



# UNDERSTANDING SHOULDER PAIN

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(02) 4954 5330

# Introduction

Shoulder pain is common and can be debilitating. The aim of this e-book is to provide an overview of shoulder pain, as well as what to expect from a treatment provider. It is not a diagnose yourself or treat yourself guide. There are several potential sources of shoulder pain, most of which are not medically serious. However pain is often a warning sign and sometimes serious pathology can cause shoulder pain. **If you have a problem you need to be professionally assessed.**

In younger people shoulder pain is most likely due to an acute injury/accident or from repeated activity leading to overload. In the older people age related changes occur in the shoulder joint and surrounding soft tissue structures (e.g. rotator cuff tendons).

The good news is that research has shown that physiotherapy is effective in the management of shoulder pain and getting you back to doing the activities you enjoy.

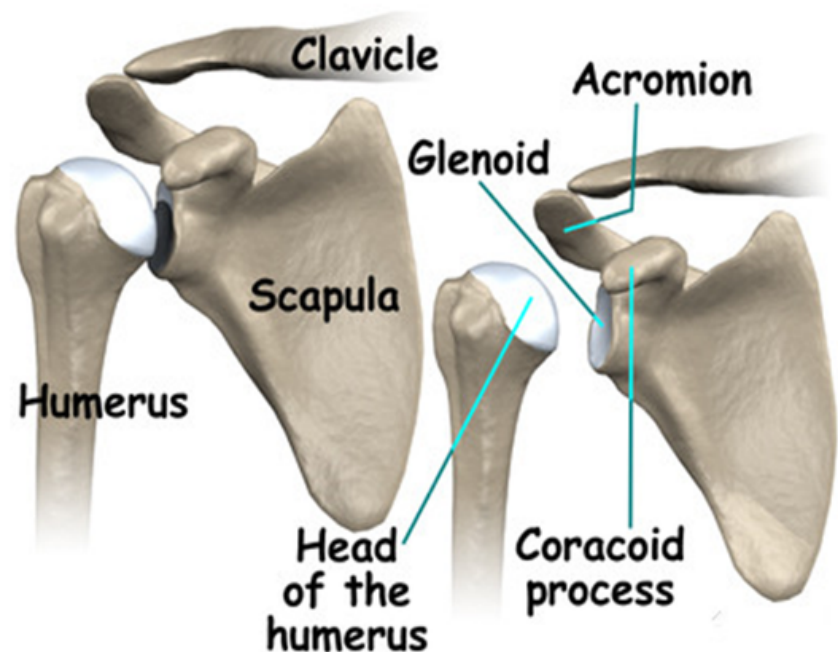
This guide aims to educate you about some common conditions and their treatment and to let you know what you should expect from a treatment provider.

# Basic anatomy

The shoulder joint is mobile and unstable due to the shallow socket, called the glenoid. The shoulder joint is made up of several components:

- Glenohumeral joint- upper arm bone (humerus) connects with the shoulder blade (scapula).
- Acromioclavicular joint- top of shoulder blade (acromion) connects with collar bone (clavicle)

The ball is held into the socket by the ligaments and by the muscles. The tendons of the rotator cuff are the most commonly injured shoulder structure. These muscles work in a co-ordinated way with the shoulder blade (scapular) muscles, and larger muscles such as the deltoid to produce shoulder movement. Loss of power or pain from injury in any of these structures can compromise shoulder function.



# What to do if you have shoulder pain?

01

**Let a professional assess you.** Shoulder pain has many causes and even though you may feel pain around your shoulder it at times could be caused by another source e.g. the neck or upper back referring pain to your shoulder. Only a trained medical professional can assess this.

02

**Manage your pain.** This includes medication, shoulder strapping, exercises and hands on treatment. Activity modification is also very important to allow shoulder pain symptoms to settle.

03

**Don't stress about it.** Psychological stress can actually increase pain. The majority of shoulder pain will settle if managed appropriately.

04

**Trial conservative management first-** Unless in severe cases (e.g. massive rotator cuff tear) where surgery is required, a trial of conservative management exercised based approach should be trialled first before surgical options are explored.



