

# Types of Shoulder Pain, cont...



## Calcific Tendinopathy:

Calcific tendinopathy occurs when calcium deposits form in the rotator cuff tendons - most commonly the supraspinatus tendon. It is believed this occurs as the body's attempt to heal small tears in the rotator cuff tendons, although, no one really knows the exact cause of calcific tendinopathy. Severe wear and tear, aging, or a combination of the two, are often involved. Some researchers think that calcium deposits form because there is not enough oxygen to the tendon tissues. Others feel that pressure on the tendons damage them, causing the calcium deposits to form.

## Frozen Shoulder:

Frozen shoulder (adhesive capsulitis) is a common cause of shoulder stiffness and pain. Although it isn't entirely understood, it has been found to be more common in individuals between the ages of 40-60, those with diabetes, Parkinson's disease, thyroid or heart disease, or post surgery or injury that has required the shoulder to be immobile for a while. The process of frozen shoulder can take between a few

months to a few years dependent upon the person. It is believed to have **3 phases: freezing** - when the shoulder is quite painful and getting stiffer, **frozen**- when the pain remains but may dull and shoulder is at its stiffest, **thawing** - when the pain begins to lessen and motion becomes more available. Treatment consists of pain control and mobilization when possible, usually during the thawing stage. In an attempt to prevent frozen shoulder, safe, early movement of the joint is recommended after injury or surgery.

## Arthritis:

As we age some people develop osteoarthritis. This occurs as the smooth surfaces of the cartilage that line the bones of the shoulder joint are worn away, and joints become roughened and larger causing pain with movement. The most common cause of osteoarthritis is overuse. Treatments for arthritis in the shoulder depend on the severity of pain. The usual treatments are rest, pain control and strengthening around the shoulder to ensure that optimal movement is reached. In more extreme cases, surgical treatment such as debridement or joint replacement may be necessary.

## What should I do??

If you are suffering from shoulder pain whether it is a small amount with some activities or waking you up at night, seek medical help. A physiotherapist can provide you with some great advice to help to manage your pain. A personalized exercise program can be provided that will allow you to correct poor movement patterns and postures and move you towards pain free mobility. A physiotherapist can help transition you back to the activities you love, whether it is high level sports or working around your yard, it is important!

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Shoulder Pain

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# Injury Prevention

Training Guide - Vol.3



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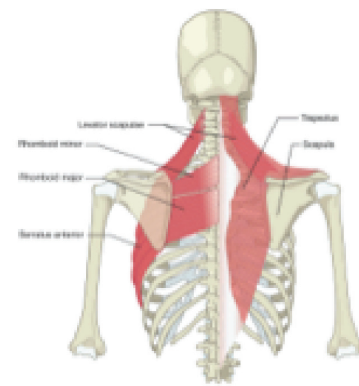
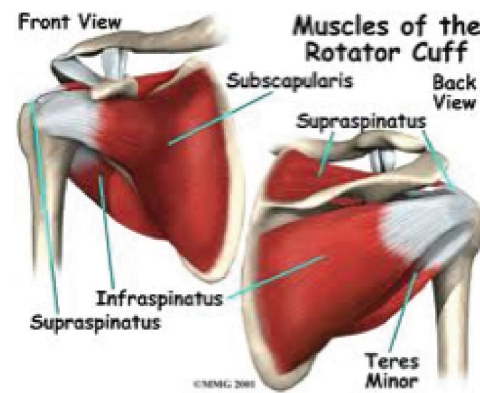
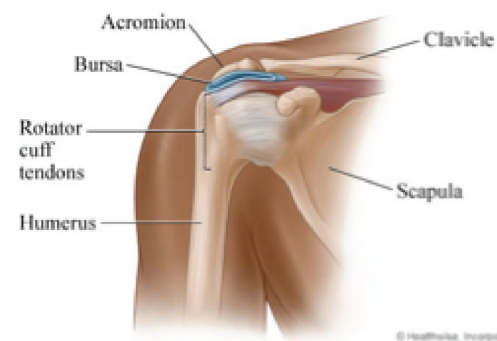
# Shoulder Pain

*My shoulder hurts.....Why??*

Did you wake up this morning with a sore shoulder without any specific fall or incident, or have you noticed it is aching and gradually getting worse, making certain movements difficult? There can be a handful of reasons for these situations.

It is very common to have shoulder problems such as muscle aches and pains. These can develop from over using the shoulder through everyday wear and tear or from a specific incident such as a fall or awkward lift in the gym. As well, shoulder issues can develop as a process of aging. As we age the muscles around the shoulder can become weaker. We also have less blood flow to the tendons (what attaches the muscles to the bones) around the shoulder and they too can weaken. As a result, normal repetitive daily tasks can create minor trauma to the shoulder structures.

