



Rotator Cuff Related Shoulder Pain

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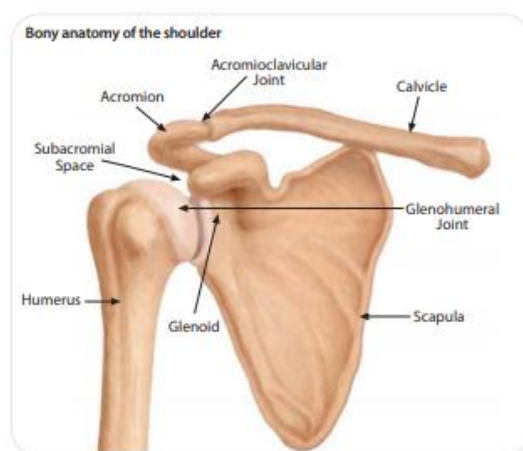
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INTRODUCTION

You have been diagnosed with a common shoulder problem. The aim of this booklet is to aid your understanding of your shoulder problem and to help facilitate its management. To do this, this booklet is broken into sections that provide information on the anatomy of the shoulder joint; what the problem is; how it is diagnosed; how the problem is managed and how long it usually takes to get better.

THE SHOULDER

The shoulder joint is a ball and socket joint. It is formed from a ball on the top of your arm bone (humerus) and a shallow socket which is part of the shoulder blade (scapula). Picture a golf ball sat on a tee. The shoulder joint is a very mobile joint, of which the main function is to position the hand in space. This allows you to reach for things, pick things up and do other important day to day tasks. Because the shoulder joint is so mobile, the muscles that surround the shoulder play a key role in both moving the joint but also providing it with stability and support.



WHAT IS THE ROTATOR CUFF?

The Rotator cuff is a common name for a group of four muscles and their tendons that attach to the top of your arm bone (humerus) from your shoulder blade (scapula). These muscles work to provide strength and stability of the shoulder joint whilst you move your arm. If the rotator cuff becomes overloaded it and other structures around your shoulder can become painful.

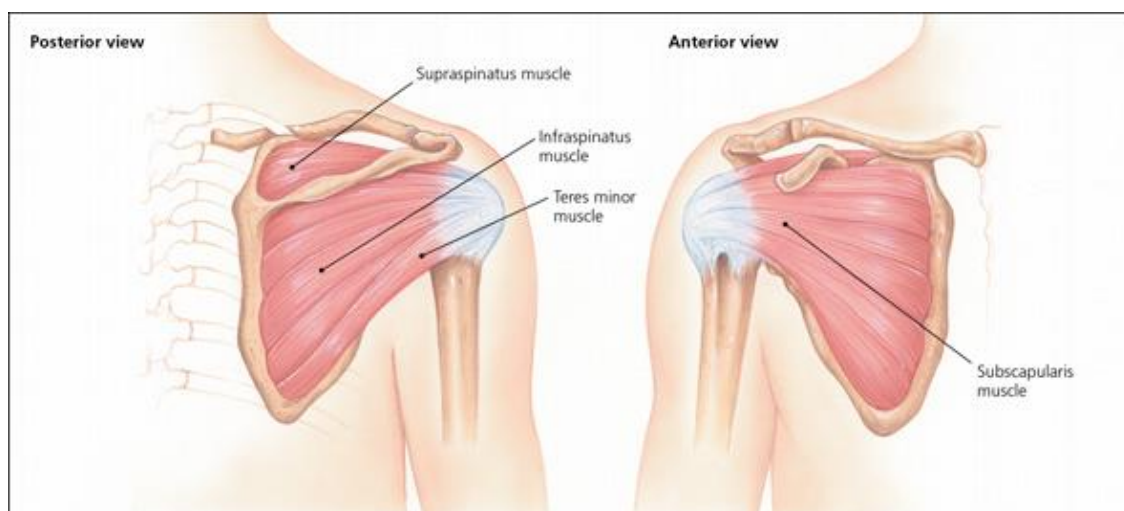


Image from Monica, Vredenburg & Korsh et al (2016). Acute Shoulder Injuries in Adults. *Am Fam Physician*. 94(2):119-127.

WHAT IS ROTATOR CUFF RELATED SHOULDER PAIN?

