

SHOULDER INJURIES IN SWIMMING - DIAGNOSIS & PREVENTION

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1. Repetitive Overhead Motion

The shoulder is a very mobile, somewhat unstable joint made up of 3 bones - the humerus, scapula and clavicle. The strength & flexibility as well as movement pattern required with swimming, combined with the anatomy of the shoulder, leads to impingement & RTC Tendinopathy.

2. Postural Changes

An increase in normal thoracic kyphosis, loss of thoracic mobility, scapular protraction and internal shoulder rotation - are as a result of imbalances of the muscles used in swimming - i.e. the larger internal rotator muscles and the smaller external rotator and peri-scapular muscles.

3. Overtraining

F.I.T.T: (Frequency, Intensity, Time and Technique)

"Quality, not Quantity!" (Coach Brandon Oates)

PRESENTATION

The adolescent or teenaged swimmer often presents with a history of a recent growth spurt and an increase in the level of training and/or competition. Initially, the pain is only noted during or immediately after swimming.

On occasion, the pain can be associated with a particular position or phase of the stroke. As the athlete tries to swim "through the pain," it may worsen to the point where it affects non-swimming shoulder activities and eventually may be noted at rest or at night. The condition often improves with rest, but then recurs with a return to swimming if the rotator cuff has not healed or been sufficiently strengthened.

Symptoms include but are not limited to: stiffness, a decrease in strength and ROM, and pain that is often poorly localized, felt to be deep within the shoulder and may include referral to the upper arm and even wrist. Secondary symptoms may also develop such as pain or discomfort in the chest, upper back and neck, and headaches.

** A reproducible click or painful catch may indicate the possibility of a tear in the Glenoid Labrum, the rim of cartilage that surrounds the socket to help stabilize the shoulder.

TIPS FOR PREVENTION

- * proper training - volume and technique
- * warm-ups and dynamic stretches before training/competition
- * cool downs and static stretches following training/competition
- * improve scapular/shoulder girdle stabilization
- * maintain strong and balanced rotator cuff

KEY STRETCHES: (2-3x each for 15-30 seconds per - **after exercise!!!**)

- * lateral flexion C/S
- * anterior chest/pec
- * posterior capsule
- * wall slide lateral flexion/lats
- * towel dry (Apley Shx Stretch)

THORACIC SPINE MOBILIZATION/STRETCHES & EXERCISES

- * Extensions/sloppy push-ups
- * Cat Arches
- * Supine Arms - on floor or ball
- * Plus Exercise - quad, push-up position or on ball
- * Scapular End Range

SCAPULAR STABILIZATION/ROTATOR CUFF EXERCISES

- * External/Internal Rotation - standing or side lying
- * Standing 3-Way
- * Bilateral Blackburn - 3 positions
- * Field Goal
- * Ball on the Wall
- * Front Lat Pulls - sit up tall and bring bar to chest
- * Seated Rows - bands or machine and maintain neutral spine

And Don't Forget the Core!

- * Bird Dog
- * Dead Bug
- * 1/2 Superman

TRAINING DO'S AND DON'T'S!!!

- * No bench pressing with a straight bar - use dumbbells
- * No lat pull downs behind the head - pull to chest with slight lean back
- * No upright rows
- * No military/overhead presses
- * No empty can exercises
- * RTC exercises use 1-2 lbs to start and never more than 5lbs
- * RTC exercises should be 2-3 sets @ 10-12 reps and gradually increase to 30 reps before changing weight - then start back at 10-12 reps again
- * Never let the theraband/tubing limit your end ROM