

Understanding Shoulder Pain

Resolving Shoulder Pain with Active Release Techniques®

If you suffer from pain or stiffness in your shoulder you are not alone. Far too often shoulder problems prevent individuals from participating in their favorite activities such as using the computer, gardening, or playing golf. At times shoulder pain can be so bad that it even prevents the simplest of daily activities such as reaching into the cupboard for a dish, and in some cases can even prevent a proper night's sleep. This can be a very frustrating problem

and to make matters worse this type of condition often gets progressively worse over time.

Now for the good news, a new treatment technique known as Active Release Techniques® (ART®) is proving to be a very effective method to combat shoulder problems and get shoulder pain sufferers back doing their favorite activities. But before we talk about how ART® works so effectively we first need to understand how the shoulder becomes injured in the first place.

Why Does the Shoulder Become Injured?

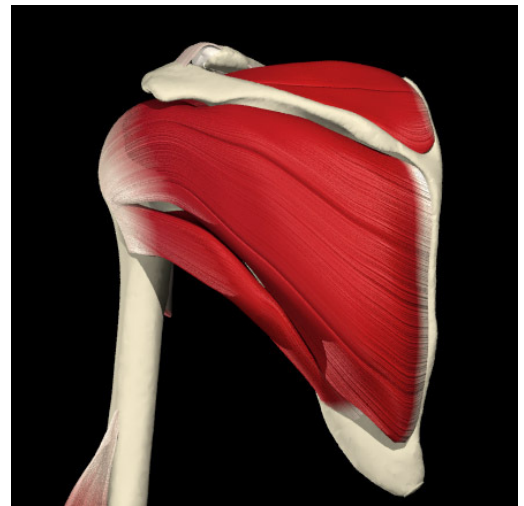
The shoulder is different from most other joints in the body because it is designed to provide a great deal of movement. For example, the architecture of the shoulder joint enables us to reach up overhead, back behind the body, across the chest, and we can even rotate our arm internally and externally. When you compare the shoulder with other joints - such as the ankle, knee, or elbow, which basically move only forward and backward - it can be seen that the shoulder is indeed a joint with a lot of mobility.

The shoulder is capable of allowing this wide range of movements as a result of the way it is formed. Basically, the shoulder joint consists of the round surface of the upper arm, called the humerus, connected to the flat surface of the shoulder blade, or scapula. This "round-on-flat" relationship means the arm does not fit tightly onto the shoulder blade, and it is this loose fit that allows for a large amount of motion. Unfortunately, in providing greater motion, this loose fit fails to provide bony protection and stability for the shoulder joint, which makes it more susceptible to injury.

Due to a lack of joint stability at the shoulder, proper motion requires a complex set of muscles to help control and stabilize shoulder movement. The primary muscles that provide this control are the Rotator Cuff muscles. The rotator cuff is a group of four muscles that cross the shoulder joint and hold the arm tightly onto the shoulder blade. When the arm is moved in any direction these muscles have to contract to hold the round surface of the humerus in place against the flat surface of the shoulder blade. If these rotator cuff muscles fail to contract properly the upper arm is not held tightly onto the shoulder blade and the shoulder joint becomes unstable. When this happens it places a tremendous amount of strain on the rotator cuff muscles as well as the ligaments and other tissue of the shoulder joint, leading to shoulder pain and injury.



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How Does Shoulder Pain Occur?

Within our daily activities we use our arms and shoulders a great deal. As a result there is a tremendous amount of strain placed on the Rotator Cuff and the muscles of the shoulder blade. Every time you lift, push, pull, or carry anything with your arm the shoulder muscles must contract to stabilize the shoulder and protect it from injury. A small but constant contraction of the shoulder muscles is even required with something as simple as sitting in front of a computer, in order to hold the arm and shoulder in a proper position.

In addition to high levels of muscle activity that is inherent in normal daily activities, many factors also place additional strain and work load on the shoulder muscles. For example, repetitive use with certain sports or occupations, poor posture, muscle imbalances, or previous injuries that may not have been fully treated or rehabilitated can further strain the muscles of the shoulder girdle.

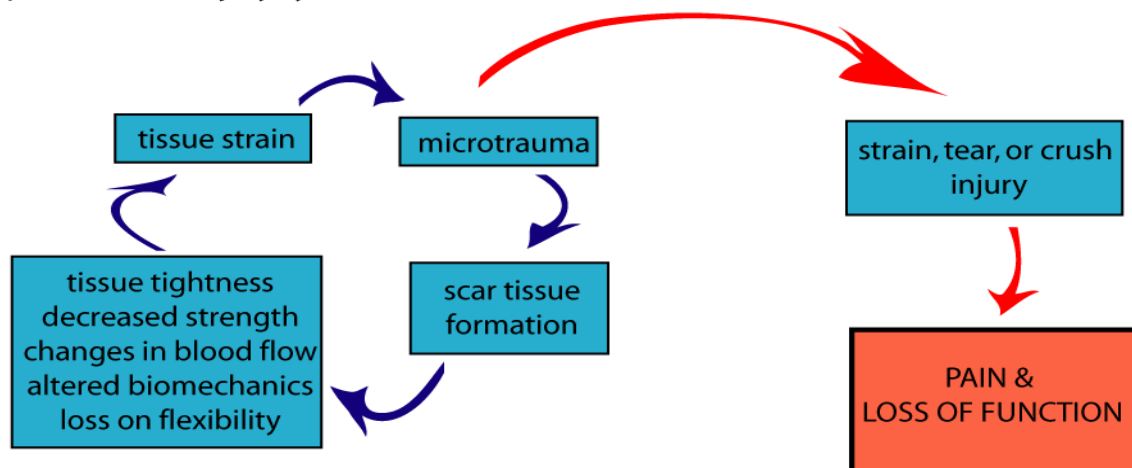
Over time this strain can develop into what is known as **micro-trauma**. Simply stated, micro-trauma is very small scale muscle damage that occurs in the muscles and ligaments in response to small levels of strain. Initially this micro-trauma is not painful, but may be perceived as a mild ache or tightness in the muscles. Although only small, this damage still



