Rotator Cuff Repair Therapy Protocol

DR. EASTWOOD

All information contained in this protocol is to be used as general guidelines only. Specific variations may be appropriate for each patient and may be specified by the physician. In all cases, it is acceptable to advance the program more slowly than stated. If excessive pain is experienced by the patient, discontinue exercises until the physician is contacted.

Staged ROM Goals = Approximate ROM targets; *specific limits may be specified by the physician.*

	PFE	PER at 20˚ ABD	PER at 90˚ ABD	AFE
POD 1	60˚	0˚-20˚	NA	NA
POW 1	100˚	10˚-30˚	NA	NA
POW 3	125˚	30˚-45˚	NA	NA
POW 6	145˚	45˚-60˚	45˚	NA
POW 9	155˚	WNL	75˚	120˚
POW 12	WNL	WNL	WNL	145˚+

POSTOPERATIVE PHASE I:
(0-6 Weeks)

GOALS

- Minimize pain and inflammatory response
- Maximally protect the surgical repair
- Achieve staged ROM goals
- Establish stable scapula
- Patient education in postoperative precautions

POSTOPERATIVE DAY 1

- Elbow, wrist and hand AROM with no weight (EWH)
- Scapula elevations and retractions (no weight done in or out of the sling
- Passive forward elevation in plane of scapula (PFE) to minimal discomfort; 5-10 reps 2x day. (Patient supine posterior arm supported with family member or therapist lifting the arm.)
- Sitting passive external rotation (PER) in slight abduction and forward elevation; to minimal discomfort, 5-10 reps, 2x day with cane
- Pendulum exercise (lean over table a comfortable amount, let the arm hang down being relaxed and keep the body still)
- Ice for pain reduction
- Positioning full time in sling. Assure sling supports arm adequately and wrist is supported.
- **C-spine AROM
- **Supine PROM by therapist within comfort ROM to decrease muscle guarding and gain patient confidence (no mobilizations)
- *Cautions: make sure PROM is gentle enough to minimize/eliminate muscle guarding/splinting muscles*

If you have any problems or questions, please call your doctor's office (8am-5pm).

Answering service for after hours.

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POSTOPERATIVE WEEKS 1-4

- Continue EWH and C-spine ROM
- Scapula elevations and retractions (no weight) done in or out of the sling
- Continue pendulum exercise
- Continue PFE sitting with family member to achieve staged ROM goals; 7-15 reps 2x day
- Continue PER sitting with family member to achieve staged ROM goals; 7-15 reps 2x day
- Ice/cryotherapy for pain reduction
- Patient education
  - Sling use full-time in community, or as instructed by the physician
  - OK to use arm for light waist-level activities as comfortable. Make sure pain level is not increasing due to excessive use of arm for ADLs.
  - **Supine PROM by therapist within comfort ROM to achieve staged PROM goals (no mobilizations)
  - **Moist heat before exercise
  - **Manual scapula strengthening
  - **Modalities for pain control PRN
- *Cautions: assure that there is no severe pain with PFE, PER exercises*

POSTOPERATIVE WEEKS 5-6

- EWH and C-spine ROM PRN (no weight)
- Scapula elevations and retractions (no weight)
- Continue pendulum
- Continue PFE sitting with family member progressing to cane, rope and pulley AAFE and supine/sitting
- AAFE as tolerated once approximately 120° FE is achieved, UBE AAROM/PROM
- Continue PER sitting with family member assist to achieve staged ROM goals
- Continue patient education as above
- Supine PROM by therapist within comfort ROM to achieve staged PROM goals (no mobilizations)
- Moist heat/ice
- **Aquatic therapy for gentle pain-free AAROM (no swimming strokes)
- **Beginning scapula strengthening (prone rowing to neutral)
- **Muscle activation exercises (exercises that activate shoulder girdle muscles to a low level without creating significant muscular force)
  - Dusting: patient sits in chair with hand grasping a cloth on a table that is at about waist level. Slide hand forward/back in pain-free motion while working to maintain scapula stability.
  - Sitting active ER/IR small pain-free motion keeping elbow near waist level (pillow below arm and trunk)
  - Beginning stability exercises (submaximal RTC isometrics, rhythmic stabilization, supine 90°-100° or prone pendulum position)
- **Modalities PRN
- **Trunk stabilization/strengthening
- **Discontinue use of sling @ 6 weeks
- *Cautions: do not initiate scapula strengthening or muscle activation exercise until overall pain level is low and exercises can be completed without increasing signs and symptoms*

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POSTOPERATIVE PHASE II:
(6-12 Weeks)

GOALS

- Achieve staged ROM goals
- Minimize shoulder pain
- Normalize AROM
- Begin to increase strength and endurance
- Increase functional activities

