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REGENETEN Partial Thickness RTC tear Biological Patch Augmentation

Rehabilitation Program

The REGENETEN Rehabilitation Program is an evidence-based and soft tissue healing-dependent program allowing patients to progress to ADL, vocational, and sports-related activities as quickly and safely as possible. Individual variations will occur depending on surgical details and patient response to treatment.

This program is only for partial thickness RTC tears receiving just the REGENETEN Bioinductive implant. If additional procedures (biceps tenodesis, distal clavicle excision/sub-acromial decompression, etc) are performed, please refer to the appropriate rehab guide.

If a rotator cuff repair is performed, follow the appropriate rotator cuff rehabilitation program. Contact us at 020- 33 84 55 88 if you have questions.

Factors Influencing Post-op Progression	Tissue quality and soft tissue healing: age, smoking, diabetes Applying appropriate loads based on time frames and healing Patient response to treatment (pain, inflammation, edema)
	General Program Outline
Sling – envelope sling	2-5 days, then use as needed for comfort.
AROM guidelines	The goal is to prevent shoulder stiffness and get patients working on shoulder ROM early in the rehab. Shoulder – goal is full AROM by 6-8 weeks, can be sooner if tolerated.
Strengthening	Goal is full strength by 12-16 wks
Return to activity and/or higher level activities	Personal care and low level ADL's (bathing, dressing, eating, drinking) : 1-2 wks Desk work: 1-3 wks Driving: 2-4 wks depending on approval ADL requiring moderate lifting: 2-4 months Sports activities: 3-6 months
	REGENETEN Partial Thickness RTC tear without repair Rehabilitation Program

Phase I: surgery to 1st postop PT visit	Immediate Post-op Phase
Goals	Protect surgical site Patient education regarding activity limitations Adequate pain control Diminish pain and inflammation Prevent stiffness and regain range of motion
Sling	2-5 days, then use as needed for comfort Remove 4-5x/day to do exercises

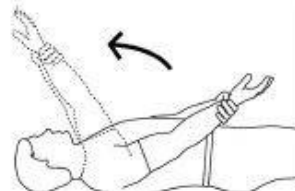
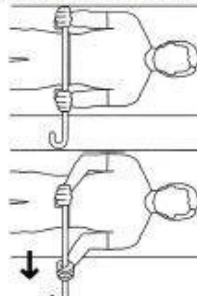
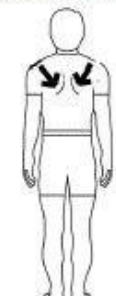
Patient Education	Sleep in sling and may be more comfortable to sleep in a recliner or several pillows. You can use your hand on the affected arm in front of your body. No lifting objects over 5 lbs No excessive shoulder extension. Keep elbow in line with side, no behind the back motions No excessive stretching or quick/sudden movements No supporting of body weight by hands
Modalities	Ice 15 minutes 4-5x/day, more often as needed for pain control
HEP 7 days per week, 4-5x/day	Postural education to avoid forward head / rounded shoulders Pendulum exercises 1-2 sets, 20-30 reps Supine passive forward flexion 1-2 sets, 10-15 reps Supine AAROM ER in neutral with wand 1-2 sets 10-15 reps Active scapular retraction with depression 1-2 sets 10-15 reps 10.30.2019

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Phase 2: 1-6 weeks	Intermediate phase – Restore ROM and initiate gentle exercises
Goals	Minimize stress to healing tissues Adequate pain control and decrease inflammation Restore range of motion Gradual progression of exercises based on guidelines to prevent muscular inhibition Improve postural awareness Independence with ADL's
Sling	Used for comfort only. May be used in the community as needed for protection
Modalities	Ice 15 minutes 3-5x/day, more often as needed for pain control IFC for pain management / inflammation control
ROM guidelines	Goal is full AROM by 6-8 weeks. PROM / AAROM: Progress as tolerated. Goal: wk 4-6 full ROM AROM: Progress as tolerated. Goal: wk 6-8 full ROM Avoid compensatory scapular shrug during shld elevation
Using arm for activities	Personal care and low level ADL's (bathing, dressing, eating, drinking) : 1-2 wks Desk work: 1-3 wks
Treatment Recommendations	Initial emphasis on ROM, pain control, and gentle exercises per guidelines Facilitate thoracic extension and proper posture. Restore ROM Initiate sub-max S-T and RTC activation exercises Initiate sub-max rhythmic stabilization

