

Rehabilitation Protocol: Arthroscopic Rotator Cuff Repair

Date of Surgery: _____

Tear Size: ☐ Small/Medium ☐ Large/Massive ☐ Isolated Subscapularis Repair

Additional Procedures: ☐ Biceps Tenodesis/Tenotomy ☐ Augmentation/Patch

If tear size is not indicated, follow the **Large/Massive** guidelines.

Augmentation/Patch: Progression may be modified based on tissue quality. If so, specific changes to the timeline will be noted in the Comments section below.

Key Rehabilitation Principles

- **Factors influencing healing:**
 - Patient age – younger patients may heal better but may be more susceptible to stiffness
 - Tear size – smaller tears heal better than larger tears
 - Tissue quality – acute tears and thick, healthy tendon heal better than thin, frayed tissue in chronic tears
 - Tendon retraction – less retracted tendons heal more easily due to lower repair tension
- **Weeks 0–6 are critical:** protect the repair while the tendon forms a weak Type III collagen bridge to bone. Passive motion within ROM limits prevents stiffness and aids fiber maturation. **Avoid end-range pressure (stretching) for the first 6 weeks.**
- **Stiffness risk:** monitor closely in younger patients (<50 years) with smaller tears, prior adhesive capsulitis, diabetes, or thyroid disorders.
- **Strengthening:** tendon-to-bone integration (Sharpey's fibers) is not seen until 12 weeks – begin strengthening at **12 weeks (Small/Medium)** or **~16 weeks (Large/Massive)**.
- **Patient education** on activity guidelines and rehabilitation principles at each stage.

☐ Phase I – Protection/Healing (Weeks 0–6 Small/Medium; Weeks 0–8 Large/Massive)

- **Sling:**
 - Sling with abduction pillow at all times, including sleep; may remove for hygiene, grooming, and exercises
 - After 2–3 weeks, may remove for desk work with arm supported on an armrest
 - Sling wean: **Small/Medium weeks 4–6** (off by 6 weeks); **Large/Massive weeks 6–8** (off by 8 weeks) – remove pillow first, then short periods out of sling at home, progressing to the community
- **Weightbearing:** None through the operative arm – no planks, push-ups, or supporting body weight
- **Range of Motion** – PROM only, within limits below by repair type; **no pulley or cane-assisted elevation**

Small/Medium	Elevation	External Rotation	Sling
Weeks 0–2	—	—	24/7 except hygiene
Weeks 2–4	0–90°	0–30°	24/7 except hygiene & exercises
Weeks 4–6	0–120°	0–45°	Wean from sling

Large/Massive	Elevation	External Rotation	Sling
Weeks 0–4	—	—	24/7 except hygiene
Weeks 4–6	0–90°	0–30°	24/7 except hygiene & exercises
Weeks 6–8	0–120°	0–45°	Wean from sling

Isolated Subscapularis	Elevation	External Rotation	Sling
Weeks 0–3	0–90°	0° (neutral)	24/7 except hygiene & exercises
Weeks 3–6	0–90°	0–30°	Wean from sling

- **Precautions:**

- Isolated subscapularis repair: follow subscapularis table above; no IR stretching or resisted IR in Phase I
- No passive tension across the repair (no cross-body adduction for supraspinatus/infraspinatus repairs)
- No ROM behind the back (no hand slides up the spine)
- No driving on narcotic pain medication; sling must be worn when driving unless cleared by our office
- May shower 5 days after surgery; suture removal 10–14 days postop; no bathing/swimming until wounds healed
- Ice and elevation with medication for pain and swelling control
- Return to work as determined by MD/PT based on work demands

- **Therapeutic Exercises**

- Elbow, wrist, and hand AROM without weight
- If biceps tenodesis/tenotomy: PROM (opposite arm assisted) for elbow flexion and supination for the first 4 weeks
- Posture – seated/standing thoracic extension, scapular sets (retraction to neutral, depression, protraction), cervical ROM/upper trapezius stretch as needed
- Pendulums – small circles:
 - Small/Medium: supported by non-operative arm for 3 weeks, then unsupported
 - Large/Massive: supported through 6 weeks, then unsupported
- Passive ROM – begins at **2 weeks (Small/Medium)** or **4 weeks (Large/Massive)**; 10 reps × 10-second holds, 3 times daily:
 - Elevation – seated, standing, or table-top supported in the scapular plane; or supine self-assisted
 - ER – seated or supine self-/wand-assisted in the scapular plane
- Grade I/II mobilization as indicated for pain relief
- Aquatic therapy after **4 weeks (Small/Medium)** or **6 weeks (Large/Massive)** – shoulders fully submerged, slow active motion within ROM limits

