

Shoulder Separation (acromioclavicular joint injury)



Introduction

Shoulder separation is an injury to the acromioclavicular joint in the shoulder. This document contains information for patients about the acromioclavicular joint, the injury and options for treatment.

What is the acromioclavicular joint?

The acromioclavicular (AC) joint is in the shoulder. Although we normally think of the shoulder as one joint, it is made up of several joints which combine to give us the overall movement of the arm. The AC joint is one of these joints (see figure 1), it joins the end of the collarbone (clavicle) to the shoulder blade. The point where it joins is called the acromion. The acromion is an extension of the shoulder blade, at the top, outer edge of the shoulder blade.

Ligaments around the AC joint hold the collarbone and acromion together. There are also ligaments further along the collarbone (toward the centre of the chest) that join to the shoulder blade at a narrow bridge of bone called the coracoid. These are called the coraco-clavicular (or "CC") ligaments. The AC joint and CC ligaments work together to help to control shoulder movement and keep it stable.

In a separated shoulder, one or both of the AC joint ligaments and the CC ligaments can be sprained or torn.

Disclaimer: The information provided in this document is not intended as medical advice. Any injury, pain or symptoms experienced by an individual should be assessed by a qualified health care professional to help with an informed decision on the most appropriate course of treatment.

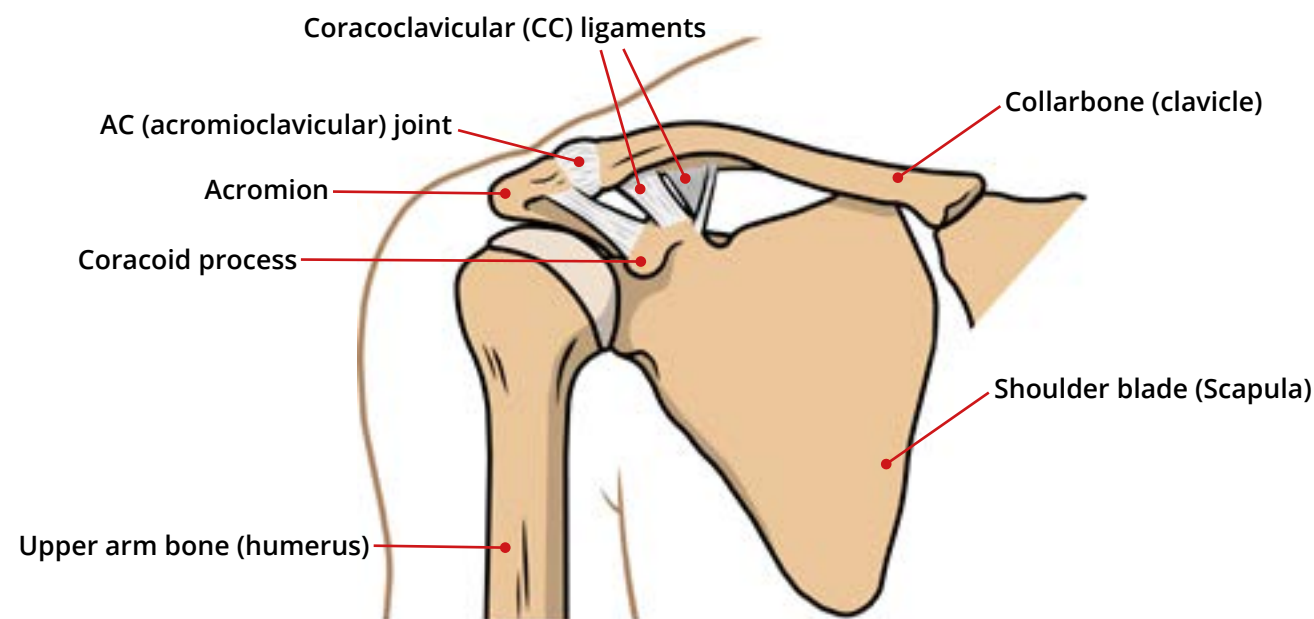


Figure 1: normal shoulder joints

Shoulder Separation, or Acromioclavicular Joint Injury

A shoulder separation injury, known medically as an AC joint injury pulls (sprains) or tears the AC ligaments (see figure 2) and might also sprain or tear the CC ligaments depending on how bad it is. It happens as a direct injury, usually a fall or a direct blow, rather than being something that develops over time.

