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 30° 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 90° of PROM scaption
- Achieves 30° 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 45°
- Begin AAROM in scaption as long as patient has greater than 90° 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 ~140° PROM scaption, 45° PROM ER
- Able to actively elevate shoulder against gravity with good mechanics to ~100°

### 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** |
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| 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 (i.e. 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 |
References: