Shoulder Pain in the Triathlete

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Triatheletes commonly suffer from shoulder pains. This pain is usually felt either at the rotator cuff or between the shoulder blades.

Stresses in these areas affect the triathelete's performance long before they are even aware that they are having a problem.

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Repetitive Motion and Shoulder Injuries

The soft tissue stresses caused by the repetitive motions of freestyle swimming are often compounded in the triathelete by the constant stress of holding the torso in fixed position upon the bicycle's aero-bars. Pain between the shoulder blades is caused by the constant neck extension and the back position required to support the weight of the cyclist's torso while bent over in the aero-bar position. This pain is often an indication of several problems in the body's kinetic chain rather than the usually diagnosis of tight Rhomboid muscles or a Rotator Cuff Tear.

Repetitive motion, constant tension, and pressure often result in inflammation and swelling of soft tissue. The body responds to this inflammation by laying down scar tissue (cross fibers across the tissue) in an attempt to stabilize the affected area. This scar tissue:

- Restricts motion.
- Reduces circulation.
- Inhibits nerve function.
- Causes ongoing friction and pressure.
- Results in the production of yet more cross fibers and adhesions across inflamed soft tissues.

Training Techniques and Shoulder Injuries

Poor swim technique, over-training, unilateral breathing, too large a swim paddle, or improper elbow to shoulder angle on the bike can easily cause shoulder problems. Each of these physical factors can result in the creation of biomechanical restrictions within the shoulder muscles.

Even though these training factors can be modified, the biomechanical restrictions that have been created in the triathelete's body are seldom addressed. This leads to future injuries and inhibits the triathlete from reaching his or her full performance potential.

Muscles affected in Shoulder Injuries

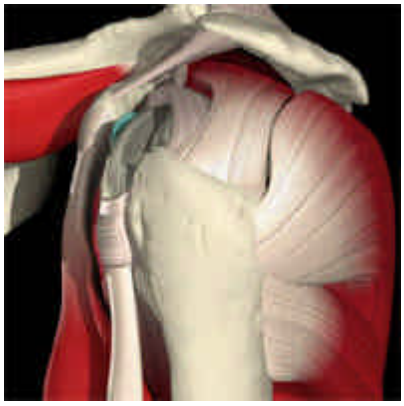
Equally important, different athletes may present with identical pain patterns, but each athlete may have completely different structures that are impaired or injured.

Before treatment takes place, an extremely specific examination and diagnosis must be performed. It is important to look past the initial point of pain to identify other structures that are involved in the kinetic chain. For example, triatheletes using aero-bars commonly have restrictions at the Serratus Posterior Superior and at a very deep muscle called the Transversospinalis.

Consider a triathlete experiencing pain in the rotator cuff. Pain in the rotator cuff is often diagnosed as *Swimmers Shoulder* or *Impingement Syndrome*. Most treatments for this diagnosis focus only on the following major structures:

- Infraspinatus.
- Teres minor.
- Supraspinatus.
- Subscapularis. (This is the most common structure involved in an impingement syndrome but is not the only factor to consider).
- Long head of the biceps tendon.

Rotator Cuff Muscles



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However, this limited focus ignores numerous associated soft tissue structures (ligaments, muscles, blood vessels, fascia and nerves), which either caused the injury or whose restrictions greatly reduce an athlete's performance level. For example, swimmers often suffer from biomechanical restrictions in these primary swimming muscles:

- Latissimus Dorsi - A muscle that inserts into the Scapula and Humerus.
- Triceps - Mostly commonly the outer head.
- Deltoids - Medial, posterior and anterior sections.
- Psoas - Hip flexor that attaches to same general area as Latissimus Dorsi. A tight Psoas can cause a tight shoulder if you follow the kinetic chain. The Psoas is also the most common muscle affected during the cycling portion of the race.
- Pectoralis Major/Minor - Flexes, adducts and medially rotates the arm.

Considering More Structures

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ART and the treatment of Soft Tissue Injuries

Effective treatment of shoulder problems, or of any soft tissue injury (ligaments, muscles, blood vessels, fascia and nerves), requires an alteration in tissue structure to break up the restrictive cross-fiber adhesions and to restore normal function to the affected soft tissue areas. When executed properly, this process:

- Substantially decreases healing time.
- Treats the root cause of the injury.
- Improves athletic performance.

ART Practitioners at Hawaiian Ironman World Triathlon Championship.

Active Release Technique (ART®) is very successful at treating this type of injury since it removes the restrictive adhesions between both the superficial and deep tissue areas. In fact ART has been shown to be over 90% effective for treating a broad range of soft tissue injuries.

Trained ART practitioners perform a biomechanical analysis of athletes to determine where the restrictions are located along the entire kinetic chain. ART treatments are specific and based upon the individual needs of each athlete. It is not a cookbook approach to treating a non-specific diagnosis.

ART® finds the specific tissues that are restricted and physically works them back to its normal texture, tension, and length by using various hand positions and soft tissue manipulation methods.

ART Practitioners at Hawaiian Ironman World Triathlon Championship.

While breaking up the adhesions can be uncomfortable at times, it is a good sign if we reproduce the pain symptoms during the treatment, since this often indicates that the correct soft tissue structures are being addressed.

Once the soft tissue (ligaments, muscles, blood vessels, fascia and nerves) has returned to its normal state, specific exercises are prescribed.

Unlike most therapies, ART® does not require extended periods of rest before you notice results. You usually see significant improvements to the injured area after only two to three sessions. It is also not uncommon, after only a few sessions, to see a considerable improvement in the athlete's best personal performance.

How to find a certified ART provider

You can find a qualified ART provider by visiting the official Active Release Techniques website at www.activerelease.com. You can also call ART headquarters at 1-888-396-2727. At your next Ironman race, look for the ART Performance Care tent. Our soft tissue experts are available to help you reach your full potential.

ART Performance Care
Perform at your best!

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