The AC joint is strong, but it is exposed to falls etc, so injuries to this joint are common and shoulder separations make up over 40% of all traumatic shoulder injuries. It is more common in athletes and in males. It is different to a dislocated shoulder (where the ball of the upper arm bone comes out of its shallow socket in the shoulder blade).

The main symptom is pain in the shoulder, usually over the AC joint. Also, the shoulder profile commonly changes with part of the collarbone sticking up. This “lump” is not always obvious, and there are many other causes of shoulder pain, so it is important to have it checked by a doctor.

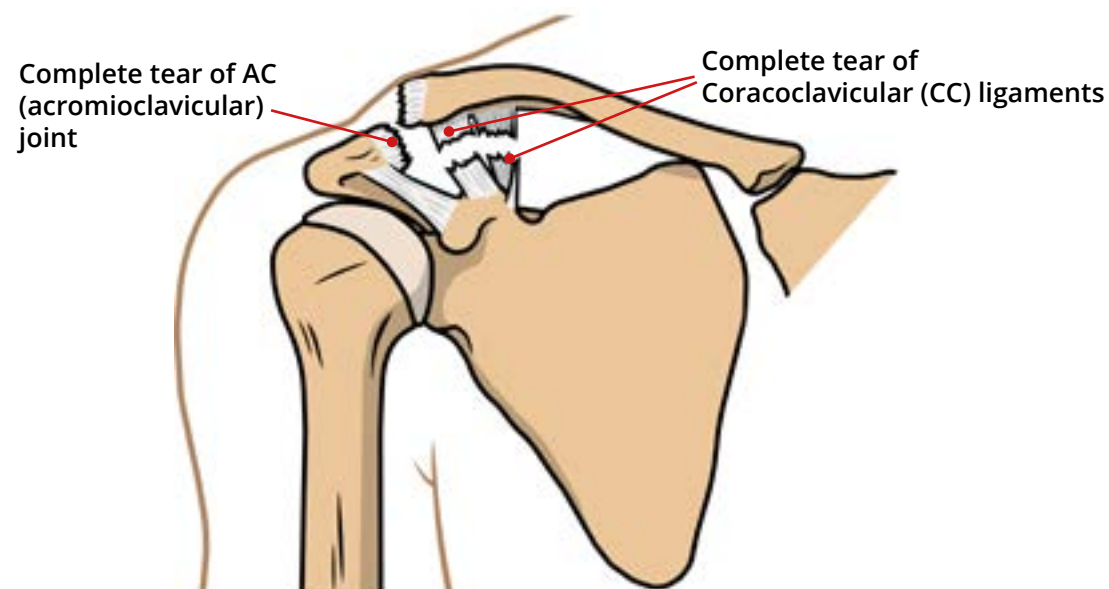


Figure 2: shoulder with torn AC and CC ligaments

What should I do? Diagnosis and treatment

Doctors will diagnose the injury by examining the shoulder and probably also by X-rays. Treatment depends on how badly the ligaments are sprained or torn, so it is important that the doctor can examine the injury. Most injuries do not need surgery, generally it is only needed in the more severe types.

Doctors grade the injuries using a system called Rockwood classification, from type 1 to 6. The table below is a simplified summary of when surgery is likely to be needed or not.

Description	Medical classification	Likely treatment
The AC ligament may be sprained or torn, but the CC ligament may be sprained but not torn.	Rockwood Type 1 or 2	Non-surgical
AC and CC ligaments torn. The collarbone can be brought back close to a normal position when manipulated by doctor or therapist.	Rockwood Type 3	Usually, non-surgical. Some cases might need surgery, especially if it does not improve with time.
Ligaments torn, shoulder is more unstable and cannot be manipulated back to normal position.	Rockwood type 4, 5 or 6	Surgery

The goal of treatment with or without surgery is to return to normal, pain free activity with normal movement of the shoulder. Treatment without surgery usually includes some combination of rest, ice (for pain), painkillers and a sling for a while to keep the arm immobilised followed by rehabilitation exercises. Your surgeon or physiotherapist will give you a rehabilitation programme introducing movement and strengthening exercises over your recovery period.