- **Goals:** Protect repair; control pain and swelling; achieve staged PROM limits; establish a stable scapula
- **Criteria to Progress:** Adherence to precautions, staged PROM goals achieved, minimal to no pain

☐ **Phase II – Motion Recovery (Weeks 6/8–12)**

- **Sling:** Discontinued – Small/Medium by week 6; Large/Massive by week 8

- **Activity:** May use arm actively at waist level with minimal weight ("nothing heavier than a coffee cup"); not at or above shoulder height until mechanics are normal and pain-free. No supporting body weight with arms; no excessive behind-the-back movement
- **Range of Motion** – Progress PROM to full, then AAROM, then AROM; avoid "scapular shrug" with elevation
- **Therapeutic Exercises**
 - Thoracic extension and scapular set prior to all passive/active exercise
 - PROM to tolerance with gentle overpressure in all planes; may begin gentle cross-body adduction, hand slide up spine, and ER at 90° abduction in scapular plane
 - Grade III/IV glenohumeral mobilization, anterior/posterior only, as needed; **no inferior glides or distraction until after 12 weeks**
 - AAROM: supine cane-assisted forward elevation (bent, then straight elbow), then inclined table top, then wall-supported, then unsupported vertical
 - AROM: side-lying ER; prone extension to hip ($\leq 20^\circ$ extension) with scapular retraction; supine serratus punches; supine long-lever motion from balanced position
 - Submaximal isometrics (ER, IR, abduction, flexion, extension) if not tolerating active progression
 - Rhythmic stabilization supine at 90° elevation, progressing force and to 60°, 120°, 150°
 - Manually resisted scapular protraction/retraction in side-lying
 - Aquatics: no range restrictions; may add cross-body adduction
- **Goals:** Restore full PROM; normalize AROM without overstressing healing tissue; minimize pain and inflammation
- **Criteria to Progress:** Full PROM; AROM elevation with normal mechanics (no shrug/substitution); pain $< 2/10$ with exercise and ADLs

☐ **Phase III – Strengthening (Months 3–6)**

- **Activity:** Light use at/above shoulder level if mechanics remain normal; lift up to 10 lbs below shoulder level; gradual return to ADLs, work, and recreation (particularly repetitive/overhead activities)
- **Strengthening:** Begin resistance at **12 weeks (Small/Medium)** or **~16 weeks (Large/Massive)**, and only once full AROM with normal mechanics is achieved
- **Therapeutic Exercises**
 - UBE warm-up
 - End-range stretching/mobilization as needed, especially posterior capsule (cross-body adduction, sleeper stretch with scapula stabilized, ER $> 90^\circ$ for throwers/tennis)
 - Rotator cuff: "full can" scaption (to 90°, then full range; max 3–5 lbs); ER/IR with weights or theraband, below then above shoulder level; high reps (30–50) with low resistance (1–5 lbs), progress by 1 lb when easy and painless
 - Scapular stabilization: prone or standing extension and horizontal abduction with ER; supine serratus presses; serratus wall presses, progressing to incline weight bearing when controlled without winging
 - Biceps curls with weight may begin if biceps tenodesis was performed
 - Deltoid: forward and lateral raises (bent elbow, to 90°) with light weight
 - Weight machines (chest press, lat pull-down, seated row) anterior to the plane of the body only; low resistance, high reps
 - PNF diagonals, supine, then standing, then seated on ball; progress to theraband/hand weights
 - Aquatics: full motion with cupped hand, then gloves/paddles, then increased speed
 - Overhead athletes/laborers: plyoball chest passes on mini-trampoline; body blade; sport-specific simulation with theraband/body blade
- **Return to Work/Sport Criteria:** Physician clearance; pain-free at rest with minimal pain during activity simulation; sufficient ROM and strength with normal mechanics