ANATOMY of the SHOULDER:



As shown in the picture, the shoulder is made up of three bones: the humerus (which has the ball at the end) the scapula or shoulder blade (which has the socket) and the clavicle or collar bone.

**The shoulder blade** has a little piece of bone called the acromion. This is where the collar bone comes and attaches with ligaments. Under this, there is a bursa (fluid filled sac to keep tendons from rubbing on bones) and the rotator cuff tendons.

**The rotator cuff** is made of four muscles (supraspinatus, infraspinatus, subscapularis and teres minor) whose role is to keep the ball centralized in the socket at the shoulder joint. Other critical muscles at the shoulder include the biceps which runs up the front of the shoulder crossing over the front of the ball and socket joint, and the trapezius muscles which are at the back of the scapula. Other muscles of the neck and upper back are also very important in maintaining appropriate shoulder position. As long as all the muscles are working correctly the shoulder will move and function as it should. If there are muscles overdoing or under doing their job then the shoulder may move incorrectly and in-turn creates minor traumas to the structures.

Being a ball and socket joint our shoulder has a wide range of movement and is usually considered the most mobile joint in the body. However, this mobility leaves the joint not as stable as other joints in the body and increases the likely hood of injury. Compound this structural flaw with overuse motions (such as repetitive actions in sport) and poor posture, shoulder ache, impingement, bursitis, tendinopathies and cuff tears may result.

# Types of Shoulder Pain



Once weakened, repetitive movements that cause impingement can cause rubbing, chafing and fraying of tendons.

There are two types of tears, a partial thickness or a full thickness tear that can involve one or more of the rotator cuff tendons. A muscle is made of millions of fibres. In partial thickness, some of the fibres have torn but there is still a lot of muscle attached. With a full thickness tear, a portion of the muscles has had all the fibres torn. This can cause extreme pain and weakness.

Tears can occur traumatically or gradually. When caused traumatically from an injury such as a fall, the pain, discomfort, and weakness is profound and leads to early evaluation and treatment. Gradual tears, on the other hand, usually occur from repetitive overuse activities such as overhead chores or sport motions. Due to this gradual onset, patients usually ignore their symptoms until they get worse before seeking help from a medical practitioner, Unfortunately, by this point the person has developed "cheating" movement patterns because of the pain and may have to be corrected first to reduce the symptoms.

Commonly, partial or small tears are treated conservatively depending on work and athletic interests. Once the diagnosis is made, therapy begins to regain better motion and function of the shoulder through hands on treatment, education and exercise. Functional strengthening to return to work and/or sport occurs after pain is managed and motion is regained. In the early stages, talking to your doctor about pain and inflammation control is very important.

With more serious tears, surgery may be recommended. However, not all tears are surgical and surgery may only be recommended once conservative treatment has failed. Younger individuals, especially those with traumatically caused full thickness tears, can sometimes be treated most appropriately with early surgical intervention. Older individuals and those with overuse and/or degenerative tears can also be treated surgically however; the surgeon may want to see if conservative measures (e.g. physiotherapy) work first (due to the relatively high success rate of conservative treatment in this group).

## Impingement Syndrome:

Impingement, bursitis and tendinopathies are all common shoulder problems that results from the same pathway; poor mechanics at the shoulder that results in inflammation, soreness and lack of movement. The most common cause of shoulder impingement syndrome is weakness of the muscles around the shoulder blade and the rotator cuff. The rotator cuff's primary function is to hold the ball of the shoulder in the socket when the arm is active. If these rotator cuff and or shoulder blade muscles become weak or injured, the ball will be able to move upwards causing the space for the tendons to move through at the top of the shoulder to become smaller and get pinched. This results in tissues getting irritated and inflamed causing tendinitis or bursitis.

Individuals who work overhead (carpenters, plumbers) or overhead athletes are prone to this problem, along with those that tend to work at a desk in a rounded shoulder posture all day. Avoiding activities which aggravate the shoulder, correcting posture, ensuring correct technique, pain management strategies such as icing, as well as beginning a strengthening program provided by a physiotherapist are the initial steps in recovering.

## Rotator Cuff Tears:

Rotator cuff tears are relatively common. Although they do occur in younger individuals, usually as a result of traumatic incidence or overuse, they are more common in middle-aged to older adults. As we age, tendons degenerate and blood supply to the shoulder becomes poor resulting in weakening.