If surgery is needed, it is usually done without the need for an overnight stay in hospital, although not always. There are many variations on the method used, but modern techniques use strong sutures, tape or a ligament graft to join the collarbone to the coracoid (where the CC ligaments were) and allow the body's own tissue to mend over time. There may be other injuries at the same time that may change the treatment plan. For example, if the collarbone is also broken and needs an operation to fix that.

Some of these strong synthetic implants such as the **Infinity-Lock** Button System (figure 3) will also allow the natural process of new tissue to overgrow the implant for added strength in the long term.

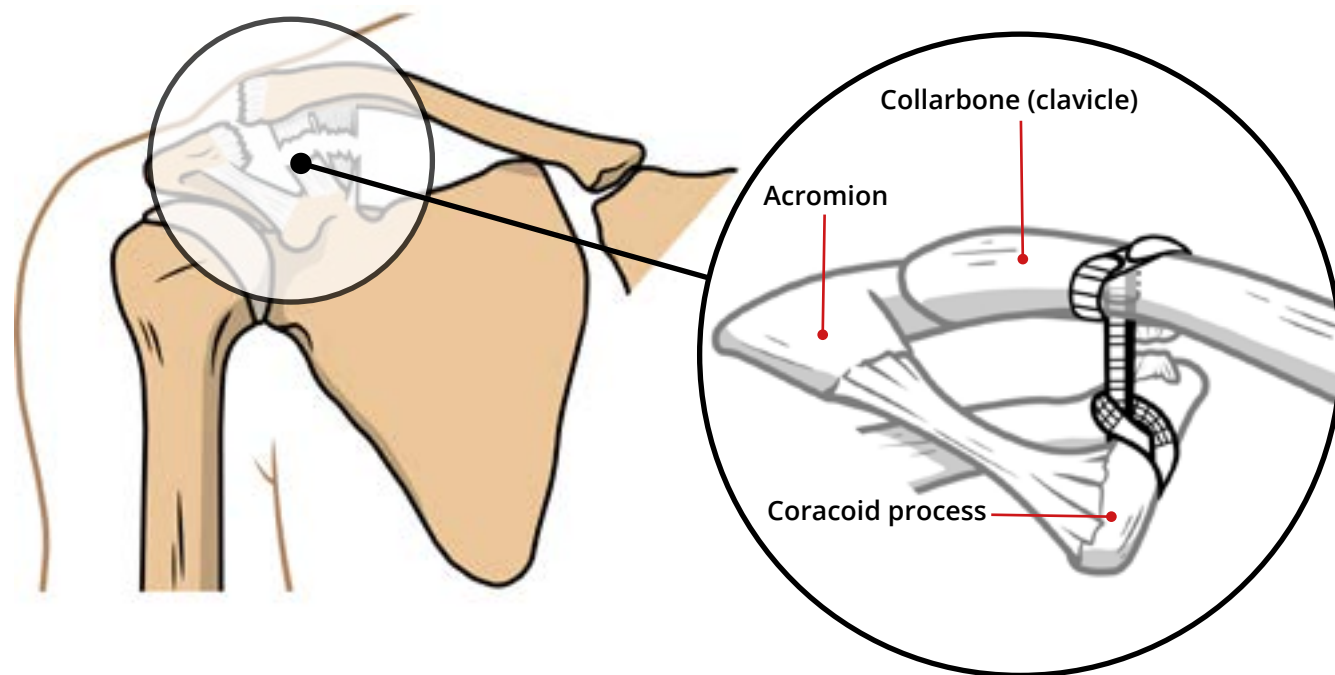


Figure 3: Infinity-Lock Button System in place

Results and risks

Most patients can recover their movement and strength well, with time and with sticking to rehabilitation exercise. The more common complications of surgery include:

- 30 - 50% are likely to have some level of residual pain at the AC joint
- Arthritis can develop in the AC joint and this is more common after surgery
- Grafts, sutures or their fixation can fail before the body's own tissue has recovered enough to take the loads
- The coracoid can fracture, particularly if the surgery requires drilling through the coracoid to fix the suture or graft
- Problems with skin can occur, from the incision, or fixing a graft where the bone is just under skin. For example skin irritation over the collarbone.

