

PECTORALIS MAJOR REPAIR

Physical Therapy, Strength and Conditioning

PHASE I: MAXIMUM PROTECTION (WEEKS 0 TO 2)

Goals

- 1 x visit to educate on basic home program addressing below, then hold on formal therapy until 2 weeks
- Reduce inflammation
- Decrease pain
- Postural education

Exercise Progression

- No shoulder motion x 2 weeks
- Sling (Breg Slingshot 3) for 6 weeks
- Ice and modalities to reduce pain and inflammation.
- Cervical ROM and basic deep neck flexor activation (chin tucks).
- Instruction on proper head neck and shoulder (HNS) alignment.
- Active hand and wrist range of motion.
- Encourage walks and low intensity cardiovascular exercise to promote healing.

Manual Intervention

- STM—global shoulder and CT junction.
- ST mobilizations.

PHASE II: PROGRESSIVE STRETCHING (WEEKS 2 TO 6)

Goals

- Continue sling with focus on maintaining shoulder internal rotation
- Avoid active motion through shoulder
- Postural education

Exercise Progression

Weeks 2-4

- Pendulums
- Wrist and elbow ROM
- Avoid active movement in all directions
- PROM: ER to 0 degrees in neutral Flex to 45 degrees
- Increase ER 5 degrees/wk, Flex 5-10 degrees/wk

Weeks 4-6

- PROM: add abduction to 30 degrees increase 5 degrees/wk
 - PROM Goals at end of week 6:
 - Flexion 75 degrees
 - Abduction 35 degrees
 - ER 0 degrees with 15 degrees of abduction

- Scapular clocks, retraction, depression, protraction
- Scapular PNF
- Scapular mobility
- Begin table weight shifts for weight bearing through UEs
- Grades I-II (anterior, posterior, distraction) oscillatory joint mobilizations
- Stationary bike with immobilizer
- Submaximal Isometrics(except IR) @ 5 weeks

Manual Intervention

- STM—global shoulder and CT junction.
- Scar tissue mobilization.
- Graded GH mobilizations.
- ST mobilizations.

PHASE III: INITIATE AAROM AND AROM (WEEKS 6 TO 8)

Goals

- 75% PROM without pain
- AAROM flexion, abduction, ER, IR without scapular or upper trap substitution
- Tolerate PRE's for scapular stabilizers and shoulder complex
- No reactive effusion

Exercise Progression

- Initiate AAROM-progress to AROM as tolerated toward 8th week
- Can push PROM ER beyond 40 degrees
- Grade III sustained joint mobilizations for capsular restriction
- Isometrics-flexion, extension, abduction, ER, horizontal abduction
- Progress scapular strengthening
- Can progress weight bearing to quadruped, tripod (1UE +2LE)
- Avoid active adduction, horizontal adduction, IR

Manual Intervention

- STM and Joint mobilization to CT junction, GHJ and STJ as needed.
- CR/RS to gain ROM while respecting repaired tissue.
- Manual perturbations.
- PNF patterns.

PHASE IV: STRENGTHENING AND PLYOMETRIC DRILLS/RETURN TO WORK/SPORT (WEEKS 12 TO 24)

Goals

- Full AROM without pain
- Increased strength proprioception with exercise without increase in symptoms

Exercise Progression

Weeks 8-14

- Gain full ROM through stretching and grade III mobilizations
- Active flexion, abduction, adduction strengthening
- Progress scapular strengthening and progress rotator cuff strengthening avoiding IR
- Begin submax pectoralis strengthening
- Wall pushups progressing to table pushups, uneven surfaces
- Dynamic stabilization, perturbations, weight bearing planks on hands
- Active ER, horizontal abduction- not to end range

Weeks 14-24

- Progress scapular and rotator cuff strengthening- including IR
- Single arm pectoralis major strengthening- therabands then progress to dumbbell bench press with light weight/ high reps, avoiding a wide grasp, and end range ER/ABD.
- Pushups- avoiding humeral abduction beyond frontal plane
- Progress into UE plyometrics- eg. wall taps, chest pass (bilateral)
- PNF D1, D2

Weeks 24-On

- Continue progressive strengthening
- Return to Sport When:
 - Tolerate high level of strengthening and plyometrics without an increase in symptoms
 - Tolerate/progress single arm strengthening of pec
 - No pain with any strengthening activities