Pearls and Pitfalls: Shoulder Rehabilitation for the Masters Athlete
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- I have no financial disclosures

What makes a Master’s Athlete Different?
- Generalized decreased mobility with age
  - Capsule and ligamentous
  - Muscle and Tendon
  - Posture Changes
- "Wear and Tear"
  - Osteoarthritis
  - Increased risk of rotator cuff pathology
  - Prior sports injury

What makes a Master’s Athlete Different?
Roger MA, Evans WJ (1993)
- Between 2nd and 7th decades
  - Muscle mass decline
    - 40% decline
  - Strength decline
    - 30% decline

Maintain or Regain Shoulder ROM
- Rotational motion is key
  - Some can tolerate a bit of a loss in end range flexion
    - Exception: swimmers
- Obstacles
  - Impingement positions
  - Degenerative changes in the GH joint
  - Previous athletic exposure

Pitfall
Previous Athletic Experience

- Tennis, Softball, h/o baseball in youth
  - Look for ITBOM deficit and GIRD
- Muraki et al. 2012
  - Anterior-superior migration of humeral head in flexion
  - Increased contact pressure
  - Subacromial arch, specifically the coracoacromial ligament
  - Swimming pull phase
  - Throwing and tennis follow through
- Muraki et al 2010
  - Posterior superior translation of humeral head in 90/90 position
  - Cocking position with throwing or tennis serve / overhead
  - Recovery phase of swimming

Range of Motion

- Low load, long durational emphasis
- Total End Range Time
- Avoid painful positions

Posterior Shoulder Stretches

Manual Stretching

Pitfall

- Rotator Cuff
  - Strengthening without proper Scapular Positioning and Stabilization

Posture

- Fighting Postures and recruitments patterns that have been reinforced through:
  - Work
  - Home computer use
  - Emphasis on chest in personal exercise program

"Now hold on just a minute.
Let’s not jump ahead of ourselves."
**Posture**
- Forward Head and Rounded Shoulders
  - Tight Pectorals
  - Weak and inhibited LT, MT, rhomboids
- Excessive Upper Trapezius Activation
- Decreased thoracic spine mobility

**Mobility and Flexibility**
- Thoracic Spine
  - Manual mobilizations and manipulation
  - Extension over chair
- Pec Minor
  - Foam roll stretch
    - Weights on shoulders
- Cervical Retraction

**Scapular Stabilization**
- Proper positioning of humeral head in glenoid
- Provide stable base for RC to function
  - Improve length-tension relationship
- Decrease risk of impingement of the RC and bursa
- Optimize force couples
  - Improve strength/activation ratios
    - Upper Trapezius / Serratus Anterior
    - Upper Trapezius / Lower Trapezius
    - Upper Trapezius / Middle Trapezius

**Manual Facilitation**
- Lower Trap
- Lower Trap and Posterior RC

**Periscapular Strengthening**
- Prone
  - Isometric Holds
    - 10 x 10 sec hold
    - 40 reps, maintain scapular retraction and depression
    - AG to 1-2 lbs
  - Cuing for LT activation throughout

**Advanced Scapular Stabilization**
- Prone "T" Series
- Prone "L-W-Y"
Caution with CKC Exercise

Serratus Anterior Strengthening
- Avoid / minimize joint compression of GH and AC joints
  - In patients with OA

Serratus Strengthening
- OKC or minimal weight bearing
  - Supine Punch
  - Dynamic Hug
  - Wall Slides
    - Add band for posterior RC

Pitfall
- Neglect to address:
  - Off season program
  - Pre-season conditioning
  - Importance of resistance training
    - Control over weight
    - Exercises to avoid
  - Don’t forget Core and Legs

Benefit of Strength Training
- Roger MA, Evans WJ (1993)
  - Older individuals adapt to resistive and endurance exercise training in a similar fashion to young people
- Pearson, SJ et al. (2002)
  - 85 y/o weightlifters were as strong as their 65 y/o matched controls
    - Age advantage of 20 years

Personal Exercise Program

Resistance Training
- Frequency
  - 2-3 x week (total body workout)
- Duration
  - 30-45 minutes
- Incorporate RC and periscapular strengthening
- Work push and pull / front and back equally
- Core and LE included

Thank You
• American College of Sports Medicine: Resistance Training for Health and Fitness. 2013
• Willoughby DS. ACSM Current Comment: Resistance Training and the Older Adult.