POSTOPERATIVE WEEKS 7-9

- Achieve staged ROM goals in FE
- Achieve staged ROM goals in ER at 20˚
- Initiate posterior capsular stretching/sleeper stretch
- Initiate stretching in 70˚-90˚ if abduction and supine hand-behind-head stretch
- Muscle activation exercises (as described above) with towel below arm and trunk
- Initiate base-strengthening progression (BSP) (standard rotator cuff, deltoid and scapula strengthening program. Performed with light resistance and increasing repetitions, 2x day at most).
  - Yellow TheraBand® ER, IR use 3-4-foot length of and, light to no pretension in a 3-6-inch arc of motion
  - Yellow TheraBand® anterior deltoid (AD); use 3-4-foot length of band; light to no pretention in a 3-6-inch arc of motion start with elbow bent and by the side, band tied behind patient, reach forward with hand at waist level; over time reach forward to hand at chest level
  - Scapula strengthening for scapula retractions, serratus anterior and scapula upward rotators with arms supported @ 45˚-90˚ FE
  - Low-level closed chain strengthening
  - *No prone forward elevation, or external rotation*
- Overhead strengthening progression (OSP) (usually start 1-3 weeks after successful initiation of base-strengthening program)
  - Definitions: A stepwise progression in difficulty of strengthening exercises to progress from PFE to full AFE against gravity
  - All exercises are done in the plane of the scapula (FE)
  - Strengthening cuff, deltoid and scapula upward rotators overhead elevation
  - If scapula or glenohumeral substitutions cause pain, choose easier exercises in the progression
  - There is some variability in the exercise sequence
  - Exercises:
    - Dusting
    - Rope and pulley AAFE
    - TheraBand® supine FE (start in 90˚, pull involved arm into FE)
    - Wall walk AAFE (assure the patient is in FE not flexion)
    - Ball roll on the wall at 90˚ FE
    - Cane AAFE with assisted or independent eccentric lowering
    - Overhead wall taps
    - Active forward elevation
- **Moist heat/ice
- **Modalities PRN
- **PROM by therapist to achieve staged ROM goals with mobilizations PRN
- **Aquatics for AAROM (Phase 1), AROM and light strengthening (Phase 2)

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- **Spine therapy assessment/mobilization if nonneurogenic cervical or scapula pain or if limitation in end-range shoulder FE (PRI postural restoration techniques)
- **Trunk stabilization/strengthening
- *Cautions: do not initiate base-strengthening program or overhead strengthening progression until overall pain level is low and assure these exercises do not increase signs and symptoms*

POSTOPERATIVE WEEKS 10-12

- Same as above except also OK to add
- Initiate functional IR AAROM/stretching as tolerated
- Once AFE WNL without pain, OK to add 1-3 pounds for resistance depending on patient body size
- **Light PNF for cuff/deltoid/scapula (rhythmic stabilization or slow reversal hold)
- **Golf chipping and putting
- **Aquatic therapy OK to add light breaststroke
- *Cautions: strengthening program should progress only without signs of increasing inflammation*
- *Strengthening program should emphasize high repetitions, low weight and should be performed a maximum of 3-5x per week, per patient pain tolerance*

POSTOPERATIVE PHASE III: (3-8 Months)

GOALS

- Normalize PROM
- Normalize strength, endurance and power
- Return to full ADLs, work and recreational activities

POSTOPERATIVE MONTHS 3-5

- PROM/stretching PRN/warm-up stretching
- Continue base-strengthening program + AFE with 1-3 pounds
- Initiate the advanced strengthening progression (ASP) PRN
  - Strict criteria to start program
    - MMT at least 4+/5 of shoulder girdle
    - Pain free with basic ADLs and the base-strengthening program
    - Full active forward elevation
    - Goals of returning to sports, heavy labor or repetitive/heavy overhead work
    - Use following principles to develop exercises to gradually progress patient from current level of functioning to desired goals
      - Decrease amount of external stabilization provided to shoulder girdle
      - Integrate functional patterns
      - Increase speed of movements
      - Integrate kinesthetic awareness drills into strengthening activities
      - Decrease in rest time to improve endurance
      - Prone strengthening PRN
      - Train larger UE muscles smartly

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- Sample exercises
  - TheraBand® standing PNF patterns
  - TheraBand® 90˚/90˚ ER/IR with or without arm support
  - TheraBand® batting, golf or tennis forehand/backhand simulation
  - Weighted shoulder shrugs
- **Return to golf progression (OK to do without advanced strengthening progression)
- **Modalities PRN
- **Therapist stretching/mobilization PRN
- **Spine therapy assessment/mobilization if nonneurogenic cervical or scapula pain or if limitation in end-range shoulder FE
- **Isokinetic strengthening
- **Truck stabilization/strengthening

POSTOPERATIVE MONTHS 4-8

- Same as above + OK to add
- Transition to maintenance deltoid/cuff/ and scapula-strengthening program
- Plyometric program (PRN)
  - May begin after 3-6 weeks of advanced strengthening program
  - Do not begin until 5/5 MMT for rotator cuff and scapula
  - 2-3x week only
  - Begin with beach ball/tennis ball progressing to weighted balls
  - Progressions
    - 2-handed tosses—waist level
      —overhead
      —diagonal
    - 1-handed drop/catch drills
    - 1-handed tosses (vary amount of abduction, UE support, amount of protected ER)
- May begin other interval sport programs after 3-6 weeks of plyometrics (once approved by physician)
- Initiate progressive replication of demanding ADL/work activities
- Initiate modified return to weight-lifting program (once approved by physician)
- *Cautions: pain level high enough for modalities=decrease exercise or ADL intensity*

DISCLAIMER: These general rehabilitation guidelines are created by a physical and occupational therapist for the rehabilitation of various shoulder and elbow pathologies. These are to simply be used as guidelines. This information is provided for informational and educational purposes only. Specific treatment of a patient should be based on individual needs and the medical care deemed necessary by the treating physician and therapists. The University of Kentucky and the American Society of Shoulder and Elbow Therapists take no responsibility nor assume any liability for improper use of these protocols. We recommend that you consult your treating physician or therapist for specific courses of treatment.

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