Rotator Cuff Related Shoulder Pain (RCRSP) is by far the most common presentation seen in the Shoulder Clinic and is considered the most common cause of Shoulder pain. Various terms have been used to describe this presentation and you may have been told you have ‘impingement’, rotator cuff tendonitis, rotator cuff tendinopathy or a degenerative rotator cuff tear; ultimately, there is a lack of consensus regarding these terms, a lack of clear diagnostic criteria for these terms, and they may even be detrimental to recovery.

Due to this lack of consensus, the term ‘Rotator Cuff Related Shoulder Pain’ has been proposed to account for this. This is a useful term as it reflects the uncertainty within clinical practice, can guide effective rehabilitation and may not be detrimental to recovery.

What is Rotator Cuff Related Shoulder Pain?

RCRSP is a term used to describe the clinical presentation whereby the symptoms suggest involvement of the Rotator Cuff tendons.

The Rotator Cuff is a group of muscles at the top of the arm that originate from the shoulder blade (scapula) and attach to the long arm bone (humerus) and in turn surround the Shoulder joint. Their role is to control the movement available at the shoulder, contribute to the active stability of the shoulder and produce movement of the shoulder. A tendon is a portion of tissue that attaches a muscle to a bone, and through this attachment, allows the muscle to produce its action or movement.

People with RCRP often report pain in the upper arm region which is exacerbated by either lying on the affected side, overhead activity or through active use of the sensitised muscle and tendons. The symptoms often start without trauma and the individual may not be able to pinpoint an exact reason as to why the symptoms started although there is usually a history of either a change of activity, starting a new activity or a period of increased activity that may lead to the onset of symptoms.

As with all clinical presentations, they are individual in nature and it is important that the rehabilitation reflects this; there are no recipes or short cuts in the rehabilitation of RCRP. To help guide clinical management, RCRP has been further subdivided into:

- Non-irritable RCRSP
- Irritable RCRSP
- Advanced RCRSP

Non-Irritable RCRSP

The intensity of the pain experience by the individual may be mild or may be severe, highlighting the individual nature of RCRP and how rehabilitation needs to be tailored to the person. The intensity of the pain usually increases with movement but soon settles when the aggravating activity is stopped; for example, when lifting above their head to take something from the top cupboard they can feel...
discomfort in their shoulder but when their arm is back down by their side the discomfort has settled. These individuals can usually describe a position of ease and can sleep through the night undisturbed.

**Irritable RCRSP**

In irritable RCRSP, the symptoms that the individual experiences is often easily aggravated and can be prolonged or even constant once provoked; for example, when lifting above their head to take something from the top cupboard they can feel discomfort in their shoulder and when their arm is back down by their side the discomfort remains for a period of time. These individuals often report disturbed sleep due to their shoulder pain, especially when lying on the symptomatic side and may find it difficult to adopt a position of ease or comfort.

**Advanced RCRSP**

Advanced RCRSP is often seen in older people that describe a gradual reduction in function of the shoulder, often in the absence of trauma. The pain experienced maybe mild or severe and tend to report progressive weakness of the shoulder. It is often the case that movement is well preserved but they have difficult accessing this movement due to the weakness. Usually these people are offered an Orthopaedic review and may receive the diagnosis of ‘irreparable rotator cuff tears’.

**I’ve been told I have a ‘Rotator Cuff Tear’ do I need Surgery?**

The short answer is no, you don’t need Surgery. The long answer is maybe, you might need Surgery.

If you have developed your shoulder problem following a traumatic incident for example a fall, have high demands for your shoulder through work or recreation and are having trouble actively moving your arm, you are likely to do better with early Surgical intervention.

A period of ‘prehabilitation’ is recommended prior to any operation to minimise any loss of movement available, to provide appropriate stimulus to the muscles around the shoulder as well as maintain whole body strength and conditioning in order to maximise post-operative outcomes with the aim to shorten the post-operative rehabilitation period to allow you to achieve your goals earlier.

If your shoulder problem has developed without trauma, you are able to actively move your arm without too much difficulty but are primarily experiencing some discomfort or weakness in certain positions or with certain activities, it is likely you will do well without Surgery.

There are usually two reasons as to why this is the case. If you’ve not had any investigations such as an Ultrasound Scan demonstrating the presence of a rotator cuff tear, then you have simply been misdiagnosed and are experiencing RCRSP. This highlights the detrimental effect that some diagnostic terms can have upon your confidence and how the uncertainty can affect clinical management.

This does not mean you need to have an Ultrasound Scan to diagnose a rotator cuff tear; this is often where the second reason arises. Early imaging without appropriate clinical examination and without consideration to epidemiology (normal aged-related findings in those individuals that are symptom free without any history of shoulder problems) or consideration of you as an individual can lead to the inappropriate and erroneous diagnosis of a rotator cuff tear.
It has been known for many years that pain is not an indicator of structural damage; people with pristine looking scans can have considerable pain and disability and people with terrible looking scans can have no pain or disability! Ultimately, we need to treat you as a person and not the images on the screen as they are not reliable indicators of what is causing your symptoms.

**Management of Rotator Cuff Related Shoulder Pain in the Shoulder Clinic**

The rehabilitation of RCRSP within the Shoulder Service, whether that is Irritable or Non-irritable RCRSP, is in keeping with the principles of tendon rehabilitation.