Rotator Cuff Related Shoulder Pain is a very common problem. It can cause pain in your shoulder and upper arm, in some cases it may spread further down your arm and up towards your neck. In most cases Rotator cuff related shoulder pain occurs when the tendon is subject to a change in load. This can happen slowly over time, or quite quickly if the tendon has been exposed to a sudden increase in load. For example, it can occur quite quickly if you have used your arm for an activity that is much more demanding than you are used to, such as suddenly doing more tasks that involve lifting or overhead movements. We also know that Rotator cuff related shoulder pain can also occur quite slowly over time. This happens when the tendon becomes irritated and overloaded and are then less able to tolerate normal day to day activities. Over time tasks that you would routinely do day to day further irritates your shoulder further and you often find that you get pain with tasks that you would normal do such as reaching into a cupboard. Rotator cuff related shoulder pain can also occur after a recent trauma or fall, in this case it is important to rule out a significant tear to the rotator cuff which your Physiotherapist can help you do. You may have heard Rotator cuff related shoulder pain referred to as many other different names including “subacromial shoulder pain”, “subacromial pain syndrome”, “shoulder impingement syndrome” and “bursitis” among others.

Why are there so many different names for the same problem?

Over time research develops our understanding of problems and how they are managed, this research is happening all of the time, as this happens conditions that are known by one name are often relabelled as something else. Unfortunately this can be rather confusing and often leaves people with more questions than answers. We believe that the term “Rotator cuff related shoulder pain” gives a more accurate description for the cause of your pain that encompasses a change in your shoulder tendon’s ability to tolerate load. This can lead to changes within the makeup of the tendon which occurs along a continuum and can also cause other structures within the shoulder joint to become irritated and painful.

Previously, compression or “impingement” of the rotator cuff and surrounding structures in the shoulder joint was thought to be the primary cause of rotator cuff related shoulder pain. This was based on a model that the space beneath the top of the shoulder (the acromion), think of this as a roof on a house, was reduced when you lift your arm. As this space was reduced it would cause the structures in this space to become “pinched” and cause pain. Over time this would cause the structures in this space to become thickened and painful. It was also thought that “bony spurs” on the underside of roof of the shoulder (the acromion) would impinge into the tendons causing “degenerative” tears to the tendon. However, over time our thinking has changed!

This Sounds Plausible, What Has Changed?

Research has shown us that most tears to the rotator cuff actually occur on the underside of the tendon, the side furthest away from the bony spur believed to “pinch” or “nick” the tendon. Moreover, people who have no shoulder pain have been found to have tears in the tendon, so a torn rotator cuff does not necessarily mean somebody will have a painful shoulder. In the absence of a clear mechanism of injury or trauma to the shoulder, a tear to one of the tendons can be considered a normal variation in a lot of people.

Like the roofs of houses, the roof over your shoulder joint (the acromion) comes in many different shapes and sizes. The good news is there is no correlation between those shapes or sizes and people that develop rotator cuff related shoulder pain, so those with more pointed, hooked, or jagged roofs are not more likely to develop shoulder pain.

Lastly, if the space between the ball and the roof of your shoulder joint was an important factor in the cause of your shoulder pain, you would expect procedures to increase this space to fix the problem and resolve your pain. However, we know that procedures that increase the space under the roof of the shoulder are not always very effective at improving shoulder pain. In fact they are no more effective than exercise or “natural healing” with time.

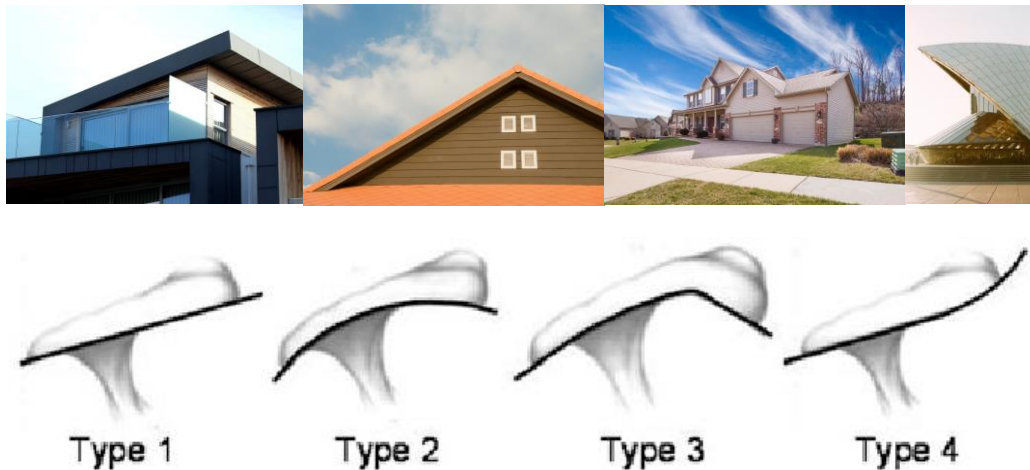
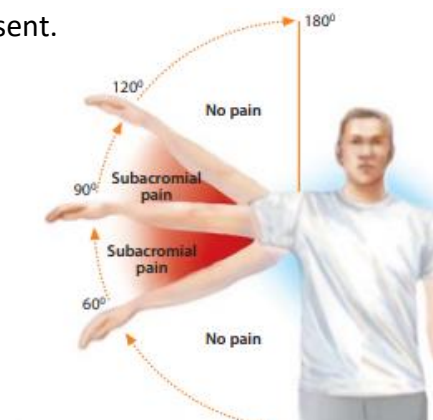


