

## SCAPULAR MUSCLE TRAINING PROGRAMS

### PHASE I: ACUTE PHASE

**Goal:** Minimize further injury to tissues

**Focus:**

1. Promote scapular and glenohumeral muscle activation working synchronously and without substitution.
2. Restore passive mobility.

**Specifics:**

Core/Lower Extremity

- Stretches for hip
  - Hip flexors



- Hip rotators



- Hip adductors



- Standing resisted hip strengthening with tubing
  - Extension
  - Abduction
  - Hip flexion

- Begin functional core strengthening (for balance and control) such as
  - Stepping back and up onto platform without UE support



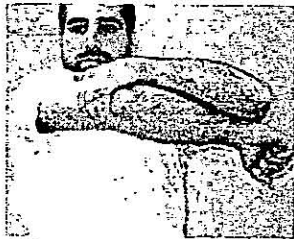
- Assume “power position” and hold for 3 seconds

- Assume “cocked arm” position as in Figure 11 and hold scapular squeeze for 3 seconds

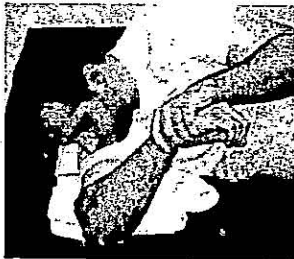


### Shoulder

- Stretches for posterior shoulder capsule
  - Cross body arm stretch with scapula stabilized against wall



- “sleeper stretch”



- Stretches for anterior musculature
  - Doorway stretch starting with arms by side and progressing to shoulder abduction 90 °



### Scapula

- Active scapula movement, especially retraction, with arm by side and no resistance
  - Watch for substitutions
- Progress to isometric scapular exercises
  - Low scapular retraction
  - Inferior glide scapular adduction

### **Criteria to progressing to Phase II:**

- Minimal or no pain with ADLs
- Demonstrate good voluntary control of scapula with minimal or no verbal cues
- Improved flexibility
- Demonstrate no loss of balance with standing hip exercises

### **PHASE II: RECOVERY PHASE**

**Goal:** Further strength core, lower extremity kinetic chain and unilateral scapular muscle balance.

**Focus:** Improve dynamic stability as well as proprioceptive and neuromuscular control.

### **Specifics:**

#### Core/Lower Extremity

- Stretching for hip flexors and rotators as in Phase I
- Progressive core strengthening
  - Prone hip extensions



- Backward lunge with trunk rotation to opposite side



- Dynamic stretches for hip
- Advanced hip strengthening such as resisted lateral walking



- Progressive functional core strengthening exercises such as
  - Resisted trunk rotation during throwing phases incorporating 3 second isometric holds at different phases of throwing



### Shoulder

- Continue stretches for shoulder from Phase I

### Scapula

- Initiate resisted scapular strengthening with bands, i.e.: low/mid/high rowing
- Initiate standing rotator cuff strengthening with bands.
  - Be sure to progress ER and IR from 0° of shoulder abduction to 90° shoulder abduction.
  - Vary stance from parallel feet to tandem stance
- Resisted scapular protraction in standing
- Resisted scapular retraction in standing

### Other

- Resisted wrist flexion and extension

### **Criteria for progressing to Phase III:**

- Minimal to no pain with all exercises
- Normal motor control of scapular and shoulder muscles without substitution
- Good flexibility during static and dynamic stretching

### **PHASE III: Functional/Advanced Strengthening**

#### **Goals:**

1. Incorporate sport-specific drills, including ballistic and endurance training.
2. Begin "Advanced Throwers Program."

### Core

- Dynamic stretching for core and hip flexors combined



- Initiate resisted "lifts" and "chops" in half kneeling and progress to staggered stance



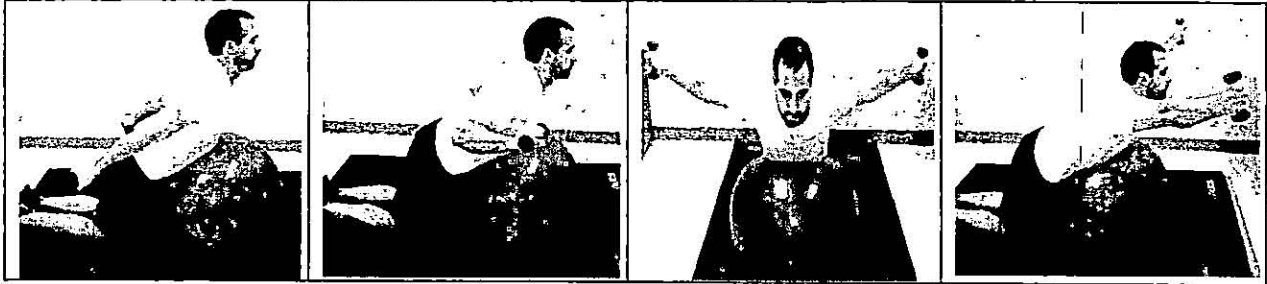
### Lower extremity

- Single-legged squats with knee straight and knee bent



## Shoulder/Scapula

- Focus on shoulder and scapular endurance exercises such as
  - Prone-lying over ball or bench and performing IWTY



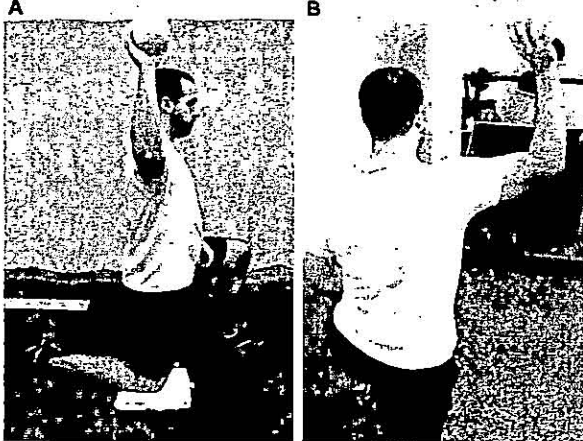
- Supine-lying on ball and performing scapula protraction



- Initiate plyometric 2-handed throws with medicine balls



- Progress to plyometric 1-handed throws with arm at 90/90



- Initiate eccentric strengthening such as
  - Prone 90/90 ball drops



- "Slow" throwing with weighted ball in half-kneeling position (see Fig 79-80)



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