabands (use pillow under arm to keep 25° abduction)
	• Scapular strengthening
	  ○ Elevation with dumbbell shrugs
	  ○ Depression with seated press ups (use hand blocks for greater ROM as tolerated)
	  ○ Retraction with prone dumbbell rows or seated Theraband rows
	  ○ Protraction with supine punches (using dumbbells or manual resistance)
	• Neuromuscular control
	  ○ PNF patterns D1 and D2 with no more than 3 lbs
	
	MODALITIES
	• Heat if needed prior to exercise
	• Ice after exercise
	
	GOALS OF PHASE 3
	• Full AROM all planes (except IR)
	• Improve strength to allow initiation of functional activities
	• Normalize kinematics

PHASE 4:
WEEK 8-10
	Recommendations:
	• Continue therapeutic exercises as above
	• Continue to advance ROM if needed...
	  ○ ... but limit IR to 45° until 12 weeks post-op
	• Continue scapular strengthening and standing isotonic rotator cuff strengthening until motion is full
	• Begin prone dumbbell strengthening
	  ○ Prone scaption with thumb up and with thumb down
	  ○ Prone horizontal adduction with thumb up and with thumb down
	  ○ Prone extension
	• Neuromuscular control
	  ○ Supine dynamic/rhythmic stabilization in 90° flexion and 90° abduction with manual resistance
	  ○ Body blade in 90° flexion and 90° abduction
	• Begin isokinetic strengthening with 60° block
	  ○ Speeds of 180°, 150°, 120°, 90°, and 60°/second (8-10 reps at each speed)

PHASE 5:
WEEK 10-12
	Recommendations:
	• Continue therapeutic exercises as above
	• Advance rotator cuff strengthening to 8-10 lbs in all directions
	• Continue to advance ROM if needed...but limit IR to 45° until 12 weeks post op
	  ○ At 12 weeks post op, can progress IR to full, with arm at 90° abduction
	  ○ (ER can also be progressed to full if not already there)
	• Advance neuromuscular control
	  ○ PNF patterns D1 and D2 with manual resistance
	• Standing dynamic/rhythmic stabilization in 90° flexion and 90° abduction with ball against wall and manual resistance
	• Continue isokinetic strengthening but advance to 15 reps at each speed

PHASE 6: WEEK 12-14	Recommendations: • Continue therapeutic exercises as above • Advance rotator cuff strengthening to eccentric manual resistance • Advance neuromuscular control ○ PNF patterns D1 and D2 with manual resistance • Advance isokinetic strengthening to full ROM • Begin traditional weight training with machines and progress to free weights as tolerated
PHASE 7: WEEK 14-16	Recommendations: • Continue therapeutic exercises as above • If thrower, begin light tennis ball tossing at 60% velocity for 20-30 feet max ○ Work on mechanics (wind-up, early cocking, late cocking, acceleration, and follow through) • If thrower, begin isokinetics at higher speeds (240°, 270°, 300°, 330°, 360°/second)

PHASE 8:
WEEK 16-24+
	Focus of this phase is return to sport/full activity
	
	Recommendations:
	• If thrower, perform isokinetic testing as noted at the end of this protocol (if available)
	  ○ If passes test, begin interval throwing program
	  ○ Must pass test before beginning interval throwing program
	  ○ Re-test monthly until passed
	• Continue maintenance strengthening
	• Return to sport/activity only if:
	  ○ Pass strength test
	  ○ Completed throwing program
	  ○ No pain with activity
	  ○ "urgeo 's OK
	  ○ No less than 5 months post-op for return to contact sports
	
	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
	• Initiate single arm plyotoss (ball toss, ball on wall)
	• Eccentric RC strengthening
	• Initiate military press, bench press, flys, lat pulldowns week 16+ (do NOT let elbow extend past plane of thorax)
	• Initiate sport specific drills and functional activities
	• Initiate interval throwing program week 16-20 – consult with Dr. Johnson first*
	• Initiate light upper body plyometric program week 16-20
	• Progress isokinetics to 90° abduction at high speeds
	
	MODALITIES
	• Ice following exercise/activity
	
	GOALS OF PHASE 8
	• Full painless ROM
	• Maximize upper extremity strength and endurance
	• Maximize neuromuscular control
	• Optimize shoulder mechanics/kinematics
	• Optimize core stability
	• Implement sports specific training/functional training