# What to expect from your treatment provider



01

An explanation of your problem

02

Alternative explanations if the actual diagnosis is not clear

03

Advice on what to do and what to avoid

04

An estimate of how long treatment will take and how much this will cost

05

A discussion of your goals for this problem and whether they are realistic

06

A program tailored to your needs. You are not just a shoulder, you are a person with shoulder pain and everyone's situation is different. No one treatment is effective for all shoulder pain.

07

A discussion with other treatment providers, who can assist in your management.



# What to avoid from treatment providers

01

Regular use of electrotherapy. Ultrasound, electric current and other modalities have at best temporary effect and will not help you heal. There are better ways for your therapist to spend their time.

02

Unnecessary use of medical imaging. X-rays and MRI are very useful in some situations but routine imaging of all shoulder pain is not necessary. Your health professional should discuss why imaging is required.

03

Non-individualised treatment programs. Prescribed exercises need to be tailored to you based on your assessment and your goals.



# Common causes of shoulder pain

## Rotator cuff and biceps tendon pain

Rotator cuff tendons refer collectively to several tendons in the shoulder which attach to the humerus. These tendons attach to muscles critical for normal shoulder function. The long head of biceps tendon works with the rotator cuff.

These tendons are commonly torn and degenerate with age.

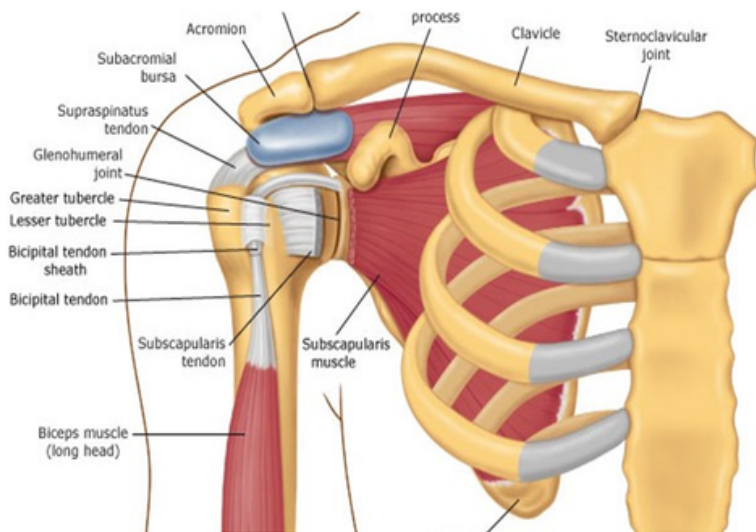
**Signs and symptoms.** These include; shoulder pain, inability to lift arm above shoulder height without pain or catching, pain lying on the arm at night, restricted movement of the shoulder and a loss of strength.

**Diagnosis-** Clinical assessment is important. Confirmation of diagnosis is via investigations of X-ray and an ultrasound. MRI may also be used to clarify the exact pathology.