Image from Stehle, Moore & Alaseirli & et al (2014). A reliable method of classifying acromial shape. *International Biomechanics*. 2 (1) 36-42

HOW IS ROTATOR CUFF RELATED SHOULDER PAIN DIAGNOSED?

Usually Rotator cuff related shoulder pain is diagnosed by listening to the history of your problem and by a physical examination. Your physiotherapist will examine your neck and shoulder movements, the strength of your shoulder muscles and perform some tests of your shoulder. Rotator cuff related shoulder pain usually presents as pain in your shoulder and upper arm. In some cases it can refer further down your arm and up towards your neck. Classically people with Rotator cuff related shoulder pain complain of pain when moving the arm such as reaching and with twisting activities, such as putting your hand behind your back or putting a coat on. People also often present with what is called a painful arc, where the shoulder is more painful with your arm in specific ranges of your movement. You may also experience discomfort when lying on your affected shoulder, pain when reaching across your body and sometimes you may also experience a sensation of locking with certain movements. Depending on the irritability of your symptoms some people may experience pain at night and pain when your arm is resting. This is more often the case when more inflammation is present.



Do I Need a Scan to Diagnose my Problem?

In most cases scans such as x-rays, MRI scans or ultrasound scans are not needed to diagnose Rotator cuff related shoulder pain. A good history and physical examination of your shoulder alone provides enough information to diagnose your problem. Scans are not always useful for diagnosing shoulder pain. While a scan may provide lots of information it does not necessarily alter the treatment or management options for your shoulder pain. We also know that the information the scan may or may not pick up might not necessarily be causing your problem. We know that scan findings are very poorly linked with pain and often people with no pain have very similar findings on their scans to those that do.

WHAT ARE THE TREATMENT OPTIONS FOR ROTATOR CUFF RELATED SHOULDER PAIN?

The management of Rotator cuff related shoulder pain is based on restoring your shoulder tendon's ability to tolerate the load you need to place on it day to day. This is done by managing and/or altering the load that you are currently placing on the tendon and the shoulder joint to allow your tendon time to adapt and by increasing your tendon's ability to tolerate load. For some people this will involve taking load away from the shoulder, this is particularly true for those people with persistent shoulder pain who's work life overloads the rotator cuff tendons. Although in some cases it is necessary to take load off the shoulder, complete rest is not needed. Instead it is about finding a lower load or reducing the load on the shoulder and then gradually increasing it over time so that the shoulder can meet the requirements of everyday life. This is done by adapting the activities you are currently doing, by restoring your normal range of movement and by improving the strength of your shoulder muscles through exercises. While over time it is important that the exercises and activities you do with your shoulder are progressively more challenging so that your shoulder tendon can adapt, it is important to find the right starting point for you and adapt the programme from there accordingly. People with less irritable symptoms can often do more strenuous activities and strengthening exercises more quickly, while those with very irritable symptoms may need time to build to a similar level which may take several weeks or months. Your physiotherapist will help you put together a programme to help restore your shoulder tendons ability to tolerate load. They will help guide you on the right level of difficulty and starting point of the exercises depending on the irritability and severity of your symptoms and guide you in order to progress them.

How Long Will it Take to get Better?

Typically most people will see a good improvement in their symptoms in around 12 weeks through exercise. It can take between 6 to 12 weeks to start to notice an improvement in your symptoms with exercise because your body needs time to adapt. However, 81% of people report significantly improved symptoms after 6 weeks of structured exercise. The key to achieving a good result is to consistently do your exercises, gradually increasing the difficulty of them to help build the tolerance of your shoulder tendon to load.

Should it be Painful When I Exercise?

There is no right or wrong answer to this question and it is very dependent upon you as an individual. The outcome of your shoulder problem is similar if the exercises are painful or if they are not. Some discomfort whilst you are exercising is normal and expected; however you should not be in excessive amounts of pain whilst you are exercising. The pain you experience during exercise should be manageable to you; generally a pain less than a 3-4 out of 10 is advised. This pain should settle to your usual baseline fairly quickly once you have completed your exercises. If it does not and your pain levels are elevated for more than a couple of hours after you have completed your exercises you may need to adapt them to make them slightly easier before gradually building them back up again over time.

