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Shoulder Arthroplasty Rehab Protocol

Key Considerations

What does it mean and why would I get a "reverse" shoulder replacement?

- A reverse shoulder replacement is performed when the rotator cuff is either torn, deficient, or the shoulder arthritis is extremely severe. The design of the implant reverses the normal relationship of the ball and socket, which allows the deltoid and periscapular muscles to take over the work of the rotator cuff in moving the arm.

How and why do we rehab a "reverse" shoulder replacement differently than an "anatomic" shoulder replacement?

- When an "anatomic" shoulder replacement is performed, the rotator cuff is essential for the function of the shoulder. A portion of the rotator cuff (the subscapularis) is taken down during anatomic shoulder replacement surgery and repaired at the end of the procedure. This repair of the rotator cuff must be protected to allow for healing or else the shoulder will fail. A "reverse" shoulder replacement is not dependent on the rotator cuff healing, and can be pushed faster in the earlier stages of the recovery without as much risk of compromising the long-term outcome of the shoulder.

It is important to take the time initially and throughout the course of rehabilitation to discuss and review important considerations related to their surgery. Remember that each patient will present with different post-surgical considerations, pain levels, goals etc. Reviewing this information with the patient and what to expect throughout the rehabilitation is of paramount importance.

- One of the most significant predictors of final postop range of motion of the shoulder is the preop range of motion. If a shoulder is very restricted in movement from arthritis for years before surgery, it is less likely that full range of motion will be achieved after surgery even with the best efforts of the patient and physical therapist.
- Total recovery time is between 6-12 months depending on how stiff and how weak the shoulder was before surgery. Most patients will benefit from 3-4 months of in person physical therapy, although some may need a longer duration of treatment

Sling Use

- Consistent usage of a sling immediately following surgery will help to protect the surgery and reduce pain. It is safe to be out of sling during showers, PT and home exercises with consideration of protecting all repaired structures from excessive stress. Sling use duration depends on the individual and surgical factors. In general, a reverse shoulder arthroplasty requires 2 weeks of sling use, and an anatomic 4 weeks, although there are cases where more or less sling wear than these standard timelines is recommended (this will be clearly specified by MD)

Strengthening

- Utilization of gradual muscle activation, proprioception and strengthening will be used in accordance with the protocol outlined below as well as physician guidance per each phase.

If at any time there are signs of infection (increased swelling, redness, drainage from the incisions, warmth, fever, chills or severe pain that is uncontrolled with the pain medication), or any other concerning symptoms that are present or preventing progress of the rehabilitation, please contact us at the office: 214-383-9356.

Rehab Milestones and Required Postop Clinical Visits in Office

- Sling wear 0-2 weeks
- First postop visit 2 weeks
- Second postop visit 8 weeks
- All postop restrictions end 8 weeks

Goals	• Reduce acute pain and inflammation (cryo)

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	• Protection of surgery site and wound healing • Maintain cervical spine, elbow-wrist-hand ROM • Begin shoulder ROM • Patient education and goals
Sling wear	• Wear sling at all times, including sleeping, for first 2 weeks. Only times it is ok to remove are during PT, during showers, and when performing home exercises. Wear sling as needed for comfort only during weeks 3-4 for reverse, continue wearing at all times for 4 total weeks if anatomic replacement
Precautions	• All exercises performed to tolerance only, do not push into pain • Do not stretch rotation • No active IR or extension in this phase (patient should "always be able to see your elbow when on your back") • No lifting >1lb, do not fully support body weight on surgical arm (do not use arm on chair for sit to stand) • No submerging incision, ok for showers only

Suggested Exercises	• Cryotherapy
	• Review basic ADLs such as donning/doffing sling, arm positioning, bed mobility, transfers, ambulation with cane/walker (if needed)
	• AROM elbow, wrist (gripping exercises, elbow motion/strength with arm in neutral)
	• AROM Cervical spine
	• AAROM/AROM shoulder: Forward elevation/abduction as tolerated (gentle supine with dowel/stick, towel slides on tabletop)
	• Pendulums (non-weighted)
	• Isometric scapular retractions (avoid shoulder shrug)
	• Anterior capsular mobilizations
	• Submaximal isometrics (especially cuff/deltoid) in all planes (ER only to neutral - straight ahead position)
	• Lower Extremity
	  ○ Body weight squats
	  ○ Calf raises
	  ○ Glute activation (clams, bridges, lateral band walks)
	  ○ Single plane lower extremity weight machines

Frequency & Duration	• 2x/week formal PT • Cryotherapy at least 3x/daily for 20 minutes for first 7-10 days, then at least for 10-15 minutes after every PT session
Progression Criteria	• Good understanding of activity limits/movement precautions • Independence with HEP • Progressing shoulder ROM, palpable contraction felt in scapular musculature

Phase 2: Early strengthening and stretching (4-8 weeks)

Goals	• Gradually restore full ROM • Protection of repair

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	• Early strengthening with appropriate mechanics • Enhance neuromuscular control
Precautions	• No passive rotation stretching until 6 weeks postop at earliest • Avoid jerking and fast pushing motions • All exercises remain low to medium velocity • Avoid activities where there is a higher risk for falling or outside forces to be applied

Suggested Exercises	• PROM, AAROM (in scapular plane), AROM all ok
	  ○ L-Bar active-assisted exercises, incline table slides, seated shoulder elevation
	  ○ Rope and Pulley exercises, Finger ladder exercises
	○ Strengthening Exercises
	  ○ Continue isometrics in all planes, begin light resisted ER, forward flexion, and abduction
	• Focus on anterior deltoid, teres (e.g. seated shoulder elevation with cane with active lowering, ball roll on wall, resistance bands) – if starting to become painful with too much deltoid work, back off on weight due to risk of acromial stress injury
	  ○ Can initiate upper-extremity weight-bearing exercises (hands on bench, table, wall)
	• Ok for cardio work (walking, recumbent bike - no swimming or upright bike yet)

Progression Criteria	• Demonstrates improving functional use of shoulder • Can isometrically activate all segments of deltoid and periscapular musculature • AROM forward elevation >90 degrees

Phase 3: Advanced strengthening/stretching (8-24 weeks)

Goals	• Progress AROM • Restore muscular strength, power, endurance, and balance • Protection of repair • Gradually initiate functional activities towards individual goals • Independence with progressive HEP
Precautions	• All exercises should be gradually progressed - don't lift 20 lbs if you haven't lifted 10 lbs, try not to progress more than 10-20% per week • Avoid jerking and fast movements - keep control of shoulder
Suggested Exercises	• Continue to work ROM – AROM over shoulder height can take 6-12 months to gain strength and control after reverse shoulder arthroplasty • Continue to progress resistive exercises (can increase intensity and decrease reps) • Advance strength training as tolerated • Closed chain scapular rehab and functional cuff strengthening • Return to light household and work activities • Return to recreational activities (i.e. golf, tennis, pickleball, gym) determined by physical therapist based on shoulder control and strength