Anatomic reconstruction, Total Shoulder Replacement (TSR) and Hemiarthroplasty (HA): Physiotherapy information and recommended protocol.

DIARMUID MOLONY ORTHOPAEDICS

The following is for guidance only and should not replace your clinical assessment. All patients are different and pain or complications of surgery may slow progress in some. Progress will be stepwise rather than linear. Patient reassurance is important for "buy in" to the rehab plan. We routinely review patients at approximately week 6, 18 and year one. If concerned please contact our office.

In anatomic replacement, the orientation of the glenohumeral joint is maintained. In a HA the glenoid is not treated while in a TSR both glenoid and humeral head surfaces are replaced. We typically perform this operation through a deltopectoral approach and release the subscapularis for access to the joint. The subscap is repaired at closure. Anatomic replacement requires a functioning cuff. In the event that the cuff is deficient or repair of it fails post operatively, early failure or at best poor longevity of the implant can be expected . As a result factors such as the quality of subacapularis repair impact on the available post op range and suitability for earlier AROM. Details regarding this are available on the patient post operative physio report (Given to the patient) and operation note. Subscap protection is key in anatomic reconstruction.

Phase 1 (Week 1-4):

- Shoulder immobiliser except when performing supervised exercise. Use a pillow behind the elbow in bed to prevent hyperextension. This avoids anterior capsule/subscap tension
- Passive ROM within safe limits determined by subscap tension. This is typically on-table range less 10 degrees (Note that passive range does not mean passive stretch!)
- We prefer PROM elevation in scapular plane over pendular exercise. Assistance of a physio or patient partner is ideal.
- Activity of daily living with modifications & family/partner help.
- Active elbow, wrist and hand ROM (H/W/E) and scapular control (STC) isometrics
- Avoid lifting of objects, hand behind back, sudden movements or excessive stretching
- No supporting of body weight.
- Cryotherapy keeping incision clean and dry.

Phase 2 (Week 4-8):

- Wean sling week 4-6
- Initiate active assisted range of motion (AAROM) elevation under guidance of physio (e.g. cane assisted / slings & pullies elevation, doorway ER. Reinforce PROM safe range.
- Activate isometric and progress isotonic posterosuperior cuff avoiding subscap.
- Continue active H/W/E and STC
- Restrictions of phase 1 to loading remain

Phase 3 (week 8-12):

- Gradual restoration of shoulder strength, power, and endurance
- Commence isometric subscap and gently push ER passive range
- Allow passive IR stretch, e.g. Towel/ Side lying internal rotation stretch (sleeper stretches).
- Allow active elevation and ER band strengthening. Progress elevation against minor resistance as tolerated after week 10.
- Only progress to IR band strengthening at or after week12.

Phase 4 (>12 weeks):

- Progress to full non-painful AROM
- Continue to perform passive stretching including ER as tolerated
- Improve muscular strength, power, and endurance (light weights). For example, aim for prone elevation in scapular plane, internal and external rotation at 90 degrees abduction, controlled forward band punch, • biceps curl.
- Gradual return to full functional activities.

Phase 5 – (week 18+):

- Increase resistance loads
- Continue to push PROM and AROM
- Gradual return to work activities
- Gradual return to recreational activities and to sport
- Note that ongoing improvements in range and function will continue up to a year post op and encouraging your patient to continue to push their rehab in phase 4 and 5 will generate gains.