TOTAL SHOULDER ARTHROPLASTY CLINICAL CARE GUIDELINE

Background

Total shoulder arthroplasty is indicated for patients who have continued pain and loss of function in the presence of advanced joint pathology and have failed conservative measures. The procedure involves replacing the head of the humerus and resurfacing the glenoid fossa. Care should be taken in regards to management of the subscapularis post operatively due to the subscapularis takedown procedure performed.

Disclaimer

Progression is time and criterion-based, dependent on soft tissue healing, patient demographics and clinician evaluation. If you are working with an Ohio State Sports Medicine patient and questions arise, please contact the author by calling our office at (614) 293-2385.

Summary of Recommendations

Precautions	• Sling use 4-6 weeks based off of surgeon recommendation • No active IR x 12 weeks ○ IR behind back should never be pushed • No supporting of body weight by hand on involved side x 12 weeks • Avoid shoulder extension past trunk of body • No stretching into pain • No driving for 6 weeks
Outcome Tools	• Quick DASH • Simple Shoulder Test • American Shoulder and Elbow Surgeon's Shoulder Evaluation Short Form
Discharge Sling	• 4-6 weeks based off of surgeon recommendation
Criteria for Discharge	• Patient able to maintain non-painful AROM • Maximized functional use of involved upper extremity • Patient has returned to advanced functional activities

Post-operative: Day 1- Week 2

- Continue home program including wrist/hand, pendulums, and shoulder blade squeezes.

Protection Phase: Weeks 2-4

Appointments	• Goal: Initiate ROM, reduce pain and effusion • Appointments 1-2x/week as necessary
Pain and Effusion	• Frequent cryotherapy for pain, swelling, and inflammation management
ROM	• **PROM:** Scaption and ER only • No shoulder IR, cross body adduction movements. • **ER to 30º due to subscapularis precaution**
Therapeutic Exercise	• AROM progressed to light strengthening as appropriate for distal extremity. • PROM of involved shoulder as above • Scapular squeezes • Pendulums

Criteria to Progress to Early Loading Phase	• Tolerating PROM • Achieves 90º of PROM scaption • Achieves 30º shoulder PROM ER

Early Loading Phase: Weeks 4-6

Appointments	• Goal: Improve shoulder PROM, initiation of AAROM and isometrics. Prepare and initiate discharge from sling • Appointments: 1-2x/week as necessary
Precautions	• In supine, a smalls pillow/towel should be placed behind elbow to avoid shoulder hyperextension to protect anterior capsule • In the presence of poor shoulder mechanics avoid repetitive shoulder AROM exercises against gravity in standing • No heavy lifting of objects (no heavier than a coffee cup) • No supporting of body weight by hand on involved side • No sudden jerking movements
ROM	• Continue PROM as tolerated, ER to 45º • Begin AAROM in scaption as long as patient has greater than 90º PROM • Gentle glenohumeral and scapulothoracic joint mobilizations as indicated
Strength	• Begin submaximal pain-free shoulder isometrics in neutral EXCEPT IR • Initiate glenohumeral and scapulothoracic rhythmic stabilization
Criteria to Progress to Next Phase	• Tolerates PROM/AAROM, isometric program • Achieves ~140º PROM scaption, 45º PROM ER • Able to actively elevate shoulder against gravity with good mechanics to ~100º

Strengthening Phase: Weeks 6-10

Appointments	• Goals: Wean from sling, initiate and progress AROM of involved shoulder, gradually restore shoulder strength, power, and endurance. • Appointments 1-2x/week as necessary
Precautions	• No heavy lifting of objects (no heavier than a coffee cup) • No sudden lifting or pushing activities • No sudden jerking motions

ROM	• Begin AROM exercise as appropriate- begin with reclined position and progress as able • Advance PROM to stretching as appropriate, ***do not stretch into pain*** • Minimize shoulder substitution patterns • **No shoulder adduction or cross body movements**
Strength	• Begin light functional exercise • Wean from sling completely • Continue isometrics • Scapular strengthening avoiding shoulder hyperextension • Scapular rows, extensions, side-lying ER, resisted ER in scapular plane • Initiate resisted deltoid exercises at week 8
Criteria to Progress to Return to Function Phase	• Tolerates AAROM/AROM/strengthening • Achieves 120º AROM flexion • Achieves 100º AROM abduction • Achieves 50º AROM ER in scapular plane in supine **NOTE:** If above ROM are not met, then patient is ready to progress when the patient's ROM is consistent with outcomes for patients with the given underlying pathology.

Return to Function Phase: Weeks 10-12+

Appointments	• Typically patient is progressing to home exercise program by this point, to be performed 3-4x/week.
Precautions	• Avoid exercise and functional tasks that put stress on the anterior capsule and surrounding structures(ie: no combined ER and abduction above 80º of abduction) • Heavy bench press and pushups are contraindicated long term • No aggressive IR behind back
ROM	• Maintain non-painful AROM • AROM as tolerated by patient
Strength	• May initiate IR strengthening at 12 weeks post op • Gradually progress strengthening program • Return to recreational hobbies/sports (i.e. golf, doubles tennis) around **6 months**

Criteria for Discharge from Physical Therapy	• Patient able to maintain non-painful AROM • Maximized functional use of involved upper extremity • Patient has returned to advanced functional activities

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References:

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Kennedy JS, Garrigues GE, Pozzi F, et al. The American Society of Shoulder and Elbow Therapists' consensus statement on rehabilitation for anatomic total shoulder arthroplasty. J Shoulder Elbow Surg. 2020;29(10):2149-2162. doi:10.1016/j.jse.2020.05.019