Boulder Centre for Orthopedics & Spine
Your Life in Motion

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"Universal" Shoulder Post Operative Rehab Protocol

Goal: Start to regain passive fluidity in the shoulder initially without putting stress on the rotator cuff.

Biology: Multiple studies on rotator cuff healing after repair have shown that tensile strength of the healed tendon remains weak during the initial 3-6 months postoperative. As a guideline, one can probably assume that the strength of the repair is only 30% of normal at 6 weeks postop, 50% of normal at 3 months postop, and improves to 80% of normal only at 6 months post op. Based on this scientific evidence we do not recommend significant strengthening of the shoulder until six months postoperative. Empirically, we feel that this has improved our overall long term results for patients who have had a rotator cuff repair. In addition, because the early healing phase is fragile, we recommend that the patient uses their sling on a regular basis for 6-8 weeks postoperative.

Protocol

Early Passive Phase: **First 3 - 4 weeks postop**

- Patient is allowed to perform gentle PROM exercises with the help of another individual (PT or patient's family member), WITHOUT helping.
- No aggressive stretching is allowed. If the patient feels that the stretch is at the end of their comfortable ROM, then the motion is halted at that position, and held for approximately 5-10 seconds. Absolute limits include 90 degrees of FF/AB/EL, 30 degrees of external rotation, and internal rotation to the abdomen, unless otherwise specified by the treating surgeon.

In general we recommend 3 sessions per day, alternating different planes of motion, "holding" the (very light) stretch for approximately 5-10 seconds, with a maximum of 5 sets per motion.

Pool therapy: Allowed as soon as incisions are completely healed, **no earlier than 2 weeks postoperative**. The pool is the patients "assist', taking away gravity. Patient is allowed to let the shoulder "float" in the directions specified above, slowly and gradually. This can be considered "passive" ROM. If a patient has access to pool therapy, this can supplant some of their early visits to the therapist, saving more visits for later once the active phase and strengthening phase are initiated.

Active Assistive Phase: **Can be initiated at 3-4 weeks postop, according to the instruction/discretion of the surgeon**.

Our definition of AAROM is that the PROM exercises are continued, with the allowance for some light muscle contraction/"help" from the patient. As an estimate, patient should not be allowed to perform more than 50% of the effort to lift their own arm. "Stick" exercises are

NOT allowed during this phase, as it is often difficult for the patient to control the motion without putting excessive force on the repair. Light pulley work is allowed. When in the pool the patient may start to lift their arm more actively but without any force against the water. ROM limits can be increased as tolerated GENTLY in FF/AB/elevation, but remain the same for rotation.

Active Phase: **Initiated at 6-8 weeks postop, and sling may be discontinued.**

- Patient can now lift and use their arm against gravity. Nothing over 2 pounds is allowed in the hand during activities. This is NOT a strengthening phase. The goal of this phase is to help the patient gradually achieve near full range of motion in elevation actively for ADL's.Light rotational stretching may be initiated, as a rule to a maximum of 45 degrees of ER, and I to L5. Still, NO AGGRESSIVE STRETCHING is allowed. Pool therapy may continue, if felt to be helpful.
- Stick AAROM/AROM may be initiated.
- Scapular retraction/control exercises are allowed without weight.

The healing tissue is still relatively weak at this point, so we emphasize the importance of no significant one-time load to the shoulder and no repetitive cyclical stress. This means limiting the number of repetitions of any exercise. NO ARM BIKE. Closed chain activities, such as light "wall walking and washing" are allowed, as long as the patient is not putting undue force on the shoulder.

Isometric phase: **Initiated at 3 months postop**

LIGHT isometrics only. Scapular control emphasized. At this point it is important for the therapist to assess the patients AROM and fine tune it in terms of proper glenohumeral and scapulothoracic kinematics. If the patient is "shrugging" excessively then this implies either glenohumeral stiffness or rotator cuff weakness. If stiffness seems to be a problem, then more aggressive stretching exercises, in the direction of the stiffness, are allowed. If felt to be related to rotator cuff weakness, light isometric exercises, in addition to closed chain and AROM exercises, should be the focus to help the patient regain near full AROM. This is not a "go-ahead" for more aggressive band or weight strengthening exercises.

Strengthening Phase: Initiated at 4.5 months postop

- Starting with band exercises and very light weights (no more than 5 pounds in the operative arm until 6 months postoperative).
- Sports specific training.

May progress gradually as tolerated without restriction after 6 months postoperative.

A NOTE ON SLING USE: The sling is meant to protect, not strictly "immobilize" the arm. The patient should always have their arm in the sling when in public places, going on walks, and at night while resting/sleeping. However, it is encouraged that the sling be removed at least 3 times per day to allow the elbow to gently extend and prevent stiffness. Hand and wrist ROM is encouraged throughout and a light "squeeze ball' may be used. When the arm is let out of the sling, we encourage that it is allowed to rest on the same sided leg/thigh, and not in the position of "protection" against the abdomen, as this can promote stiffness.