### Treatment

**Conservative management** will include a combination of activity modification, manual therapy, and exercises.

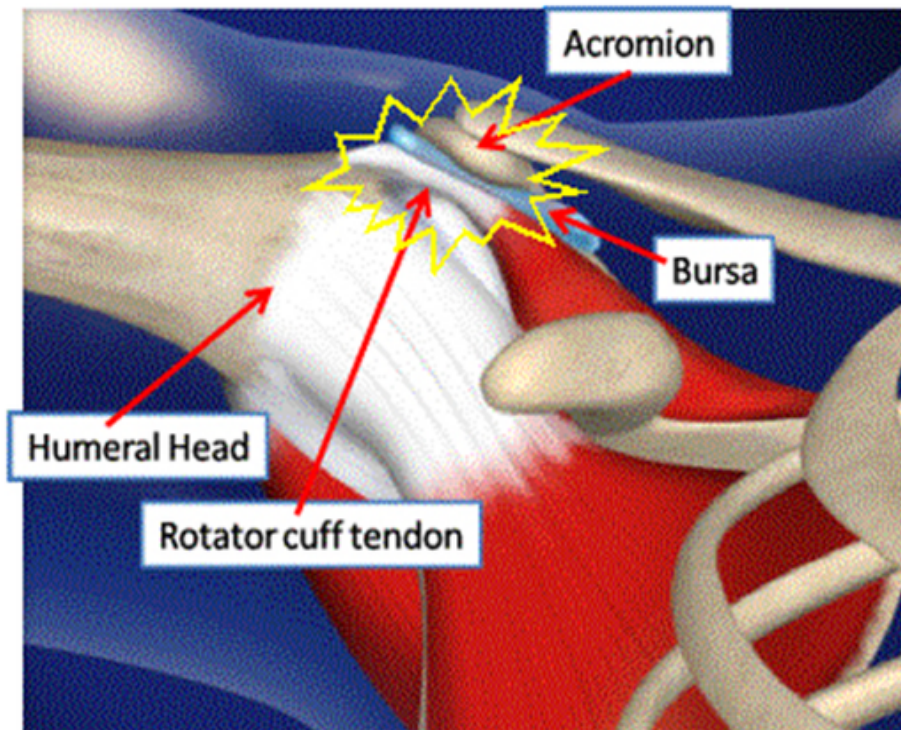
**Surgical Management-** can be necessary with major injury or failure of non-surgical treatment.



# Shoulder impingement syndrome

Impingement pain occurs because painful rotator cuff tendons and bursa (lubricating pad) are compressed against bone (acromion) as the arm is elevated overhead. It is often related to a tendon injury, but can have other causes such as muscle imbalance or nerve injuries.

This can occur in any age group but is rare in children. Athletes who use their arm overhead for swimming, throwing, bowling and racquet sports. Those who do repetitive overhead activities or lifting are also more at risk.



**Signs and symptoms.** Pain that may be present with both activity and at rest, pain radiating from the front of the shoulder to the side of the arm, sudden pain with lifting and reaching movements, pain when lying on that shoulder at night, pain when throwing, swimming, or serving a tennis ball.

**Treatment.** This will include a strengthening program of rotator cuff and shoulder blade muscles, avoiding aggravating activities overhead and heavy lifting. There are various medical treatments such as medication and injection that are sometimes used in conjunction with exercise.

It can often take upwards of 3-6 months for symptoms to resolve. Surgery is occasionally required if conservative treatment approach fails.



# Anterior shoulder (glenohumeral) dislocation

The most common joint dislocation is shoulder dislocation. This involves the humeral bone moving outside the natural resting position to sit in front out of its socket. A number of structures may be injured including bony surfaces, glenohumeral ligaments, labrum, rotator cuff tendons or nerves.

This usually occurs after trauma. The shoulder can dislocate anteriorly (forwards) or posteriorly (backwards).

**Signs and symptoms-** There can be a visible deformity and a feeling of the shoulder being out of place, with an inability to use the arm and shoulder pain

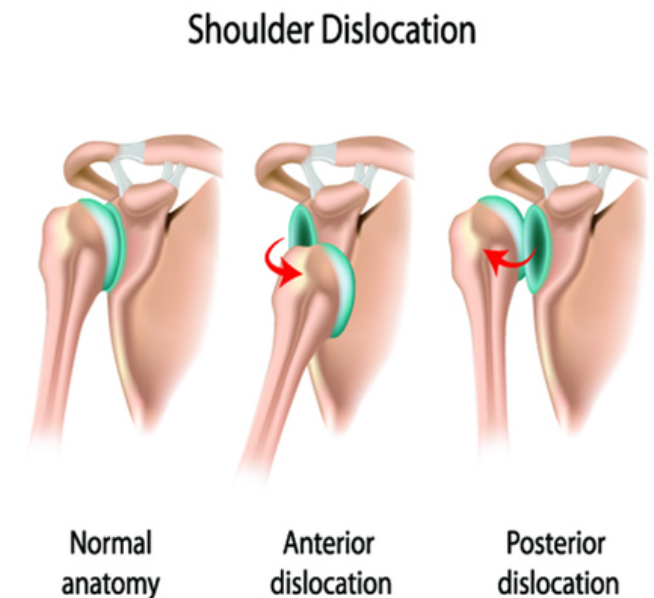
**Diagnosis.** This is often can be diagnosed with history and clinical examination. An x-ray is often performed to rule out any fracture or other injury. MRI is frequently used to further assess the shoulder and determine if any other structures are involved and extent of damage to them if present.

