SIDELINE ORTHOPEDICS AND SPORTS MEDICINE

540 552-7133• www.sidelineORTHO.com

# Rotator Cuff Repair Therapy Protocol

**Bart Eastwood D.O.**
**250 South Main St.**
**Suite 224A**
**Blacksburg, VA 24060**
**540-552-7133**

*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˚+ |

**PHASE I:**

Goals:

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

POD 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 w/ 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 hand down being relaxed and keeping the body still)

SIDELINE ORTHOPEDICS AND SPORTS MEDICINE
540 552-7133• www.sidelineORTHO.com

# Rotator Cuff Repair Therapy Protocol

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 w/ in 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*

POW 1-POW 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 w/ family member to achieve staged ROM goals; 7-15 reps 2x day
Continue PER sitting w/ 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 ADL's.
- **Supine PROM by therapist w/ in 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 w/ PFE, PER exercises*

POW 5- POW 6:

EWH and C-spine ROM PRN no weight
Scapula elevations and retractions (no weight)
Continue pendulum
Continue PFE sitting w/ 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 w/ family member assist to achieve staged ROM goals
Continue patient education as above
Supine PROM by therapist w/ in 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 w/ out creating significant muscular force)

- Dusting: patient sits in chair w/ hand grasping a cloth on a table which is at about waist level. Slide hand forward/ back in pain free motion while working to maintain scapula stability

# Rotator Cuff Repair Therapy Protocol

- 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 w/out increasing signs and symptoms.

**PHASE II:**

Goals:

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

POW 7-POW 9:

Achieve staged ROM goals in FE
Achieved 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 T-band ER, IR' use 3-4 feet length of and, light to no pretension in a 3-6 inch arc of motion
- Yellow T-band anterior deltoid (AD); use 3-4 feet length of band; light to no pretention in a 3-6 inch arc of motion start w/ elbow bent and by the side, band tied behind patient, reach forward w/ 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)

# Rotator Cuff Repair Therapy Protocol

- Definitions: A stepwise progression in difficulty of strengthening exercises to pregress 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 or pain, choose an easier exercises in the progression
- There is some variability in the exercise sequence
- Exercises:
    - Dusting
    - Rope and pulley AAFE
    - T-band supine FE (start in 90˚, pull involved arm into FE)
    - Wall walk AAFE (assure the patient is in FE not flexion)
    - Bal roll on the wall at 90˚ FE
    - Cane AAFE w/ assisted or independent eccentric lowering
    - Overhead wall taps
    - Active forward elevation

**Moist heat/ ice
**Modalities PRN
**PROM by therapist to achieve staged ROM goals w/ mobilizations PRN
**Aquatics for AAROM (phase 1), AROM, and light strengthening (phase 2)
**Spine therapy assessment/ mobilization if non neurogenic cervical or scapula pain or if limitation in end-range shoulder FE, (PRI postural restoration techniques)
**Trunk stabilization/ strengthening
Cautions: do not initiates base strengthening program or overhead strengthening progression until overall pain level is low and assure these exercises do not increase signs and symptoms

POW 10- POM 3:

Same as above except also ok to add
Initiate functional IR AAROM/ stretching as tolerated
Once AFE WNL w/out pain ok to add 1-3 lbs 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 breast stroke
*Cautions: strengthening program shoulder progress only without signs of increasing inflammation. Strengthening program should emphasize high repetitions, low weight, and shoulder be performed a maximum of 3-5x per week, per patient pain tolerance.*

**PHASE III:**

Goals:

Normalize PROM
Normalize strength, endurance and power

# Rotator Cuff Repair Therapy Protocol

Return to full ADL's, work and recreational activities

POM 3- POM 5:

PROM/ stretching PRN/ Warm-up stretching
Continue base strengthening program + AFE w/ 1-3 lbs
Initiate the Advanced Strengthening Progression (ASP) PRN

- *Strict criteria to start program*
  - MMT at least 4+/5 of shoulder girdle
  - Pain free w/ basic ADL's and the base strengthening program
  - Full active forward elevation
  - Goals of returning to sports, heavy labor or repetitive/ heavy overhead work
  - Use to following principles to develop exercises to gradually progress patient from current level of functioning to desired goals
- *Exercise Principles*
  - 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
- *Sample Exercises*
  - T-band standing PNF patterns
  - T-band 90/90 ER/ IR w/ or w/out arm support
  - T-band batting, golf or tennis forehand/ backhand simulation
  - Weighted shoulder shrugs
- **Return to golf progression (ok to do w/out advanced strengthening progression)
- **Modalities PRN
- ** Therapist stretching/ mobilization PRN
- **Spine therapy assessment/ mobilization if non neurogenic cervical or scapula pain or if limitation in end-range shoulder FE
- **Isokinetic strengthening
- **Truck stabilization/ strengthening

POM 4- POM 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

SIDELINE ORTHOPEDICS AND SPORTS MEDICINE
540 552-7133• www.sidelineORTHO.com

# Rotator Cuff Repair Therapy Protocol

- Begin with beach ball/ tennis ball progressing to weighted balls
- *Progressions*
  - A. 2-handed tosses—waist level
    --overhead
    --diagonal
  - B. 1-handed drop/ catch drills
  - C. 1-handed tosses (vary amount of abduction, UE support, amount of protected ER)

May begin other Interval Sport Programs after 3-6 wks 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*