

Avoiding the syndrome of ‘swimmer’s shoulder’.

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This is part one of a two-part series.

Shoulder pain is the most common orthopedic complaint of competitive swimmers. Reports have cited complaints that range from 47 to 73%. Several factors are implicated in what is typically known as “swimmer’s shoulder,” which is thought to be a tendinitis problem of the rotator cuff, usually the supraspinatus or biceps tendon.

The demands of competitive swimming are excessive in terms of repetition and force. These stress the shoulder muscles and their tendons far beyond their design and normal use and make the swimmer vulnerable to shoulder injury. So prevention of injury should be given a central role in training programs as swimmers and coaches work together to optimize performance.

The four competitive swimming strokes are free style, backstroke, butterfly, and breaststroke. In the free style, backstroke, and butterfly, the arms provide 75% of propulsion. In the breaststroke, the arms and legs contribute equally.

Each stroke consists of four phases: The reach, the catch, the pull, and the recovery.

During the catch position in all strokes, but the breaststroke, the shoulder begins to extend, abduct, and medially rotate. This is where the maximum impingement can occur and most swimmers describe the occurrence of their pain as just after the catch phase.

Factors that are implicated in the so-called swimmer’s shoulder are the following:

- Intense training programs that do not allow enough rest and cause too much stress on the shoulder.
- Overwork and overuse of the shoulder with swimming and repetitive strokes tend to cause rotator cuff muscle fatigue and precipitate this problem of a tendinopathy of the rotator cuff.
- Stroke mechanics of the shoulder during the phases of swimming. At entry of the hand into the water, and the first half of the pull phase, the shoulder is in a position which commonly causes impingement and rotator cuff stress.
- At the end of the pull phase, the shoulder is against the side of the body and internally rotated and this position also irritates the shoulder in many occasions. Almost half of the swimmers polled in a recent study reported shoulder pain occurred during entry or the first half of the pull phase. Some 14% reported pain during the second half of the pull phase and 23% had pain during the recovery. The remaining 17.8% had pain during the entire pull phase or recovery phase.

Part II in the July/August issue will address the aspects that may help stroke mechanics and put less stress on the rotator cuff, plus a prevention training regimen for the swimmer.