A tendon can become sensitised in general terms if it is asked to do too much, too soon, too quick or not enough for too long!

The rehabilitation of RCRSP rarely involves a period of complete rest you may be glad to hear! However, rehabilitation of RCRSP requires you to afford it more respect than you would a fracture or broken bone; not only is the rehabilitation of a fracture shorter, it is also more predictable whereas rehabilitation of RCRSP is both longer and less predictable. Therefore, a period of relative rest and activity modification is required to allow the sensitised tendons to settle, whilst keeping you active to prevent deconditioning. While this may sound simple, it is notoriously difficult to find the right amount of activity modification.

Alongside relative rest, and activity modification it is important than both the strength of the corresponding rotator cuff muscle and the capacity of the tendon to be able to withstand loading, needs improving. As such, the mainstay of RCRSP rehabilitation is a period of progressive strength and conditioning of the involved tendons, muscle and whole body in order to not only rehabilitate the problem and return you to your activity, function or occupation but also to prevent the problem occurring in the future.

For the majority of people experiencing RCRSP, the general principles outlined above of relative rest, activity modification and progressive strength and conditioning are sufficient to fully rehabilitate and recover. Unfortunately, for some people, even the most well planned and executed rehabilitation programme does not resolve symptoms to a manageable level allowing the individual to return to whatever activity they wish to; this is particularly the case for those people presenting with Irritable RCRSP whereby it can be difficult to settle the symptoms adequately enough to facilitate rehabilitation. It is in these situations that Injection Therapy may be required as part of your rehabilitation programme in order to kick start your recovery.

**Management of Advanced RCRSP in the Shoulder Clinic**

Not all Rotator Cuff Tears require surgery to repair the tear for a person to achieve a pain-free, mobile and functional shoulder. It is well documented in the research and well recognised in clinical practice that people without any shoulder pain, any shoulder problems or any history of shoulder problems can have tears in their rotator cuff muscles and not know about it.

This tells us a few things that are useful for rehabilitation; that a tear in the rotator cuff tendons does not necessarily correlate with pain, that a tear in the rotator cuff tendons need not necessarily impede
function of the arm and that we cannot rely upon imaging findings in isolation to explain the pain that the person is experiencing.

There are of course some circumstances when a Rotator Cuff Tear is symptomatic and is responsible for the pain, loss of movement and loss of function in the shoulder. A detailed understanding of the history of the problem and a structured and evidence-informed clinical examination can allow for the identification for a symptomatic Rotator Cuff Tear.

The circumstance in which this usually occurs is often following a traumatic episode, such as a fall. However, they can occur in the absence of trauma as part of age-related changes to the muscle and tendon tissue in the shoulder. In such circumstances, an Orthopaedic opinion may be sought in attempt to repair the tear in order to facilitate further rehabilitation back to recovery. During this process, the Orthopaedic Consultant assesses whether or not the tear is reparable i.e. can they re-attach both ends of the tear together and obtain a satisfactory hold?

In some circumstances, the decision is made that the tear is ‘irreparable’. This does not mean that improvement in pain, mobility and function can’t be achieved, it purely means that the two ends cannot be approximated! This presentation is historically referred to as either a ‘massive rotator cuff tear’ or a ‘irreparable rotator cuff tear’; these terms offer little hope with regard to prognosis despite effective treatment options being available, both non-surgical and surgical. It is always recommended that a non-surgical approach is adopted in the first instance. A more appropriate term for this presentation is therefore Advanced Rotator Cuff Related Shoulder Pain.

The non-surgical approach utilised to rehabilitate this clinical presentation has been researched and shown to be an effective intervention in terms of improving short term pain and function as well as sustaining these improvements over time. Andrew utilises this approach as a framework for the rehabilitation of people with Advanced Rotator Cuff Related Shoulder Pain due to the research evidence supporting its use however, clinical practice is always evolving. As a reflection of this, Andrew has adapted the programme in light of new research evidence in order to addressing the limitations of the initial approach with the aim to improve its effectiveness further.

In some circumstances, engagement in rehabilitation is limited by uncontrolled levels of pain despite appropriate pacing, activity modification and analgesia. In such circumstances, you may be recommended the use of Injection Therapy; the role of such an injection is to reduce the pain associated with the rotator cuff tear, to facilitate an exercise-based approach to rehabilitation and allow you to perform your activities of daily living, thus maintaining your quality of life and ability to function.

Traditionally, a corticosteroid injection has been utilised to provide short-term pain relief and is still widely offered in clinical practice due to it being highly effective in some people. The amount of pain relief provided is difficult to predict due to the wide variability that exists in the clinical presentation of Advanced Rotator Cuff Related Shoulder Pain. Furthermore, there is some evidence that if administered on a repeated basis that it may further accelerate any changes within the muscle, tendon and joint. With these reasons in mind, there is a move towards the use of Viscosupplementation.

The proposed benefits of Viscosupplementation include pain reduction, restoration of the natural viscoelastic properties of the joint and even protection of the joint against further age-related changes; the research evidence for these claims in the shoulder are currently in their early stages. Within the shoulder, they appear to be associated with less side effects and both longer and more predictable pain relief when compared to a corticosteroid injection.