

## Physical Therapy Protocol: Pectoralis Major Repair

### Philosophy:

The pectoralis major repair protocol is a soft tissue post-op program which allows injured patients to recover as completely as possible. The emphasis for these individuals is progression to work/sport-specific activities as quickly and safely as possible. Our program begins with early rest of the repair, followed by a progression to strengthening and then shoulder function. These are mainly open repairs and so they are progressed slowly to avoid catastrophic failure. Individual variations will occur depending on surgeon input and patient response to treatment. An excellent result cannot be established without the patient following the therapist's instructions.

### *Phase I, surgery to 4 weeks*

#### OSMS appointments:

- Medical appointment at 4-10d with films
- Rehabilitation will begin as directed by your physician and as indicated on your rehabilitation order

#### Rehabilitation Goals:

- Protect the muscular repair
- Cryotherapy unit to the shoulder: twenty minutes every two hours to reduce swelling

#### Precautions:

- Sling for soft-tissue healing for 6-8 weeks total.
- OK for limited removal of the sling in safe environments at 4 weeks
- Avoid active shoulder movement in all planes

#### Suggested Therapeutic Exercises:

- Hand gripping
- Elbow, forearm and wrist ROM
- Cervical spine & scapular active ROM
- Desensitization for axillary n distribution
- Postural exercises
- Shoulder pendulums

#### Cardiovascular Exercises (with sling on):

- Walking

#### Progression Criteria:

- Negative impingement pain or shoulder apprehension

## *Phase II, 4-6 weeks*

### **OSMS appointments:**

- MD appointment at 6 weeks
- Rehabilitation appointments every 5-7 days

### **Rehabilitation Goals:**

- Begin PROM in all planes, with eventual normal scapulothoracic movement
- Begin proprioceptive and dynamic neuromuscular control training
- Strengthen shoulder and scap stabilizers
- Discontinuation of sling at 6-8 weeks

### **Precautions:**

- Avoid shoulder ER and horizontal abduction (by progression, no more than 40° ER allowed)
- No swimming, throwing or overhead serves
- Avoid activities that have risk for falls

### **Suggested Therapeutic Exercises:**

- Resisted forward flexion
- Scapular mobility & stabilization exercises (shrugs, rows, etc.) and neuromuscular control
- Scapular PNF patterns
- Begin table weight shifts progressing UE weight-bearing
- Gentle shoulder mobilizations as needed
- PROM in all planes-assessing scapular rhythm
- Begin grades 1-2 (anterior, posterior distraction) oscillatory joint mobilizations
- Core strengthening

### **Cardiovascular Exercises:**

- Walking or stationary bike
- Impact exercises are only allowed once the patient exhibits full RTC strengthening in neutral position (to avoid distractive forces when landing)

### **Progression Criteria:**

- 75-100% PROM shoulder

## *Phase III, 6-8 weeks*

### **OSMS appointments:**

- Rehabilitation appointments every 5-7 days

### **Rehabilitation Goals:**

- Begin AAROM in all planes, with eventual normal scapulothoracic movement
- Begin proprioceptive and dynamic neuromuscular control training
- Strengthen shoulder and scap stabilizers
- Discontinuation of sling at 6-8 weeks

### **Precautions:**

- Shoulder ER allowed beyond 40° ER
- No swimming, throwing or overhead serves

### **Suggested Therapeutic Exercises:**

- Progress to AROM as tolerated at week 8 with T-bars/pulleys
- Submaximal pain-free isometrics (flexion, ext, abduction, ER, horizontal abduction)
- PROM in all planes-assessing scapular rhythm
- Begin grade 3 sustained joint mobilizations
- Progress weight-bearing to quadruped and tripod (1UE+2LE)
- Core strengthening

### **Cardiovascular Exercises:**

- Walking, Stairmaster, or stationary bike

### **Progression Criteria:**

- 75-100% AAROM shoulder without pain
- Tolerate PRE's for scapular stabilizers and shoulder complex
- No reactive effusion

## *Phase IV, 8-24 weeks*

### **Rehabilitation Goals:**

- Full shoulder and scapular ROM, all planes
- 5/5 RTC strength at 90 degrees
- 5/5 per-scapular strength

### **Precautions:**

- Avoid wide grasp bench press
- Avoid push-ups with humeral abduction beyond frontal plane
- Avoid 1 repetition max for bench press
- Avoid IR strengthening until 12 weeks



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### **Suggested Therapeutic Exercises:**

- Progress to FROM through stretching and grade 3 joint mobilizations
- Begin submaximal pec strengthening
- Wall push-up progressing to table push-ups/uneven surfaces
- Dynamic stabilization
- Perturbations
- Weight-bearing planks on hands
- Closed chain stabilization with narrow base support

### **Progression Criteria:**

- After 12 weeks, ok to progress to TheraBand pec major strengthening, then dumbbell; progress into UE plyometric wall taps and chest pass
- After 18 weeks, ok to progress throwing/OH athletic movements
- After 24 weeks, ok to progress bench press and push-up goals as tolerated

### **References:**

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