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needs to be repaired. The body responds to micro-trauma by laying down small amounts of scar tissue to repair the injured tissue. Unfortunately over time this scar tissue will build-up and accumulate into what we call **adhesions**. As these adhesions form they start to affect the normal health and function of the muscles. In fact, they will often lead to **pain, tightness, stiffness, restricted joint motion, and diminished blood flow**.

the repetitive strain injury cycle



As these scar tissue adhesions accumulate in the shoulder region, it places more and more strain on the muscles as they must now stretch and contract against these adhesions in an attempt to move and stabilize the shoulder. This places even further strain on the shoulder muscles, which in turn leads to more micro-trauma. Essentially a repetitive injury cycle is set-up causing continued adhesion formation and progressive shoulder dysfunction. At this point mild pain and tightness within the shoulder often starts to become noticeable.

As this cycle continues the ability of the shoulder muscles to meet the demands placed on

them diminishes. At this point it is not uncommon for the muscles to give way and a more severe and debilitating pain occurs. In fact many patients come into our office explaining how they have hurt their shoulder during a seemingly simple task such as picking up a small object or reaching for their seatbelt. When further questioned these patients almost always describe some mild pain or tightness in their shoulders that has been building over time. As you can see from the explanation of this repetitive injury cycle, these types of injuries build-up over time and the more acute injury is often just the “straw that broke the camels back”.

How Can These Shoulder Injuries Be Fixed?

The Traditional Approach

In an attempt to relieve shoulder pain, a variety of treatment methods are used, either on their own, or in combination with other methods. Some of the more common approaches include anti-inflammatory medications, rest, ice, ultrasound (US), muscle stimulation (E-Stim), steroid injections, stretching, exercise, and when all else fails, surgery. Unfortunately most of these traditional techniques generally require a long period of time before they provide any significant relief, and in many cases provide only temporary relief from symptoms instead of fixing the underlying cause of the problem.

The main reason that these approaches are often ineffective is that they fail to address the underlying scar tissue adhesions that develop within the muscles and surrounding soft tissues.

It is these adhesions that are binding the tissues together, restricting normal movements, and interfering with the normal flexibility and contraction of the muscles in the shoulder area.

Passive approaches such as medications, rest, ice, and steroid injections all focus on symptomatic relief and do nothing to address the muscle restrictions and dysfunction. More active approaches such as stretching and exercises are often needed for full rehabilitation of the condition and to restore full strength and function of the muscles, however, they themselves do not treat the underlying adhesions. In fact, without first addressing the scar tissue adhesions, stretches and exercises are often less effective and much slower to produce relief or recovery from the shoulder condition.



Our Approach: ART® – A Better Solution

ART® stands for Active Release Techniques®. It is a new and highly successful hands-on treatment method to address problems in the soft tissues of the body, including the muscles, ligaments, fascia, and nerves. ART® treatment is highly successful in dealing with shoulder problems because it is specifically designed to locate and treat scar tissue adhesions that accumulate in the muscles and surrounding soft tissues. By locating and treating the soft-tissue adhesions with ART®, it allows the practitioner to, 1) break-up restrictive adhesions, 2) reinstate normal tissue translation and movement and 3) more completely restore strength, flexibility, balance, and stability to the shoulder region.

An additional benefit of ART® is that it allows the practitioner to develop a more comprehensive diagnosis of the problematic area, and provide more complete care to ensure all the soft tissue restrictions are addressed. This ensures full resolution of the problem and minimizes the chance of re-occurrence. With ART® treatment protocols the practitioner is able to “feel” which structures have become problematic and require treatment. In this sense,

we are able to assess and correct problems not only in the shoulder joint itself, but also in other area of the “kinetic chain” that influence shoulder motion, such as the shoulder blade, neck and ribcage. This ensures that all the soft tissues that have become dysfunctional and are contributing to the specific shoulder injury are addressed, even if they have not all developed pain.

Of course not all shoulder injuries are the exact same. Some of the more common shoulder injuries include diagnoses such as Impingement Syndrome, Swimmer’s Shoulder, Tendonitis, Rotator Cuff Tears, and Bursitis. All of these conditions are somewhat unique in terms of which specific structure is responsible for the majority of the symptoms, but in essence they are all related to shoulder dysfunction caused by problems in the Rotator Cuff and shoulder blade muscles, and they generally all respond very well the ART® treatment.

For more information on ART®, or for inquiries regarding specific shoulder injuries, please send us an email at frchiropractic@eastlink.ca, or visit our website at www.fallriverchiropractic.ca.