Pectoralis Major Repair Rehabilitation Protocol

**PHASE 1: WEEKS 0-6**

Restrictions

*No active range of motion exercises before 6 weeks.*

AAROM permitted at 4 weeks with good ROM, good quality tissue at repair site and minimal pain

Passive ROM exercises only (Ranges dictated by safe shoulder motion in the operating room)

- 90° of forward flexion
- 30° of external rotation with the arm at the side
- 80° of abduction without rotation
- Neutral internal rotation

No strengthening/resisted motions of the shoulder until 6 weeks after surgery minimum. Isometric strengthening, progressing to theraband exercise, may begin at 8 weeks.

Immobilization

Sling: at all time, even with sleep, for the first 4 weeks. This keeps repair in IR and adduction and protects interface.

Pain control

Reduction of pain and discomfort is essential for recovery

Medications

- Narcotics: for 7-10 days after surgery
- NSAIDs: for patients only with persistent discomfort after surgery (elder- consider COX2)
  
Use NSAIDs cautiously, esp in first 2-4 weeks.

Therapeutic modalities

- Ice, ultrasound, HVGS (high-voltage galvanic stimulation)
- Moist heat before therapy; ice at the end of the session

Motion: Shoulder

Passive only

OK to do pendulums immediately

Exercises

Begin Codman pendulum exercises to promote early motion

Passive ROM exercises only

Motion: Neck and shoulder girdle

*Neck ROM and shoulder girdle motion per pt preference.*

Motion: Elbow

Passive; progress to active motion

0-130°

Pronation and supination as tolerated
Muscle strengthening
Grip strengthening only
With partial or small non-displaced tears of the tendon, active internal and external rotation exercise with the arm at the side, and isometric internal and external rotation strengthening can begin during phase 1, when postoperative pain has been controlled.

PHASE 2: WEEKS 6-12

I. Criteria for progression to phase 2
   A. At least 4-6 weeks of recovery has elapsed
   B. Painless passive ROM exercises to:
      90° of FF
      30° of external rotation
      80° of abduction
   C. No open chain strengthening/resisted motions of the shoulder until 12 weeks after surgery

II. Immobilization
    A. Discontinuation of sling or abduction orthosis
    Utilize for comfort only

III. Motion: Shoulder
    **Note: full ROM can begin at 4 weeks if the above criteria have been met.
    A. Goals
       1. 90° of forward flexion; progress to 160°
       2. 30° of external rotation; progress to 70°
       3. 90° of abduction; progress to 150°
    B. Exercises
       1. Continue with passive ROM exercises to achieve above goals
       2. Begin active assisted ROM exercises for the above goals
       3. Progress to active ROM exercises as tolerated after full motion achieved with active assisted exercises
       4. Light passive stretching at end ranges of motion

IV. Muscle strengthening
    6-8 weeks: Closed chain exercises, scapular stabilization
    Progress to open chain, slow controlled resistance
    8-9 weeks: + open chain resistance exercises, controlled, eccentric control.
    ECCENTRIC CONTROL is critical from 6-12 weeks. No terminal bounce. Concentric power to be emphasized after 9-10 weeks.

PHASE 3: MONTHS 3-6

I. Criteria for progression to phase 3
   A. Painless active range of motion
   B. No shoulder pain or tenderness
   C. Satisfactory clinical examination

II. Goals
   A. Improve shoulder strength, power, and endurance
   B. Improve neuromuscular control and shoulder proprioception
   C. Prepare for gradual return of functional activities
D. Establish a home-exercise maintenance program that is performed at least 3 times per week for strengthening

E. Stretching exercises should be performed daily

III. Motion
A. Achieve motion equal to contralateral side
B. Utilize passive, active assisted, and active ROM exercises
C. Passive capsular stretching at end ranges of motion, especially cross-body (horizontal) adduction and internal rotation to stretch the posterior capsule

IV. Muscle strengthening
A. Strengthening of the rotator cuff and pectoralis major