Sub-acromial pain syndrome (shoulder impingement)

What is sub-acromial pain syndrome?

Sub acromial pain syndrome refers to pain arising from the soft tissues (tendon and bursa) that sit between the top of the long bone of the arm (humerus) and the roof of the shoulder socket (acromion).

The diagram shows you what this might look like.

The primary issue is tendon pain.

We (you and us) can treat the condition by managing the tendon- this includes treating inflammation, managing loading, and modifying lifestyle risk factors.

We can also influence pain by assessing and influencing movement of the shoulder. When we move our arms and our shoulders both the long bone of the arm and the shoulder blade move. For some people who need to see a physiotherapist about the problem learning how to influence this through exercise is an important part of getting their symptoms to go away.

The focus of this article is to tell you about tendon pain in the shoulder and the steps you can take to manage this.

We will start by reviewing what a tendon is and why tendon pain develops.

What is a tendon?

A tendon is the end part of a muscle that attaches to bone. It is made up (and looks) different to the rest of the muscle. It is made up mainly of collagen (type 1) which is a very strong, slightly stretchy type of tissue. The tendon isn't just one piece of collagen, infact it is made up of many tiny fibres. These amazing structures have the capacity to self repair small areas of injury, and can adapt to increasing demand, although they do both of these things very slowly.

Why do we get rotator cuff tendon pain?

There are many reasons why we might develop rotator cuff tendon pain- here are the main ones:

The most common reason is a sudden increase in load or activity. Overloading can occur because you do a lot of a new activity, or a one of activity (e.g. decorating a room) or you have been exposed to a sudden external force (such as catching yourself if you trip or fall. Because the change is sudden the tendon struggles 'to keep up', leading to pain.

The second most common scenario is constant exposure to overload (i.e. sustained heavy activity) for example because of your occupation. Again the tendon is struggling to adapt to the demands you are placing on it.

Thirdly we may get tendon pain because we don't use our shoulders very often. Tendons can become deconditioned and if they do, normal day to day activities can start to cause changes we normally see with overload.

As you can see the main factor in the development of tendon pain is how the tendon relates to load.

There are however a number of a 'risk factors' for tendon pain we need to be aware of.

Some health problems can predispose us to tendon pain for example diabetes, rheumatoid arthritis, depression, and anxiety. It's important if you have any coexisting health problems that these are well managed.

Lifestyle factors have also been linked to tendon pain. Smoking and being overweight are both associated with a higher likelihood of tendon pain.

What can I do about the problem right now?

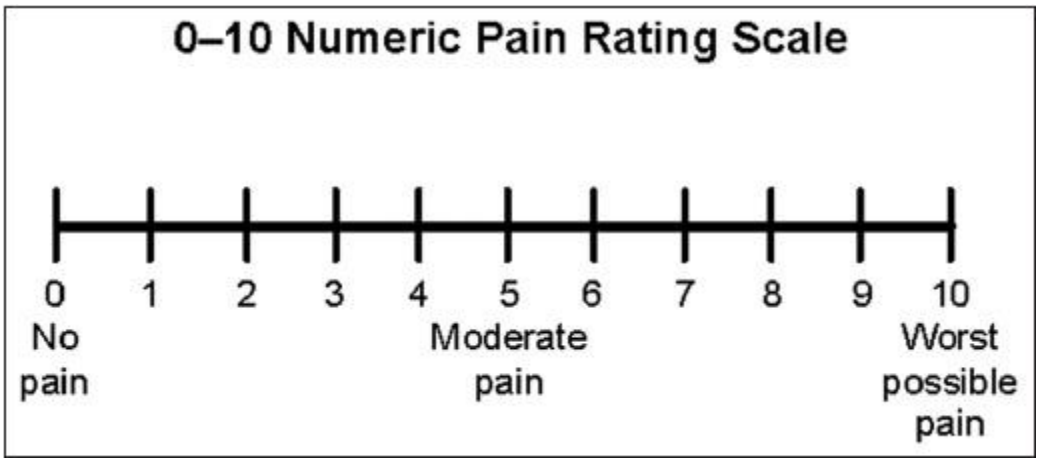
1. Deload

If your symptoms have just come on because of a sudden increase in load, they are probably as a result of local inflammation within the tendon. They will usually settle within 6-12 weeks, as long as you are able to 'deload' the tendon. This essentially means not repeating the heavy activity again and again, and making sure you modify your day to day activities for a couple of weeks so they don't cause excessive pain.

If your symptoms are due to constant exposure, then again you may want to 'deload'. You can do this for example by modifying your work tasks, getting help with heavy lifting, or using more equipment.

A useful technique to employ during this deloading phase is 'relative rest'.

Relative rest refers to a technique where by you limit your activities based upon your symptoms.



To start with you have to rate your pain on a scale of 0 to 10 where 0 is no pain at all, and 10 the worst pain imaginable. The aim with *relative rest* is not to let you pain go anymore than 2 points up this scale with your day to day activities (i.e if your rest pain is 2 you should not provoke pain more than 4). This can mean cutting activities short or modifying how you do them for a short period of time. You should apply the principles of relative rest for a few weeks until the pain begins to settle.

If you think you are going to struggle with deloading because of the nature of your job, come and see us. There are other strategies we can employ to achieve deloading which we can teach you, but they do require a detailed face to face assessment.

2. Reload

If you completed the deloading phase or you think you have a tendon underuse problem the next thing to do is to gradually start exposing the tendon to load again.

Why do this? Because these strong amazing structures get their ability to cope with loading by exposure to it. The tendon needs to know in the long term what the normal demand on it is going to be and has to relearn how to cope with this. Once the tendon has 'settled down' you can start this gradual education.

The best place to start is with isometric exercises. These are static contractions of the muscle and tendon. These have been shown to reduce short term pain (so are good for self-administering pain relief) and help to prepare the tendon for beginning to accept loading through movement.

The exercise below is an isometric exercise for your rotator cuff:

- Stand with your painful arm by your side , bent at the elbow as shown above
- Place your other hand on the outside of your bent arm as shown above
- Try and rotate the shoulder outward, resisting the movement with your other hand as shown above
- You should start by only working at about 50% of your maximum push, less if 50% is uncomfortable. Eventually you want to get up to about 70% of your maximum.
- You should hold the push for about 50 seconds and repeat 2-3 x per day.

What next?

For a good many people simply deloading the tendon and then a simple reloading exercise coupled with a gradual return to normal activity will be enough for their pain to settle.

However some people will reach this stage of being able to perform isometric exercises fine but still have pain. Equally some people will find themselves unable to do this exercise without their symptoms flairing (we call this an irritable tendon). If this is you then please speak to your GP about an MSK referral. The information here represents the first of four phases of tendon rehab that you may need to do. We also have other strategies we can employ if your tendon is really irritable that may allow you to then rehab.

For people with persisting tendon pain it is worth noting that it can take 6 months+ to resolve this, but we can equip you with the tools to take control of the problem and see a good outcome.