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**REVERSE SHOULDER ARTHROPLASTY REHABILITATION GUIDELINES**

**PROTOCOL FOR PROXIMAL HUMERAL FRACTURE RTSA**

PHASE	PRECAUTIONS AND GUIDELINES	GOALS	EXERCISES	CRITERIA TO ADVANCE	EXAMINATION
<p><b>1</b> (Post-operative day 1 to post-operative week 3)</p>	<p>Sling 24/7 (remove for grooming and home exercise program 3-5x/day)</p> <p>Avoid combined IR/EXT/ADD (hand behind the back) and IR/ADD (reaching across chest) for dislocation precautions</p> <p>Pillow behind the upper arm while reclining with sling on</p> <p>Patient should always be able to see the elbow</p> <p>Avoid WBing – discuss WBing need with physician and PT</p> <p>No submersion in water until after 4 weeks</p> <p>Ice after HEP as needed</p>	<p>Maintain integrity of joint replacement; protect soft tissue healing</p> <p>ROM for elevation to 130 and ER to 30</p> <p>Optimize distal UE circulation and muscle activity (elbow, wrist and hand)</p> <p>Instruct in use of sling for proper fit</p> <p>Educate regarding signs/symptoms of infection</p>	<p>Active elbow, wrist and hand</p> <p>Pendulum</p> <p>Scapular retraction with arms resting in neutral position</p> <p>Forward elevation in scapular plane to 130 deg max motion (table slides, step backs, supine well arm assisted)</p> <p>ER in scapular plane to 30 deg (seated or supine)</p> <p>ROM within precautionary range limits must be passive</p>	<p>Pain less than 3/10 with ROM</p> <p>Healing incision without signs of infection</p> <p>Clearance by surgeon to advance after 2 week post-operative visit</p>	<p>Wound assessment</p> <p>Swelling assessment of upper extremity</p> <p>Neurovascular assessment of upper extremity</p> <p>Sling fit and ability to don/doff properly</p> <p>Patient reported outcome measure</p> <p>Pain level</p> <p>Range of motion for elevation and ER</p>

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<p><b>2</b> (Post-operative week 3 to 6)</p>	<p>After 2 weeks can remove the sling at home and just use the sling at night and in community until 6 weeks</p> <p>May use arm for basic activities of daily living (such as feeding, brushing teeth, dressing...)</p> <p>May submerge in water after 4 weeks</p> <p>Avoid combined IR/EXT/ADD (hand behind the back) and IR/ADD (reaching across chest) for dislocation precautions</p> <p>Avoid acromial or scapular spine pain as increase deltoid loading – decrease load if this occurs</p>	<p>Elevation to 130 deg and ER to 30 deg – passive, active assisted or active</p> <p>Low (less than 3/10) to no pain</p> <p>Ability to fire all heads of the deltoid</p>	<p>May discontinue grip, and active elbow and wrist exercises since using the arm in ADLs with sling removed around the home</p> <p>Continue passive elevation to 130 and ER to 30, both in scapular plane</p> <p>Submaximal isometrics (pain-free effort) for all functional heads of deltoid (anterior, posterior, middle).</p> <p>Place in balanced position with circumduction and progressive arcs in sagittal plane</p>	<p>Passive elevation in scapular plane to 130; ER in scapular plane to 30</p> <p>Ability to fire isometrically all heads of the deltoid muscle without pain</p> <p>Ability to place and hold the arm in balanced position (90 deg elevation in supine)</p>	<p>Wound assessment</p> <p>Neurovascular assessment</p> <p>Swelling assessment</p> <p>PROM shoulder elevation and ER(0)</p> <p>Patient reported outcome measure</p> <p>Pain level</p>

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<p><b>3</b> (Post-operative week 6 to 12)</p>	<p>Avoid forceful end-range motion in any direction</p> <p>Progress active use of the arm in ADLs without being restricted to arm by the side of the body;</p> <p>No heavy lifting or carrying</p> <p>Initiate functional IR behind the back <b>gently</b> <b>without forceful overpressure</b></p> <p>Avoid acromial or scapular spine pain as increase deltoid loading – decrease load if this occurs</p> <p>NO UPPER BODY ERGOMETER</p>	<p>Optimize ROM for elevation and ER in scapular plane</p> <p>Expected PROM: Elevation - 145-160; ER - 40-50 ; functional IR to L1</p> <p>Recover AROM to approach as close to PROM available as possible</p> <p>Establish dynamic stability of the shoulder</p>	<p>Forward elevation in scapular plane active progression: supine to incline to vertical; short to long lever arm</p> <p>Lateral raise with bent elbow; side-lying abduction</p> <p>Active ER/IR with arm at side</p> <p>Scapular retraction with light band resistance</p> <p>Serratus anterior punches in supine; avoid wall, incline or prone press-ups for serratus anterior</p> <p>Functional IR with hand slide up back – very gentle and gradual</p>	<p>AROM equals/approaches PROM with good mechanics for elevation</p> <p>No pain</p> <p>Higher level demand on shoulder than ADL functions</p>	<p>PROM for elevation, ER(0)</p> <p>AROM for elevation, ER(0) and functional IR</p> <p>Patient reported outcome measure</p> <p>Pain</p>

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<p><b>4</b> (Post-operative week 12+)</p>	<p>No heavy lifting and no overhead sports</p> <p>Weight lifting limit 25.lb</p> <p>No heavy pushing activity</p> <p>Gradually increase strength</p> <p>NO UPPER BODY ERGOMETER</p>	<p>Optimize functional use of operative UE to patient specific goals</p> <p>Gradual increase in deltoid, scapular muscle and rotator cuff strength</p> <p>Pain-free functional activities</p>	<p>Light hand weights for deltoid up to and not to exceed 3 lbs for anterior and posterior with long arm lift against gravity; elbow bent to 90 deg for abduction in scapular plane</p> <p>Band progression for extension to hip with scapular depression/retraction</p> <p>Band progression for serratus anterior punches in supine; avoid wall, incline or prone press-ups for serratus anterior</p> <p>End-range stretching gently without forceful overpressure in all planes (elevation in scapular plane, ER in scapular plane, functional IR) with stretching done for life as part of daily routine</p> <p>NO UPPER BODY ERGOMETER</p>	<p>Pain-free AROM for shoulder elevation (expect around 135-150 deg)</p> <p>Functional strength for all ADLs, work tasks, and hobbies approved by surgeon</p> <p>Independence with home maintenance program</p>	<p>PROM for elevation, ER(0); ER(90)</p> <p>AROM for elevation, ER(0) and functional IR</p> <p>Scapulohumeral rhythm/biomechanics of active movement strategies</p> <p>Strength testing for deltoid, RTC, scapular muscles</p> <p>Patient reported outcome measure</p> <p>Pain</p>

Created by: June Kennedy, PT, DPT and shoulder surgery team