Timothy Crall, MD
US Ski Team Physician

Bartlett White, PA-C
Teaching Associate

REHABILITATION GUIDELINES FOR MASSIVE ROTATOR CUFF REPAIR

PHASE I (0-6 WEEKS) DATES:

Appointments	• Physical therapy 2 x per week
Rehabilitation Goals	• Maintain integrity of repair • Diminish pain and inflammation • Prevent muscular inhibition • Independent with ADL's with modifications to protect repair.
Precautions	• Keep wound clean and dry • Maintain arm in sling per MD orders • Control pain and inflammation • Avoid lifting objects • No active overhead motions • No supporting of body weight with hands. • Avoid sudden movements or excessive stretching • Ice frequently or as dictated by pain and/or swelling
Suggested Therapeutic Exercises	**ROM:** • Gentle mobilizations as needed to improve ROM • No shoulder AROM for 6 weeks • PROM to tolerance for flexion and ABD in scapular plane • Limit ER/IR in neutral to 30 degrees • PROM to elbow wrist and hand • **Subscapularis repair**: limit ER to 30 degrees, read op report, may differ • **Tenodesis:** no active biceps for 6 weeks **HEP:** • Codman's 3-4 x daily • Passive table slides • PROM to elbow if tenodesis, otherwise AROM • With glenohumeral joint totally supported: elbow, wrist, and hand AROM (no elbow flexion if tenodesis performed)

Cardiovascular Exercises	• N/A
Progression Criteria	**PROM:** • Flexion to at least 100 degrees • ER in scapular plane to at least 45 degrees (**30 degrees if a subscapularis repair)** • IR in scapular plane to at least 45 degrees (**30 degrees if infraspinatus or teres minor repair)** • Abduction to at least 90 degrees in the scapular plane

PHASE II (6-12 WEEKS) DATES:

Appointments	• Physical therapy 2 x per week
Rehabilitation Goals	• Educate on safety when out of sling • Do NOT overstress healing tissues • Once out of the sling, may begin to use arm for gentle ADL's at waist level
Precautions	• **No** lifting heavier than a cup of water • Supporting of body weight • Reaching behind the back

Suggested Therapeutic Exercises	**ROM:**
	• Work toward full pain-free PROM by the end of 12 weeks
	• May begin active biceps if tenodesis performed
	• May begin active IR if subscapularis repair
	• Continue with PROM:
	  ○ flexion and abduction in scapular plane to tolerance
	  ○ ER and IR at 60–90 degrees of abduction
	  ○ Slow progression to full ER/IR ROM by the end of 12 weeks
	Strength:
	• With glenohumeral joint completely supported:
	  ○ AROM 4 way wrist exercises
	  ○ AROM bicep curls
	• Scapular squeezes (careful not to fire cuff from 6-10 weeks)
	• **8 weeks:** Submaximal isometrics: elbow bent shoulder flexion/extension, IR/ER, elbow flexors/extensors
	• Begin pulleys at 8-10 weeks
	• Start table slides and progress to wall slides toward the end of 12 weeks

(Phase II continued)
 	
Suggested Therapeutic Exercises
	• Initiate gentle rhythmic stabilization for ER/IR in 45 degrees abduction
	• Sidelying scapular rhythmic stabilization (not PNF)
	  ○ *careful not to fire cuff musculature*
	• Can begin aquatic ROM exercises if desired
	HEP:
	• PROM to tolerance for the following:
	  ○ Codmans
	  ○ Table slides
	• 6-12 weeks: Begin AAROM: pulleys, wall walks and rhythmic stabilization
	• 10 weeks: supine flexion and sidelying ABD

Cardiovascular Exercises	• Recumbent bike (no supporting of body weight)
Progression Criteria	• Full PROM • AAROM without compensation

PHASE III (12-16 WEEKS) DATES:

Appointments	• Physical therapy 2 x per week
Rehabilitation Goals	• Full PROM by 12 weeks • Emphasis on low resistance/high repetitions (30 reps), using no weight initially • Strength phase
Precautions	• Patient must demonstrate good glenohumeral and scapular mechanics prior to beginning isotonic strengthening.
Suggested Therapeutic Exercises	**AAROM**: • UBE minimal to no resistance low arms (standing) • Active scapular protraction/retraction • Sidelying easy resisted scapular protraction/retraction • Supine ER/IR with tubing in neutral abduction with a towel roll, progress to standing theraband, then sidelying • Gentle PNF patterns • Light weight bicep and tricep curls • Prone rows at 30 degrees abduction • Prone extension (elbows bent to 90 degrees)

(Phase III continued) Suggested Therapeutic Exercises	• Prone horizontal abduction (elbow bent to 90 degrees or straight arm to 45 degrees) • Sub-maximal rhythmic stabilizations for flexion at 45 degrees, 90 degrees, 120 degrees (nearing 16 weeks) • Rhythmic stabilizations for ER/IR • Palm on hip lift to 90 degree and end with palm up) • Aquatic exercises for light AROM **HEP:** • Codmans as needed • Progress scapular exercises as determined safe
Cardiovascular Exercises	• UBE, stationary bike
Progression Criteria	• Full PROM • Full AROM without compensation

PHASE IV (16-22 WEEKS) DATES:

Appointments	• Physical therapy 1-2 x per week
Rehabilitation Goals	• Negative impingement signs • No compensatory movements present • Continue with total body conditioning • Rehab geared toward return to sport or work
Precautions	• None
Suggested Therapeutic Exercises	**ROM:** • Goal is full AROM without compensation **Strength:** • Begin WB wall, semi- prone, prone exercises • Progress diagonals • Progress functional reach **Week 20 onward**: • Plyomentric chest tosses • Resisted ER/IR at 90°/90° • Oscillation work (body blade) • Begin weight training: ○ Bench press, flys, lat pull-downs, PNF with pulley

Cardiovascular Exercises	• As tolerated
Progression Criteria	• Negative impingement signs • Full AROM without compensation • Return of UE strength and overhead strength
Return to Activity Phase (weeks 22-26)	• Gradual return to strenuous work activities • Gradual return to recreational activities • Gradual return to sport activities • Continue strengthening and stretching • Continue stretching, if motion is tight • May initiate interval sport program (i.e. golf, etc.), if appropriate

References:
PT name and date: Rachel Georgeson, MPT 2015 / new template March 2017
MD name and date: Timothy Crall, MD 2015 / Brian Gilmer, MD 2017

MAMMOTH ORTHOPEDIC INSTITUTE
85 Sierra Park Road ▪ Mammoth Lakes, CA 93546 ▪ 760.924.4084
162 South Main Street ▪ Bishop, CA 93514▪ 760.872.7766
SIERRA PARK PHYSICAL AND OCCUPATIONAL THERAPY
85 Sierra Park Road ▪ Mammoth Lakes, CA 93546 ▪ 760.934.7302
162 South Main Street ▪ Bishop, CA 93514▪ 760.872.2942