The Infinity-Lock™ Button System for shoulder separation

The **Infinity-Lock** Button System implant provides a surgical solution to repair a separated shoulder. Surgical repair with **Infinity-Lock** Button System reduces pain and allows you to get back to work, home life and sport.

Multiple clinical studies using the **Infinity-Lock** Button System have shown:

- Reduced pain after operation
- Brings the collarbone back into line
- Successful return to activity after operation
- Low-profile implant improves appearance on the collarbone

What it is and how it works

The **Infinity-Lock** Button system includes a broad tape implant and a metal button for fixing the tape to the collarbone. The tape is specially designed to lasso the coracoid bone, so there is no need to drill through that bone. The surgeon attaches the coracoid to the collarbone with the tape. A low-profile titanium button on top of the collarbone protects the tape. The tape-and-button system improves the appearance of the shoulder as well as reducing the pain by re-aligning the collarbone. After surgery the shoulder tissues heal with careful rehabilitation and the **Infinity-Lock** implant is left in place permanently.

After the operation - Rehabilitation

Rehabilitation starts very gently and carefully and the programme should be supervised by a physiotherapist. All mobilisation and exercises should be performed within the pain free range of movement. This typically starts with wearing a sling for around 3 weeks, protecting the shoulder. Then you can wean off the sling and introduce more exercises. The recovery programme usually takes around 12 weeks. You should not try to increase the prescribed activity levels or to overload the repair before complete healing has occurred.

To find out whether **Infinity-Lock** Button System can help your shoulder and start a dialogue with your surgeon, please click [here](#)

Frequently Asked Questions



These answers to patients' questions have been checked by a consultant shoulder surgeon who is experienced in using Infinity-Lock Button System.

Q. My doctor said that I do not need surgery, but I'm not getting any better. Can I have the operation?

A. This type of injury can vary, from a sprain to the most severe rupture. Surgery is normally recommended for more severe injuries only. For intermediate level injuries the first treatment option is to use local measures such as slings, ice packs and pain relief. If that does not work, then surgery is the next option. If you have had pain and impaired function for over 3 months you should ask your doctor for a review.

Q. Will I have to wear a sling after the operation?

A. You will have your arm supported in a sling straight after the operation. This is to protect the repair. It is very important to wear the sling at all times until you are told you can take it off by your therapist or surgeon. Patients usually need to wear the sling for 4-6 weeks, but it might be removed for physiotherapy during this period.

Q. How long does recovery take before I can return to normal activities?

A. Typically it will take 4-6 weeks before the sling can be removed and you need to be prepared not to use your arm during this time. From 6 to 12 weeks after the operation you will be working on regaining range of movement and shoulder stability. Following this period, you will start to strengthen the shoulder. You should discuss your activities with your surgeon. Whilst individual situations vary, it is usually advised to avoid manual work for 3-4 months and contact sports for 6 months.

Q. Is there a scar and if so, where is it?

A. The operation is normally done through an incision about 5 cm long. It will either be placed over the collarbone or vertically over the top of the shoulder. There will be a scar where the incision was made. Please ask your surgeon how he/she intends to make the incision or where the scar will be.

Q. How long will I have to stay in hospital?

A. This surgery is usually carried out as a day case and you often go home the same day, once you have been shown how to look after the shoulder and how to put on a sling. Sometimes an overnight stay might be appropriate or needed, especially if you live alone.

Q. Can I have the implant taken out later?

A. The implant is normally left permanently in place since tissue grows in and around it as the body heals. Removing the whole implant would probably damage the body's repaired tissue and undo some of the benefit. The number of reoperations has been very low using this implant, but in exceptional cases, the metal button may need to be removed if it is prominent under the skin. This will only be after 9-12 months, once the ligament has integrated into your body such that the button is no longer required.

Disclaimer:

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