Is There Anything Else That I Can Do To Help My Pain?

1. Activity Modification

It is possible to change the load on your shoulder and help your symptoms by making slight alterations in the way you do things such as stepping towards something as opposed to reaching for it. You may also be able to break activities or tasks into more manageable smaller chunks and gradually increase the time you do the task over time. It is important to keep moving and exercising your shoulder so avoid not using it all together. For other ways that you can help adjust your day to day activities to help your symptoms speak to your physiotherapist and read our helpful tips section below.

2. Ice or heat

Applying ice or heat to your shoulder may also help alleviate some of your symptoms. Make sure you protect and regularly monitor the skin when applying ice or heat. They should be applied through a protective barrier such as a towel and not applied for more than 15 minutes at a time. In the early stages ice may be more beneficial however in the later stages heat can also help alleviate your pain.

3. Medication

Pain relief or anti-inflammatory medication may help settle your pain and inflammation to help you engage with exercise. It is important you speak with your GP or a Pharmacist before you take any medication to see if it is appropriate for you.

4. Sleep, Stress & Other Lifestyle factors

Pain is very complex and there is no one pain centre within the brain. What we do know is pain is not an accurate measure of tissue health or damage and it is influenced by many factors including sleep, stress and anxiety. These often share common outputs in the brain and can therefore increase your pain sensitivity. This means we have to think bigger than just what is happening to your shoulder on a tissue level but also have to consider what else might be contributing to your pain experience. The good news is, this means there are lots of way to help your pain.

5. Smoking Cessation

Smoking affects every tissue in the human body, including bone, muscle and tendons. Smokers are more likely to develop musculoskeletal pain including rotator cuff related shoulder pain compared to non-smokers. Smoking also slows and delays the healing process meaning for those that do have pain it may take longer to resolve. However, many effects of smoking are reversible over time. Avoiding or stopping smoking may help your recovery. For further assistance and advice on stopping smoking/ nicotine addiction see the information at the end of this booklet.

6. Physical Activity

A sedentary lifestyle and physical inactivity increases the likelihood of developing musculoskeletal pain along with other health issues such as heart disease, stroke, cancer and type II diabetes. Physical activity acts as a powerful “medicine” for the body and helps reduce the risk of all of the above mentioned conditions. General exercise has enormous benefits for both your physical and mental health. It can not only help the recovery of your shoulder pain but can also help with weight loss, improve your mood, promote better sleep, increase your energy levels and much more. The recommended dose of physical activity for adults in the UK is at least 150 minutes of moderate aerobic activity (such as cycling or brisk walking) or 75 minutes of vigorous physical activity (such as running) each week and strength exercises of the main muscle groups on 2 or more days a week. It is important to keep going with other activities that you enjoy to keep fit. For more information and help to become more physically active see details of the Chartered Society of Physiotherapy’s Love Activity, hate Exercise Campaign at the end of this booklet.

7. Injections

Occasionally some people may benefit from corticosteroid injections to help with the pain. This is steroid medications mixed with local anaesthetics injected into the space underneath the roof of your shoulder (sub-acromial space) that helps to reduce the inflammation and related pain. Injections can be useful to help settle irritable symptoms that are related to inflammation, they are not very effective for shoulder pain that is more mechanical in nature, for example if you only get your pain if you lift your arm or when reaching. It is important to continue with Physiotherapy and your exercise programme following steroid injections to achieve longer term pain relief.

Will My Problem Need Surgery to Fix It?

Most people will not need surgery for rotator cuff related shoulder pain. Most people make a full recovery with optimised conservative treatment that involves a structured exercise program, activity modification, changes to other lifestyle factors and adequate pain relief plus or minus a steroid injection. Surgery is only indicated for those people with persistent or significant pain and loss of function despite appropriate non-operative treatment. Surgery usually involves shaving some of the bone away from under the roof of the shoulder (the acromion) and/or repairing the torn tendons if they are present. You will often need a prolonged period of Physiotherapy and activity modification after surgery and you are not guaranteed to have a pain free shoulder afterwards. Research suggests that a large proportion of the benefits gained from surgery are related to the post-surgical recovery and rehabilitation. This allows people to have time away from the repetitive overload placed on their shoulder and they are also more likely to engage in the graded rehabilitation and strengthening programme that helps build the tolerance of your shoulder tendon to load following surgery. In some cases it may be worth “watching and waiting” as with time the pain can settle to a similar level to those that have had the surgery. If you require more advice in relation to this speak to a health professional.

