



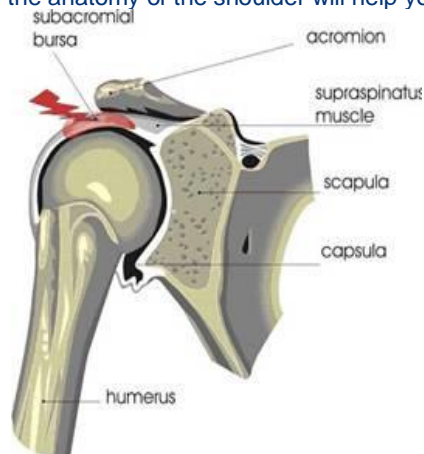
## Shoulder - Subacromial Bursitis

### WHAT IS SHOULDER (SUBACROMIAL) BURSITIS?

A bursa is a fluid filled sac that helps to reduce friction in joint spaces. Your subacromial bursa is the most commonly inflamed of the shoulder bursa.

**Subacromial bursitis** is a common cause of shoulder pain that is usually related to tendinitis (inflammation) of the rotator cuff. Subdeltoid bursitis is less commonly inflamed shoulder bursa.

The most usual cause of inflammation of tendons and the bursa is **impingement**. Knowing a little about the anatomy of the shoulder will help you to understand why.



### YOUR SHOULDER ANATOMY

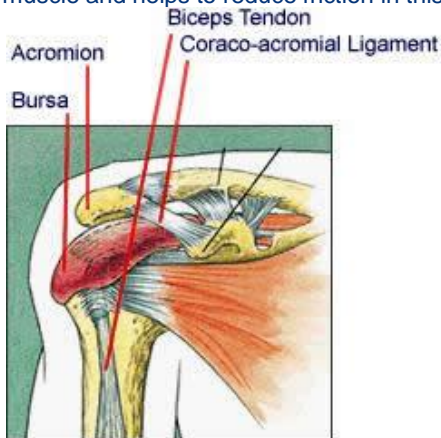
The shoulder joint is a relatively unstable ball and socket joint. It is often likened to a golf ball on a tee.

The **subscapularis, supraspinatus, infraspinatus** and **teres minor** are small muscles that stabilise the shoulder. Collectively, these four muscles are known as the **rotator cuff**.

The rotator cuff tendons are protected from simple knocks and bumps by bones (mainly the acromion) and ligaments that form a protective arch over the top of your shoulder.

In between the rotator cuff tendons and the bony arch is the **subacromial bursa** to prevent friction.

Specifically, the subacromial bursa lies between the coracoacromial ligament and the supraspinatus muscle and helps to reduce friction in this small space under the acromion. (See picture)



Arm at rest.



Arm abducted (lifted outwards).

When your arm is at your side the bursa protrudes laterally or out to the side.

When you elevate your arm out to the side the bursa rolls beneath the bon





Arm lifted above 120 degrees and the pressure on the bursa decreases.

### WHAT CAUSES SUBACROMIAL BURSITIS?

Bursitis around the shoulder can be caused by a **repeated minor trauma** such as overuse of the shoulder joint and muscles or a **single more significant trauma** such as a fall.

In overuse type injuries, bursitis is often associated with **impingement** and **tendinitis/inflammation** of the rotator cuff tendons.

### WHAT CAUSES SHOULDER / ROTATOR CUFF IMPINGEMENT?

#### Primary Rotator Cuff Impingement – Structural Narrowing

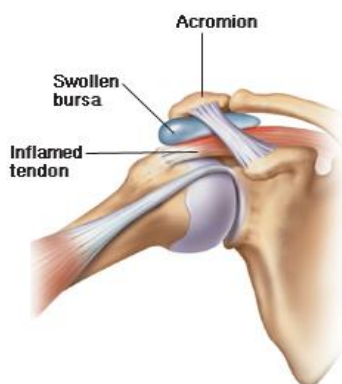
Some of us are born with a smaller subacromial space. Conditions such as osteoarthritis can also cause the growth of subacromial bony spurs, which further narrows the space.

Because of this structural narrowing, you are more likely to squash, impinge and irritate the soft tissues in the subacromial space, which results in bursitis or rotator cuff tendonitis.

Postures that significantly narrow the subacromial space are:

- Your arm directly overhead
- Your arm working at or near shoulder height

#### Secondary Rotator Cuff Impingement – Dynamic Instability



**Impingement** can occur if you have a dynamically unstable shoulder. This means that there is a combination of excessive joint movement, ligament laxity and muscular weakness around the shoulder joint.

