

## REHABILITATION PROTOCOL (INFORMATION FOR PHYSIOTHERAPISTS)

### ROTATOR CUFF REPAIR +/- BICEPS TENODESIS OR TENOTOMY

#### 1. General Guidelines

- This is a GENERAL rehabilitation protocol. Any SPECIFIC instructions that differ from this protocol should be followed. For revision surgery or larger repairs, this protocol will often be delayed.
- Timelines are approximate. If the physiotherapist feels the patient is not ready for progression (due to pain, swelling, inadequate ROM or strength), the time line should be extended to suit the patient.
- In general, regaining ROM is the first (and most important) priority, followed by strengthening.
- Supervised physiotherapy begins 1-2 weeks post-op and continues for 3-6 months, as necessary, depending on patient's progress, activity level and goals.
- Patients are to be discharged after completion of all appropriate functional progressions and adequate performance on strength and functional tests.
- In addition to formal physiotherapy, patients should be encouraged to exercise independently 3-5 times/day during Phases I and II and 3-5 times per week during Phases III and IV.
- Functional Milestones – common functional activities the patient is expected to perform during each rehabilitation phase.
- Advancement Criteria – objective criteria used to judge whether or not a patient is ready for progression to the next phase of rehabilitation (see Rehabilitation Progression below).

#### 2. General Precautions

- The sling should be worn at all times for 6 weeks, except during physiotherapy.
- **No active motion – for at least 6 weeks** (according to surgery specific precautions).
- **No resisted exercises – for at least 12 weeks** (according to surgery specific precautions).
- **No pushing, pulling, or heavy lifting for at least 12 weeks.**
- **Long term: Limit forceful, jerking movements (i.e. starting outboard motor) and limit repetitive impact loading (i.e. chopping wood).**
- Surgery Specific Precautions:
  - Supraspinatus Repair: Avoid early active or resisted **Elevation or Abduction**.
  - Infraspinatus / Teres Minor Repair: Avoid early active or resisted **External Rotation**.
  - Subscapularis Repair: Avoid early active or resisted **Internal Rotation**.
  - Biceps Tenodesis or Tenotomy: Avoid resisted **Elbow Flexion** for 6 weeks.
  - Revision Surgery: Delay entire protocol 4 weeks (i.e. NO shoulder PT until 4 weeks post-op).

#### 3. Rehabilitation Progression

- The following is a guideline for progression through the rehabilitation process.
- Progression is based on achieving advancement criteria for the next phase of rehabilitation and should take into account the patient's status and the surgeon's advisement.
- If the patient achieves the advancement criteria early, the physiotherapist may choose to advance the patient only AFTER 6 weeks post-op.
- If the patient does NOT meet the advancement criteria, extend the time in the current phase.
- If there is ANY uncertainty concerning the patient, please contact the surgeon.

#### 4. Specific Instructions

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**PHASE I: Immediate Post-Op → 2 Weeks Post-Op**

**1. Objectives**

- Protect the shoulder repair.
- Decrease post-op pain and swelling (can utilize Cryo-cuff for 8-12 hours/day x 2 weeks).
- Reduce the effects of immobilization.
- Educate patient on rehabilitation progression.

**2. Sling**

- Worn at all times, except when under the supervision of the physiotherapist and when bathing.
- Should be worn for sleeping.
- Patient to be taught proper removal and reapplication of sling.

**3. Therapeutic Exercises**

- Ice after exercise program x 15 min.
- Pendulum shoulder ROM exercises.
- Wrist/elbow ROM.

**4. Functional Milestones**

- Proper removal and reapplication of sling.
- No pain with pendulum exercises.

**5. Advancement Criteria for Phase II**

- No active signs of inflammation.

**PHASE II: 2 Weeks Post Op → 6 Weeks Post-Op**

**1. Objectives**

- Protect the shoulder repair.
- Increase shoulder ROM with passive and active-assisted ROM exercises.
- Begin general activities of daily living (ADL's) (i.e. feeding, bathing, and dressing).
- Return to work: light duties (desk duties).

**2. Sling**

- Should be worn at all times, except when under the supervision of the physiotherapist and when bathing.
- Should be worn for sleeping.

**3. Therapeutic Exercises**

- Ice after exercise program x 15 min.
- Continue pendulum shoulder ROM exercises.
- Begin passive and active-assisted ROM exercises (i.e. supine, pulleys, wall crawls, and cane exercises) - forward elevation, abduction, external rotation, internal rotation (behind back) and internal rotation in 90° abduction (**NO Forceful PROM**).
- Begin manual glenohumeral and scapular mobilization.
- Continue wrist/elbow ROM.
- General fitness – may use stationary bike (arm **MUST** be kept in sling . . . **NO** weight bearing through arm).

**4. Functional Milestones**

- Progressive increase in ROM.
- Light (non-manual) occupational duties (i.e. deskwork).

**5. Advancement Criteria for Phase III**

- Full PROM & AAROM.

**PHASE III: 6 Weeks Post Op → 12 Weeks Post-Op**

**1. Objectives**

- Achieve full active ROM in all planes.
- Begin cross training to maintain general fitness.
- Return to work: modified duties (avoid heavy lifting and overhead activity).

**2. Sling**

- May discontinue.

**3. Therapeutic Exercises**

- Begin active ROM and continue passive and active-assisted ROM exercises in all planes as necessary to achieve full ROM.
- Begin GENTLE isometric strengthening exercises (with surgery specific precautions):
  - Supraspinatus Repair: IR, ER (No elevation or abduction).
  - Infraspinatus/Teres Repair: IR, elevation, abduction (No ER).
  - Subscapularis Repair: ER, elevation, abduction (No IR).
- May begin aquatic shoulder therapy.
- General fitness – continue to use stationary bike (sling no longer required), may begin running.
- Begin peri-scapular muscle strengthening: postural work, scapular retraction, protraction, elevation and depression.
- Continue wrist/elbow ROM (as necessary).
- May begin driving.

**4. Functional Milestones**

- Full active ROM.
- Full use of shoulder for all general activity without pain.
- Light bimanual or modified occupational duties.

**5. Advancement Criteria for Phase IV**

- Full Active ROM.

**PHASE IV: 12 Weeks Post-Op → 6 months Post Op**

**1. Objectives**

- Maintain/improve shoulder ROM.
- Increase shoulder strength.
- Progressive return to sport.
- Return to work: for manual and overhead occupations.
- Patient education regarding possible restrictions/limitations.

**2. Sling**

- Already discontinued.

**3. Therapeutic Exercises**

- 3 months
  - Begin Theraband strengthening exercises for RTC, progressing to strengthening exercises with free weights for all planes. Increase repetitions before increasing weight (↑ endurance > ↑ strength).
  - Begin overhead activity.
  - Begin swimming to increase shoulder strength at low resistance.
  - Begin putting and chipping for golf.
- 4.5 months
  - Begin sport-specific strengthening exercises.
  - Begin low speed throwing / controlled racket sports / non-contact hockey.
  - Progress to swing with irons for golf.
- 6 months
  - Begin high speed throwing / full swing racket sports / slap shots.
  - Progress to competitive throwing / racket sports / contact sports.
  - Progress to full swings with all clubs for golf.

**4. Functional Milestones**

- Full active ROM.
- Full use of shoulder for sporting activity.
- Return to work: full duties.

**References**

- Bardana D, Rehabilitation Protocols, Queen's University Sports Medicine.
- General Rehabilitation Guidelines, Bone and Joint Center, University of Washington Medical Center.