**Treatment.** Initially the arm is placed in sling for comfort and analgesic medication for pain management, and avoidance of positions of instability (e.g. stop sign position) and sports.

**Conservative management.** Graded exercise program to improve shoulder movement and strengthen the muscles around the shoulder and shoulder blade.

**Surgical management.** Surgery is often required due to high rate of recurrence especially in younger active populations. This will involve period of immobilisation post-operatively followed by intensive physiotherapy.

**Recovery timeframes-** Can vary depending on associated injuries sustained however full return to sport may take over 6 months. If not managed appropriately there is high rate of recurrence of anterior shoulder dislocations and can lead to chronic shoulder instability



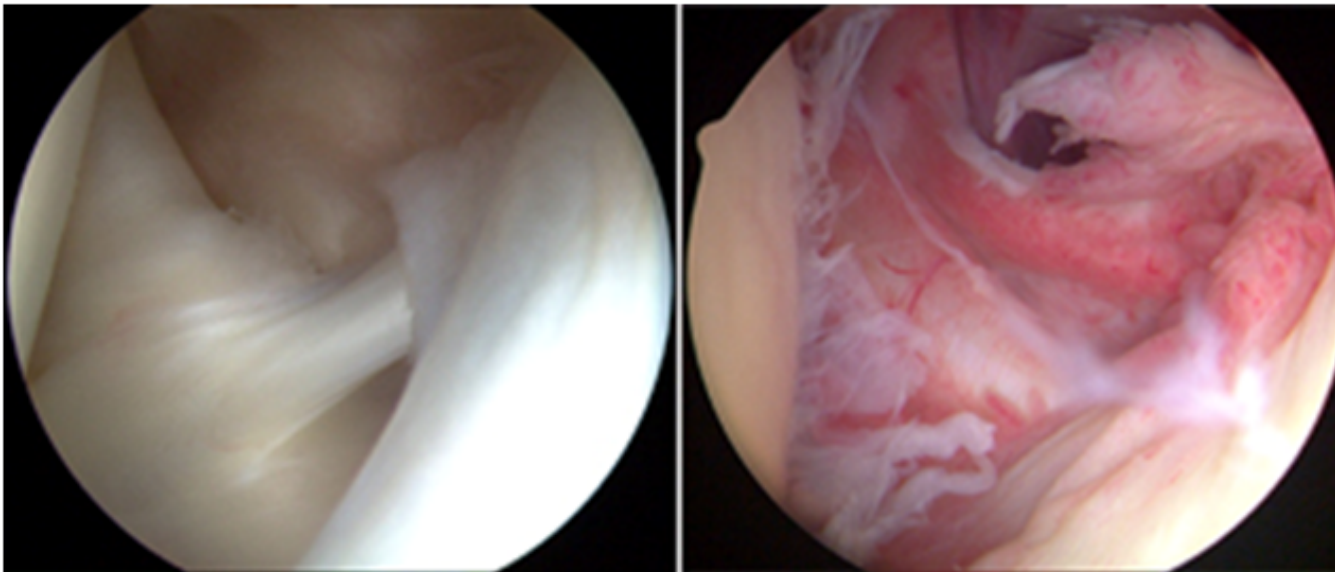
# Adhesive Capsulitis or frozen shoulder

Frozen shoulder, also called adhesive capsulitis, causes pain and stiffness in the shoulder. Over time, the shoulder becomes very hard to move. It most commonly affects people between the ages of 40 and 60, and occurs in women more often than men.

In frozen shoulder, the shoulder capsule thickens and becomes tight. Stiff bands of tissue — called adhesions — develop. In many cases, there is less synovial fluid in the joint.

This image shows the inside of a frozen shoulder (right) vs a normal shoulder (left). No wonder it is painful. Medical imaging is not usually needed to diagnose frozen shoulder, although in the early stages there are some signs of it on MRI.

