

# TOTAL SHOULDER ARTHROPLASTY CLINICAL PRACTICE GUIDELINE



## Rehabilitation Precautions

- Sling use for 6 weeks
- No internal rotation (IR) x 12 weeks
  - IR behind back should NEVER be pushed
- No cross chest adduction x 12 weeks
- Forward elevation in SCAPTION only
- No stretching into pain
- Avoid arm extension in all positions
- No supporting of body weight by hand on involved side (for example, pushing up from a chair) x 12 weeks
- No driving for six weeks

## Phase I: Post-operative – 2 weeks

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

## Phase II: Weeks 2-4

ROM	<ul style="list-style-type: none"><li>• Begin PROM in scaption and external rotation only</li><li>• NO SHOULDER IR, ADDUCTION OR CROSS BODY MOVEMENT</li></ul>
Strengthening	<ul style="list-style-type: none"><li>• Progress active distal extremity exercise to strengthening as appropriate</li></ul>
Goals to Progress	<ul style="list-style-type: none"><li>• Tolerates PROM program</li><li>• Achieves at least 90° PROM flexion</li><li>• Achieves at least 90° PROM abduction</li><li>• Achieves at least 45° PROM ER in plane of scapula</li></ul>

## Phase III: Weeks 4-6

Rehabilitation Precautions	<ul style="list-style-type: none"><li>• In supine, a small pillow or towel should be placed behind the elbow to avoid shoulder hyperextension/anterior capsule stretch</li><li>• In the presence of poor shoulder mechanics avoid repetitive shoulder AROM exercises/activity against gravity in standing</li><li>• No heavy lifting of objects (no heavier than coffee cup)</li><li>• No supporting of body weight by hand on involved side</li><li>• No sudden jerking motions</li></ul>
ROM	<ul style="list-style-type: none"><li>• Continue with PROM, active assisted range of motion (AAROM)</li><li>• Begin at week 4 - AAROM pulleys in scaption as long patient has greater than 90° of PROM</li><li>• Gentle glenohumeral and scapulothoracic joint mobilizations as indicated</li><li>• Continue use of cryotherapy for pain and inflammation</li></ul>

	<ul style="list-style-type: none"> <li>• NO SHOULDER IR, ADDUCTION OR CROSS BODY MOVEMENT</li> </ul>
Strengthening	<ul style="list-style-type: none"> <li>• Begin shoulder submaximal pain-free shoulder isometrics in neutral EXCEPT IR</li> <li>• Progress distal extremity exercises with light resistance as appropriate</li> <li>• Initiate glenohumeral and scapulothoracic rhythmic stabilization</li> </ul>
Goals to Progress	<ul style="list-style-type: none"> <li>• Tolerates PROM/AAROM, isometric program</li> <li>• Achieves at least 140° PROM flexion</li> <li>• Achieves at least 120° PROM abduction</li> <li>• Achieves at least 60° PROM ER in plane of scapula</li> <li>• Able to actively elevate shoulder against gravity with good mechanics to 100°</li> </ul>

## Phase IV: Weeks 6-8

Rehabilitation Precautions	<ul style="list-style-type: none"> <li>• No heavy lifting of objects (no heavier than coffee cup)</li> <li>• No sudden lifting or pushing activities</li> <li>• No sudden jerking motions</li> </ul>
ROM	<ul style="list-style-type: none"> <li>• Begin AROM exercise/activity as appropriate—use reclined position</li> <li>• Advance PROM to stretching as appropriate—minimal pain</li> <li>• NO SHOULDER IR, ADDUCTION, OR CROSS BODY MOVEMENT</li> </ul>
Strengthening	<ul style="list-style-type: none"> <li>• Begin light functional activities</li> <li>• Wean from sling completely</li> <li>• Continue isometrics</li> <li>• Scapular rows, extensions, and sidelying or light band external rotation</li> </ul>
Goals to Progress	<ul style="list-style-type: none"> <li>• Gradual restoration of shoulder strength, power, and endurance</li> <li>• Optimize neuromuscular control</li> <li>• Gradual return to functional activities with involved upper extremity</li> </ul>

## Phase V: Weeks 8-10

ROM	<ul style="list-style-type: none"> <li>• Progress AROM as tolerated.</li> <li>• Continue AAROM as necessary</li> <li>• Minimize shoulder substitution patterns</li> <li>• NO SHOULDER IR, ADDUCTION OR CROSS BODY MOVEMENT</li> </ul>
Strengthening	<ul style="list-style-type: none"> <li>• Resisted flexion, abduction, extension (Therabands)</li> <li>• Continue progressing ER strength</li> </ul>
Goals to Progress	<ul style="list-style-type: none"> <li>• Tolerates AAROM/AROM/strengthening</li> <li>• Achieves at least 120° AROM flexion</li> <li>• Achieves at least 100° AROM abduction</li> <li>• Achieves at least 50° AROM ER in plane of scapula supine</li> </ul>

## Phase VI: Weeks 10-12

Rehabilitation Precautions	<ul style="list-style-type: none"><li>• Avoid exercise and functional activities that put stress on the anterior capsule and surrounding structures (eg, no combined ER and abduction above 80° of abduction)</li><li>• Bench press and push ups are contraindicated long-term</li><li>• No aggressive IR behind back</li></ul>
ROM	<ul style="list-style-type: none"><li>• Maintain nonpainful AROM</li><li>• NO SHOULDER IR, ADDUCTION OR CROSS BODY MOVEMENT</li></ul>
Strengthening	<ul style="list-style-type: none"><li>• May initiate IR strengthening at the 12 week postop mark</li><li>• Continue to progress AROM scaption and abduction as tolerated</li><li>• Gradually progress strengthening program to improve muscular strength, power, and endurance</li><li>• Gradual return to more advanced functional activities</li><li>• Progress weight-bearing exercises as appropriate</li><li>• Typically patient is on a home exercise program by this point, to be performed 3 to 4 times per week</li><li>• Return to recreational hobbies, gardening, sports, golf, doubles tennis</li></ul>
Criteria for Discharge	<ul style="list-style-type: none"><li>• Patient able to maintain nonpainful AROM</li><li>• Maximized functional use of upper extremity</li><li>• Maximized muscular strength, power, and endurance</li><li>• Patient has returned to advanced functional activities</li></ul>

### References

Wilcox RB, Arslanian LE, and Millet PJ. Rehabilitation Following Total Shoulder Arthroplasty. *Journal of Orthopaedic and Sports Physical Therapy*. 2005; 35:12 (821-836).

Michener LA, McCluer PW, and Sennett BJ. American Shoulder and Elbow Surgeons Standardized Shoulder Assessment Form, Patient Self-Report Section: Reliability, Validity, and Responsiveness. *Journal of Shoulder and Elbow Surgery*. 2002; 11: 587-594.