

Managing Shoulder Pain in the Swimmer

Swimming is a rigorous sport that requires multiple repetitions of the swim stroke and often times leads to overuse problems. Many individuals begin swimming at a very young age. In a typical 2-hour swim session, an elite-level competitive swimmer may swim 5-7,000 yards. This amounts to swimming an average of 20-40 miles per week, which is the aerobic equivalent of running 80-160 miles. This high yardage means that competitive swimmers perform between 1,500 and 4,000 stroke cycles per day or about 1,000,000 strokes per year. Female swimmers have a shorter stroke and may perform an additional 600,000 stroke cycles per year.

It should be no surprise that shoulder pain is very common in the elite swimmer. The causes of shoulder pain are multifactorial and include the athlete's sex, experience, distance, stroke choice, workout intensity, weight training, stretching and use of hand paddles.

The current thought on why swimmers develop shoulder pain is that swimming selectively strengthens the anterior chest musculature and internal rotators of the shoulder. This in addition to repetitive micro trauma to the rotator cuff muscles leads to an imbalance in the dynamic stability of the joint. Swimmers also tend to have increased laxity in the shoulder joint. This increased laxity, while making them a more efficient swimmer, may make the swimmer more prone to instability development and secondary shoulder impingement, causing pain.

Stretching

Is there value to stretching in the swimmer? Since most swimmers already have loose joints the time honored practice of swimmers stretches is probably a hindrance rather than a help. The indications for stretching in the swimmer are limited. Any stretching should occur only to correct a specific capsular tightness. Swimmers in general, who do not have shoulder pain, should stretch the posterior shoulder capsule and the anterior chest musculature. If shoulder pain is present, stop all stretching of the anterior capsule and work on the posterior capsule. If multidirectional instability exists then all stretching should be discontinued. All "buddy Stretching" should be discontinued as this stretches the joint beyond its normal limits. For athletes a gentle warm-up is sufficient to increase blood flow to the muscles and prepare for the workout.

Strengthening

Strengthening should concentrate on the rotator cuff and scapular musculature. These are best done with a formal exercise program that concentrates on these muscles in a low weight, high repetition fashion. It is probably best to perform these exercises on off or light days giving the muscles time to rest before swimming repetitions.