Treatment Interventions GH =glenohumeral RTC = rotator cuff S-T = scapulathoracic Examples of exercises, not an inclusive list	• Warm-up: Active Pendulum, Nustep. Progress to UBE at 2 weeks • Mobilizations: GH joint grade I/II pain management, grade III/IV for ROM • PROM /AAROM per tolerance with end range stretch. At 2 wks: add in extension past neutral. At 3 wks: add in gentle IR behind the back stretch. • Low load long duration end-range stretch if needed • AROM: Progress as tolerated. Emphasis on quality movement and avoiding scapular substitution. • Therapeutic Exercise / Neuromuscular control: - GH and RTC isometrics - Progress to gentle S-T, RTC, GH neuromuscular control/strengthening when range of motion is progressing well. - S-T: - supine protraction, Chest press(+), rows, press downs, scaption (Moseley) - prone ext, prone hor abd neutral rotation, prone hor abd in ER - RTC and GH: sidelye ER, isotonic ER/IR, flexion, prone hor abd w/ER, press downs, scaption (Townsend) - Total arm strengthening: Biceps and Triceps - Rhythmic stabilization / perturbation training - CKC exercises: sub-max BW: weight shifts, wall push-ups, quadruped (euroglide / cuff link) • Cryotherapy. IFC as needed
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Phase II: 6-12+ wks	Strengthening and Conditioning Phase, Gradual Return Back to Activity Phase
Goals	Progress muscle strength, endurance, and power Improve neuromuscular control Prepare to begin to throw and perform similar overhead or sport specific activities when appropriate Initiate higher level activities depending on functional demands and MD approval. Return to sports is 12 weeks and beyond depending on strength and functional performance.
Modalities	Cryotherapy
ROM guidelines	No limitations. Full AROM expected by 6-8 wks
Treatment Recommendations:	ROM activities if needed Progress strength, endurance, and power Add in overhead strengthening Progress to 90/90 ER/IR. PNF patterns with resistance. Add in isokinetics Progress with functional strengthening/total body strengthening including core activation with strengthening activities. Advance to plyometrics, functional and sport specific activities

Treatment Interventions: Examples of exercises, not an inclusive list	• Active warm-up: • ROM activities as needed: Low load long duration stretch (TERT), GH mobilizations, PROM /AAROM with end range stretch • Therapeutic exercise/ Neuromuscular control: Focus on scapula-thoracic, GH, RTC, total arm strengthening, core strengthening, perturbation training • S-T: Chest press(+), rows, press downs, scaption (Moseley) prone ext, prone hor abd neutral, prone hor abd with ER, prone full can, dynamic hug,serratus punch 120 deg, lateral pull down GH and RTC: flexion, prone hor abd w/ER (press downs, scaption) Townsend isotonic ER/IR progressing to 90/90. progress to isokinetics Total arm strengthening: triceps, biceps curls Resisted PNF patterns. Wk 8: Overhead strengthening if needed. Focus on endurance/short lever arm progressing to increased weight. CKC exercises progress to full BW: planks, prone walk outs Wk 9: Plyometrics if needed • Cryotherapy
Return to Sports Guidelines	Based on MD and PT approval, full ROM, no pain at rest and activity, isokinetic strength scores of 90%, adequate performance on sport specific tasks



AROM shld pendulum  • Lean forward as shown, supported arm by uninjured arm. • Allow involved arm to hang freely. • Use uninjured arm to move involved arm in circles, both clockwise and counter clockwise. Special Instructions: Perform 2 sets of 25 Repetitions, three times a day. Rest 0 Seconds between sets.	PROM shld flx supine self  • Lie on back. • Grasp wrist of involved arm with uninjured hand. • Gently raise arm upward and in front, through available range avoiding pain. • Return to start position and repeat. Special Instructions: Perform 2 sets of 10 Repetitions, three times a day. Hold exercise for 5 Seconds. Rest 0 Seconds between sets.
AAROM shld ER bil supine w/cane neutral  • Lie on back with arms at side, elbows bent. • Hold cane in hands as shown. • Rotate involved arm away from body, pushing with the cane as needed with the uninjured arm. • Return to start position. Special Instructions: Keep arms at side. Perform 2 sets of 10 Repetitions, three times a day. Use Cane. Hold exercise for 10 Seconds. Rest 0 Seconds between sets. Perform 0 repetitions every 0 Seconds.	AROM shld retract bil stand arms at side  • Stand with arms at sides. • Squeeze both shoulder blades together, hold 5 seconds. • Relax and repeat. Special Instructions: Perform 2 sets of 10 Repetitions, three times a day. Hold exercise for 5 Seconds. Rest 0 Seconds between sets.