Sutter Health

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Reverse Total Shoulder Arthroplasty Protocol:

The intent of this protocol is to provide the therapist with guidelines of the post-operative rehabilitation course. It should not be a substitute for one's clinical decision making regarding the progression of a patient's post-operative course based on their physical exam findings, individual progress, and/or the presence of post-operative complications. The therapist should consult the referring physician with any questions or concerns.

Shoulder Dislocation Precautions

- No shoulder motion behind back. NO combined shoulder adduction, internal rotation, and extension
- No glenohumeral (GH) extension beyond neutral

*Precautions should be implemented for 12 weeks postoperatively unless surgeon specifically advises patient or therapist differently.
*Progression to the next phase based on clinical criteria and time frames as appropriate.

Phase I – Immediate Post Surgical Phase/Joint Protection (Day 1-6 weeks)

Goals

- Patient and family independent with
    - Joint protection
    - Progressive PROM
    - Assisting with putting on/taking off sling and clothing
    - Assisting with home exercise program
    - Cryotherapy
- Promote healing of soft tissue / maintain the integrity of the replaced joint
- Enhance PROM and restore AROM of elbow/wrist/hand
- Independent with ADL's with modifications
- Independent with bed mobility, transfers, and ambulation or as per pre-admission status

Phase I Precautions

- Sling is worn for 3-4 weeks postoperatively and only removed for exercise and bathing once able. The use of a sling often may be extended for a total of 6 weeks
- While lying supine, the distal humerus / elbow should be supported by a pillow or towel roll to avoid shoulder extension. Patients should be advised to "always be

able to visualize their elbow while lying supine."
- No shoulder AROM
- No lifting of objects with operative extremity
- No supporting of body weight with involved extremity
- Keep incision clean and dry (no soaking/wetting for 2 weeks); No whirlpool, jacuzzi, ocean/lake wading for 4 weeks

Days 1-4

- Active/Active Assisted ROM (A/AAROM) of cervical spine, elbow, wrist, and hand
- Begin periscapular sub-maximal pain-free isometrics in the scapular plane
- Continuous cryotherapy for first 72 hours postoperatively, then frequent application (4-5 times a day for 20 minutes)
- Ensure patient is independent in bed mobility, transfers and ambulation
- Ensure proper sling fit/alignment/ use
- Instruct patient in proper positioning, posture, initial home exercise program
- Provide patient with HEP including exercises and protocol information

Days 5-21

- Continue all exercises as above (typically 2-3 times per day)
- Frequent (4-5 times a day for about 20 minutes) cryotherapy

Weeks 3-6

- Progress exercises listed above
- Initiate PROM
    - Forward flexion and elevation in the scapular plane, goal to 120 degrees
    - ER in scapular plane to tolerance, respecting soft tissue constraints
- No internal rotation ROM
- Gentle resisted exercise of elbow, wrist, and hand
- Continue frequent cryotherapy

Criteria for progression to Phase II

- Tolerates shoulder PROM and isometrics; and, AROM- minimally resistive program for elbow, wrist, and hand
- Patient demonstrates the ability to isometrically activate all components of the deltoid and periscapular musculature in the scapular plane

Phase II – AROM/ Early Strengthening Phase (Weeks 6-12)

Goals

- Continue progression of PROM (full PROM is not expected)
- Gradually restore AROM
- Control pain and inflammation
- Allow continued healing of soft tissue / do not overstress healing tissue
- Re-establish dynamic shoulder and scapular stability

Precautions

- Due to the potential of an acromion stress fracture one needs to continuously monitor the exercise and activity progression of the deltoid. A sudden increase of deltoid activity during rehabilitation could lead to excessive acromion stress. A gradually progressed pain free program is essential
- Continue to avoid shoulder hyperextension
- In the presence of poor shoulder mechanics avoid repetitive shoulder AROM exercises/activity
- Restrict lifting of objects to no heavier than a coffee cup
- No supporting of body weight by involved upper extremity

Weeks 6-8

- Continue with PROM program
- At 6 weeks post op start PROM IR to tolerance (not to exceed 50 degrees) in the scapular plane
- Begin shoulder AA/AROM as appropriate
    - Forward flexion and elevation in scapular plane in supine with progression to sitting/standing
    - ER and IR in the scapular plane in supine with progression to sitting/standing
- Initiate gentle scapulothoracic rhythmic stabilization and alternating isometrics in supine as appropriate. Minimize deltoid recruitment during all activities / exercises
- Progress strengthening of elbow, wrist, and hand
- Gentle GH and scapulothoracic joint mobilizations as indicated (Grade I and II)
- Continue use of cryotherapy as needed
- Patient may begin to use hand of operative extremity for feeding and light activities of daily living including dressing, washing

Weeks 9-12

- Continue with above exercises and functional activity progression
- Begin gentle glenohumeral IR and ER sub-maximal pain free isometrics
- Begin gentle periscapular and deltoid sub-maximal pain free isotonic strengthening exercises. Begin AROM supine forward flexion and elevation in the plane of the scapula with light weights (1-3lbs. or .5-1.4 kg) at varying degrees of trunk elevation as appropriate. (i.e. supine lawn chair progression with progression to sitting/standing

- Progress to gentle glenohumeral IR and ER isotonic strengthening exercises in sidelying position with light weight (1-3lbs or .5-1.4kg) and/or with light resistance resistive bands or sport cords

Criteria for progression to Phase III

- Improving function of shoulder
- Patient demonstrates the ability to isotonically activate all components of the deltoid and periscapular musculature and is gaining strength

Phase III – Moderate Strengthening (Weeks 12-16)

Goals

- Enhance functional use of operative extremity and advance functional activities
- Enhance shoulder mechanics, muscular strength and endurance

Precautions

- No lifting of objects heavier than 2.7 kg (6 lbs) with the operative upper extremity
- No sudden lifting or pushing activities

Weeks 12-16

- Continue with the previous program as indicated
- Progress to gentle resisted flexion, elevation in standing as appropriate

Phase IV – Continued Home Program (Months 4+)

- Typically the patient is on a home exercise program at this stage to be performed 3-4 times per week with the focus on
    - Continued strength gains
    - Continued progression toward a return to functional and recreational activities within limits as identified by progress made during rehabilitation and outlined by surgeon and physical therapist

Criteria for discharge from skilled therapy

- Patient is able to maintain pain free shoulder AROM demonstrating proper shoulder mechanics. (Typically 80 – 120 degrees of elevation with functional ER of about 30 degrees.)
- Typically able to complete light household and work activities