This impingement usually occurs over time due to repetitive overhead activity, trauma, previous injury, poor posture or inactivity. In an unstable shoulder, the rotator cuff has to work harder, which can cause injury

An **overworking rotator cuff** fatigues and eventually becomes inflamed and weakens due to pain inhibition or tendon tears.

When your rotator cuff fails to work normally, it is **unable** to prevent the head of the humerus (upper arm) from riding up into the subacromial space, causing the bursa or tendons to be squashed.

Failure to properly treat this instability causes the injury to recur. Poor technique or bad training habits such as training too hard is also a common cause of overuse injuries, such as bursitis or tendinitis.

## **SIGNS AND SYMPTOMS OF SUBACROMIAL BURSITIS**

- Gradual onset of symptoms over weeks or months
- Pain on the outside of the shoulder
- Pain may spread down the arm towards the elbow or wrist
- Pain made worse when lying on affected side
- Pain made worse when using the arm above head
- Painful arc of movement – pain felt between 60-90° of arm moving up and outwards. By side minimal pain and above 90° relief of pain
- Pain with activities such as washing hair, reaching up to high shelf in the cupboard

## **HOW TO DIAGNOSE SUBACROMIAL BURSITIS**

Your physiotherapist is able to differentiate shoulder bursitis from a rotator cuff injury using manual tests. Bursitis commonly co-exists with rotator cuff tears or tendonitis.

**Ultrasound scan** is often the most helpful test to diagnose subacromial bursitis. Sometimes MRI scan is required to confirm the diagnosis of bursitis of the shoulder.

## **ACUTE/EARLY CARE OR SHOULDER BURSITIS**

**Relative rest** is one of the most important aspects of treating shoulder bursitis. This means that you should stop doing the movement or activity that provoked the shoulder pain in the first place and avoid doing anything that causes pain in your shoulder.

**Cold therapy/ice** should be applied in the early stages for up to 15-20 minutes every hour. As the pain in the shoulder improves you can decrease the frequency of cold therapy.

**Painkillers or anti-inflammatory** medications may help in the early stages and can be taken as prescribed by your doctor. Oral NSAID's are thought to have a minimal effect due to the isolated nature of the bursa.

**Soft tissue massage** around the shoulder to relieve tightness in the muscles can help with the pain and prevent muscle imbalances. Direct massage to the bursa is not recommended.

**Acupuncture** can help manage pain and swelling reduction in the initial stages and also help to relax tight muscles around the shoulder joint.

## **REHABILITATION – SUBACUTE PHASE**

**Physiotherapy** is particularly effective in the subacute phase, once the acute pain has settled.

Your physiotherapist will aim to regain your shoulder range of movement, correct your shoulder posture and work on strengthening of the rotator cuff and scapular stabilisers.

**Massage** techniques and stretches will also be used to allow greater joint flexibility and allow better joint position for strengthening.

Your physiotherapist can assess your shoulder strength and control with regards to your specific sport and tailor a strengthening program with cope with the demands of your particular sport/job.

## **CHRONIC BURSITIS**

In chronic or persistent bursitis, physiotherapy may need to be provided after a corticosteroid injection,

which is an injection of a drug, which helps to powerfully reduce inflammation. There are a number of advantages and disadvantages with corticosteroid injection and this option should be discussed with your doctor. The best results have been shown to occur when the injection is performed under ultrasound guidance.

### **HOW LONG WILL YOUR BURSITIS TAKE TO HEAL?**

Every injury is different. However, most sufferers are able to resume sports specific training or work between one and three weeks if appropriate rehabilitation is undertaken.

### **WHAT IS CALCIFIC BURSITIS?**

If a bursitis injury is neglected it can become chronic and be very difficult to treat resulting in a cycle of rotator cuff injury and impingement of the shoulder joint. Calcific bursitis (bone growth within the bursa) may occur with neglect. Surgical excision of the bursa may be required in these instances.

### **HOW CAN YOU PREVENT SHOULDER BURSITIS?**

Eliminating the causes of primary and secondary impingement is the key to preventing shoulder bursitis and rotator cuff problems. Factors such as posture, shoulder stability and rotator cuff strength need to be addressed and can be optimized with specific exercises as prescribed by you physiotherapist.