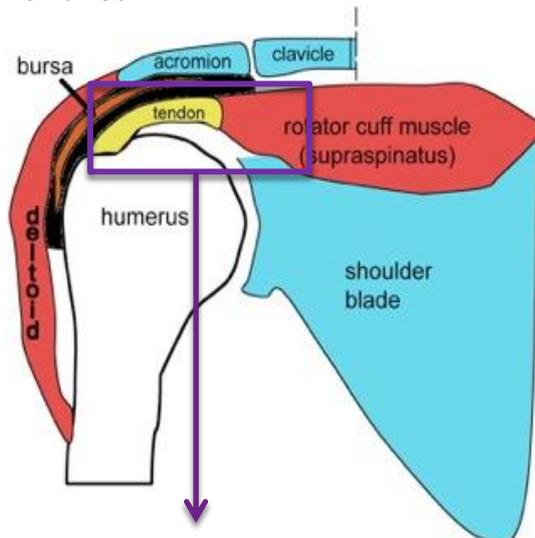


## Subacromial pain / impingement syndrome

### What is Subacromial pain?

The shoulder (glenohumeral) joint is a very mobile 'ball and socket' joint. It is formed from a ball on the top of your arm bone (humerus) that fits into a socket of your shoulder blade. It relies on muscles and tendons (structures that attach muscles to bone) to keep it stable (rotator cuff). Above the ball and socket is a ligament (coracoacromial ligament) (figure 2) which attaches to the top of your shoulder blade and forms an arch over a space called the 'subacromial' space (figure 1).

Subacromial or impingement pain is one of the most common causes of shoulder pain. It is caused by pinching (impingement) of structures that lie in the subacromial space. The 'roof' of the shoulder is an extension of the shoulder blade bone known as the acromion (see figure 1). The rotator cuff (supraspinatus) tendon lies under the 'roof' of the shoulder and sandwiched between them is the subacromial bursa. This bursa is a fluid filled sac that allows for smooth gliding of the rotator cuff under the acromion with overhead movements of the shoulder. When you lift your arm away from your body, the subacromial space is narrowed.



Subacromial space (beneath the acromion)

Figure 1: Anatomy of the shoulder showing the subacromial space.

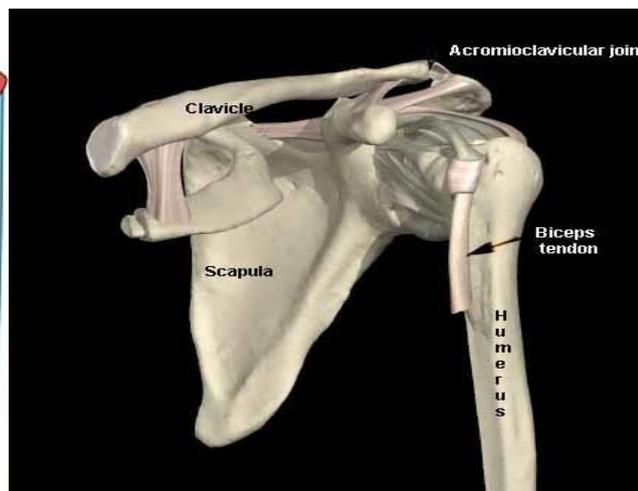


Figure 2: Coracoacromial ligament

Subacromial pain can start suddenly after an injury or come on gradually with no obvious cause. It is caused by irritation of structures that lie in the subacromial space. The subacromial space can be narrowed by:

- Swelling of supraspinatus tendon or bursa, which causes the supraspinatus tendon or bursa to become pinched or squashed and further inflamed. This will lead to pain and loss of function.
- As people get older, the rotator cuff muscles become weaker. This can affect stability of the ball and socket joint, so that when the arm bone (humerus) moves upwards there is narrowing of the subacromial space.
- Postural positions such as sitting in a slouched position with rounded shoulders (being hunched)

Pain is often felt over the outside of the shoulder and upper arm and sometimes up to the side of the neck. The pain can be worse when lifting the arm forwards or out to the side and with twisting movements such as putting on a coat or seatbelt. The shoulder is often worse at night when lying on the painful side.

### *How long will it take to get better?*

Subacromial pain can get better on its own in a few days or may take up to 6 weeks to settle. Try the self-help advice below to help ease your symptoms. Sometimes the pain can persist for longer than six weeks and take several months to settle. If the pain persists for longer than six weeks and is not improving you may want to see your doctor for pain relief and possibly a referral for physiotherapy.

### *What can I do to help myself?*

**Getting the balance right between rest and activity:** Subacromial pain is aggravated when you raise your arm to shoulder height or above, so try and limit this activity. If you have to raise your arm above your shoulder, keep your elbow in and lead with your thumb pointing up. If possible, take regular breaks to rest during activities. Try to keep your shoulder moving within your pain free range to prevent stiffness. Aim to improve your posture by taking your shoulder blades back to avoid a rounded (hunched) position.

**Some exercises** can be very helpful to strengthen the rotator cuff muscles to help provide stability for your shoulder and ensure the ball is centralised in the socket during movement. The exercises should be pain free to avoid making your symptoms worse. These simple exercises may be helpful:

<http://www.arthritisresearchuk.org/arthritis-information/conditions/shoulder-pain/shoulder-pain-exercises.aspx>

**Pain killers:** Over the counter painkillers may be helpful such as paracetamol, ibuprofen or creams that you can buy at the chemist. Your pharmacist will be able to give you expert advice.

**Sleeping:** The shoulder can often be painful at night. You may find it helpful to lie on your good side with your painful shoulder supported in front of you on a pillow. If you lie on your back a pillow under the arm can provide support.

This link may be helpful:

<http://www.nhs.uk/Conditions/Sports-injuries/Pages/Treatment.aspx>

- **Protection** – protect the affected area from further injury; for example, by using a support and avoiding painful activities.
- **Rest** – Optimal loading of the shoulder is advised to maintain function but avoid aggravating pain.
- **Ice** – apply an ice pack to the affected area for 15-20 minutes every two to three hours. A bag of frozen peas, or similar, will work well. Wrap the ice pack in a towel to avoid it directly touching your skin and causing an ice burn.

### *How can a clinician help?*

If your shoulder is no better after six weeks you may need to see your doctor. Your doctor may prescribe you stronger painkillers. You may also be referred for physiotherapy.

**Physiotherapy** is very helpful to mobilise your shoulder and strengthen the muscles around your shoulder blade as well as your rotator cuff muscles. You will be given specific exercises to help reduce your pain and improve your range of movement. You will also be given advice on good posture.

**A steroid injection** may help if you are in a lot of pain and struggling to do your exercises. This injection uses a steroid and local anaesthetic to help reduce pain and allow you to move your arm and undertake the exercises which will help to restore function. It is advisable to rest from any exercises for at least a week after the injection.

**Surgery** may be required if the shoulder pain is still severe in spite of physiotherapy and injections. The aim of surgery is to relieve pain by increasing the space under the acromion. This is done by keyhole surgery (arthroscopy) and involves removing some of the bone from the acromion (top of the shoulder blade) to increase the space for the tendon and bursa. It is called an 'arthroscopic subacromial decompression'. It normally takes three months to recover from this surgery. This link may be helpful:

<http://sussexshoulder.co.uk/treatments/arthroscopic-subacromial-decompression-and-or-acj-excision>