Helpful Tips

- To reduce the load on your shoulder with movement, step towards things as opposed to stretching out to reach them.
- If you are struggling with poor sleep due to your shoulder pain waking you try propping a pillow behind you to help stop yourself rolling onto your shoulder in the night. Sometimes your shoulder can be painful when sleeping on the opposite side if your painful shoulder falls across your body, in this case try resting your arm on the outside of your leg or use a pillow to support the arm.
- Break activities into smaller chunks, if needed plan your day to space out activities that involve using your shoulder/ arm more.
- Although in some cases we need “relative rest” or to reduce the load on your shoulder to allow it to adapt, avoid complete rest/ don’t stop moving your shoulder. Muscles and tendons need movement to stay healthy, complete rest may decondition your tendon further.
- If you don’t exercise regularly or do much physical activity try to build some into your weekly routine. Try to find something you enjoy doing, for help with this check out the Chartered Society of Physiotherapy’s “Love Activity, Hate Exercise” campaign.
- Consider other factors that may be contributing to your pain experience. Improving your sleep, taking regular physical activity, maintaining a healthy weight, stopping smoking and finding strategies to help manage stress can all help influence your pain. Visit the NHS live well website (www.nhs.uk/live-well) for further information on these topics.

REASONS TO QUIT



FEEL HEALTHIER

No matter how many years you've smoked, quitting does improve current and future health and wellbeing.



SAVE MONEY

Quitting smoking leads to a richer life in more ways than one. If you smoke 20 a day, you could save around £250 a month. That's £3000 per year.



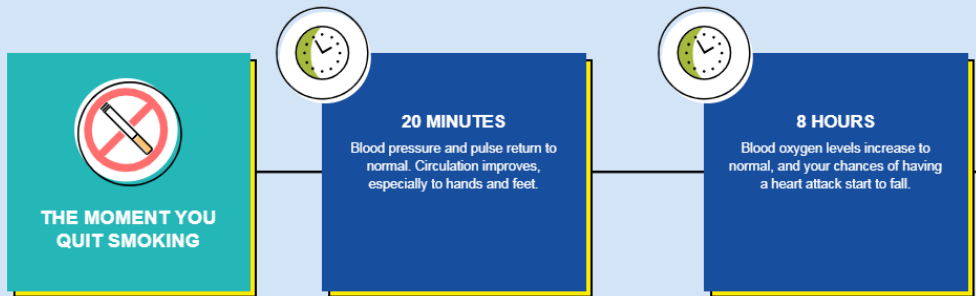
TAKE CONTROL

Cigarettes don't have to control your life. Protect your loved ones from harmful second-hand smoke and reduce their risk of developing smoke related illnesses.

WHATEVER YOUR REASON FOR QUITTING, WE'RE HERE TO HELP.

THE HEALTH BENEFITS OF GOING SMOKEFREE

When you stop smoking, your body starts to improve straight away.



READY TO QUIT? YOU DON'T NEED TO GO IT ALONE

Smokefree Hull has loads of FREE services



FACE TO FACE

Our local smoke free specialists are on hand to support you on your smoke free journey, call now to book an appointment 01482 247111.



TEXT

Stay focused with advice and tips straight to your phone. Text "QUIT" to 61825."



QUITPAL APP

Download our FREE app for practical daily support to keep you motivated; search 'quitpal' in your App store.



ONLINE

Use our FREE online service at www.readytostopsmoking.co.uk for convenient support around the clock.



NRT

Eligible clients can access FREE Nicotine Replacement Therapy (NRT) to help manage cravings.



COME AND SEE US

We're out and about in your community. Check [facebook](#) for a list of our community drop in sessions.

LOVE HATED ACTIVITY EXERCISE

Do more of what you ♥ with physio

TIPS FOR GETTING STARTED

1 FIND
SOMETHING
YOU ENJOY SO
THAT YOU'LL
KEEP GOING.

2 SET
GOALS
FOR YOURSELF
- BIG OR SMALL -
TO KEEP YOU
MOTIVATED.

3 PACE
YOURSELF
- START
SLOWLY AND
GRADUALLY
BUILD UP.

4 IT'S OK
TO ACHE
BUT IF PAIN
PERSISTS, EASE
BACK AND GO
SLOWER.

5 NEED MORE
MOTIVATION
AND SUPPORT?
FIND SOMEONE
TO JOIN YOU!

Find out how you can
do more of what you love at:

www.csp.org.uk/activity