The hallmark sign of this condition is being unable to move your shoulder - either on your own or with the help of someone else. It develops in three stages:



## Freezing

In the "freezing" stage, you slowly have more and more pain. As the pain worsens, your shoulder loses range of motion. Freezing typically lasts from 6 weeks to 9 months.

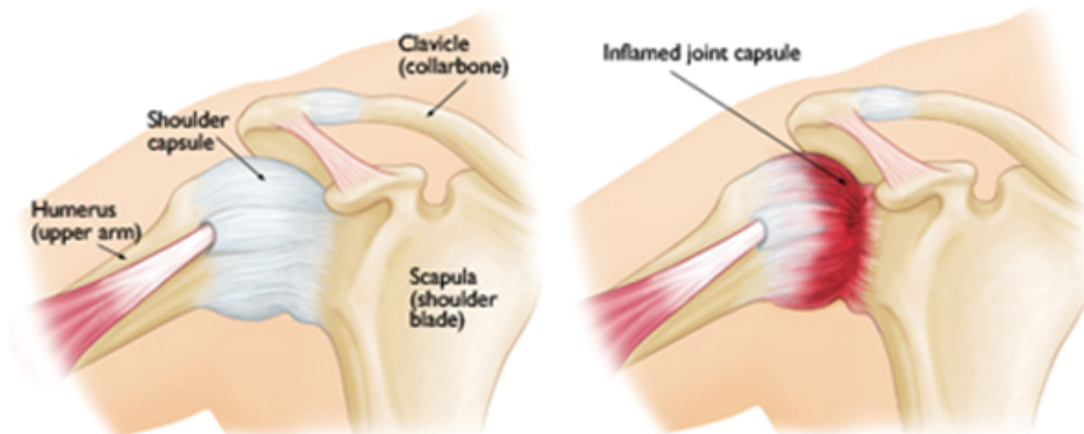
## Frozen

Painful symptoms may actually improve during this stage, but the stiffness remains. During the 4 to 6 months of the "frozen" stage, daily activities may be very difficult.

## Thawing

Shoulder motion slowly improves during the "thawing" stage. Complete return to normal or close to normal strength and motion typically takes from 6 months to 2 years.

In frozen shoulder, the smooth tissues of the shoulder capsule become thick, stiff, and inflamed.



**Cause-** The causes of frozen shoulder are not fully understood. A few factors may put you more at risk for developing frozen shoulder. These include diabetes, thyroid problems, Parkinson's disease, HIV and cardiac disease.

**Symptoms-** Pain from frozen shoulder is usually dull or aching. It is typically worse early in the course of the disease and when you move your arm. The pain is usually located over the outer shoulder area and sometimes the upper arm.

**Treatment-** Frozen shoulder generally improves over time, although it may take up to 3 years. About 40% of patients report mild symptoms that are ongoing after several years. The focus of treatment is to control pain and restore motion and strength through Physiotherapy.

**Nonsurgical treatment-** More than 90% of patients improve with relatively simple treatments to control pain and restore motion.

**Non-steroidal anti-inflammatory medicines-** Drugs like aspirin and ibuprofen reduce pain and swelling.

**Steroid injections-** Cortisone is a powerful anti-inflammatory medicine that is injected directly into your shoulder joint.

**Physiotherapy-** Exercises will help restore motion. These may be under the supervision of a physical therapist or via a home program. Therapy includes stretching or range of motion exercises for the shoulder. Sometimes heat is used to help loosen the shoulder up before the stretching exercises.

**Surgical treatment-** If your symptoms are not relieved by therapy and anti-inflammatory medicines, you and your doctor may discuss surgery. It is important to talk with your doctor about your potential for recovery continuing with simple treatments, and the risks involved with surgery. Surgery is rarely required.

**Remember, always seek professional advice-** Your Physiotherapist is the best person to guide your treatment. We hope this guide is helpful. Please feel free to share it with anyone you think would benefit from it.





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02 4954 5330



Unit 2 Building 2, 335 Hillsborough Rd,  
Warners Bay NSW, 2282

Bookings: [https://auappts.gensolve.com/advanced\\_physiotherapy](https://auappts.gensolve.com/advanced_physiotherapy)