

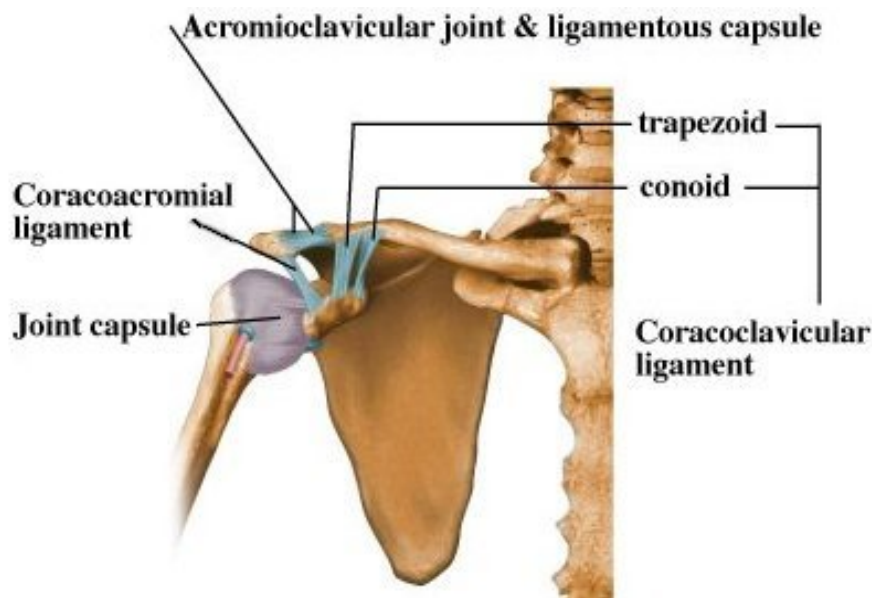
“INJURIES TO THE ACROMIOCLAVICULAR JOINT - COMMONLY CALLED THE AC JOINT”

The AC joint is an area of the shoulder complex that is commonly injured, particularly in people involved in collision or impact sports such as rugby, skiing and mountain biking. It is thought to account for 40% of all injuries to the shoulder.

Anatomy

Once you know where the AC joint is located you will usually know if it is the problem because the pain often lies over or very close to the joint. The AC joint is where the outer end of the clavicle (collar bone) attaches to the top edge of the scapula (shoulder blade). It is therefore completely separate from the ball and socket joint, sitting just above the shoulder, but they do have a relationship when moving. When you lift your arm above horizontal, the collar bone and shoulder blade must move upwards in order for the ball and socket joint to move above your head. The AC joint is therefore crucial to normal shoulder mechanics. Anyone who has injured the AC joint will testify how difficult it is to move the rest of the shoulder.

Figure 1: The AC Joint



The joint is held secure by some very strong ligaments which attach from bone to bone (figure 1 shows conoid and trapezoid ligaments) and a thin capsule that surrounds the joint. These help to withstand the forces that are placed on the joint during movement and impact. There are also a couple of muscles that pass over the joint and so help to hold the two surfaces together, particularly the deltoid muscle.

How does it get injured?

By virtue of its location the AC joint is vulnerable to injury when you fall onto the top or side of your shoulder, or alternatively if you are hit hard on the top of your shoulder by an opposing player or object. Sufficient force will push the acromion (tip of the shoulder) down and the clavicle will spring upwards at the AC joint. In this way it is possible to partially or totally dislocate the AC joint, which will leave the ligaments stretched or torn. This is very painful and will result in severely limited movement of the shoulder, the degree of which depends on the grade of injury. On examination there will be pain and swelling over the AC joint with a possible 'step' deformity where a gap has developed between the 2 bones.

Grades of Injury

The severity of the injury will be graded by a specialist or physiotherapist and is determined by the ligament damage sustained. An X-ray may be used to help visualise the joint and ensure no fracture has been sustained:

Grade I – strain of the AC ligaments (stretched) with no deformity.

Grade II – partial tear of the AC ligaments with small step deformity.

Grade III – rupture of the AC ligaments with greater step deformity.

Figure 2: Step deformity of the AC joint



Figure 3: X-ray showing step deformity of the AC joint, notice the raised end of the clavicle.



How do you treat it?

The treatment will in part depend on the severity of the injury. It is advisable to seek medical attention from a Physiotherapist or Doctor for any injury that results in pain and loss of movement particularly if you can sense deformity of the joint.

First line treatment will include regular ice treatment, gentle movement exercises, anti-inflammatories if appropriate and the use of a sling to immobilise the arm and give the joint time to settle. It is often very difficult to sleep on the injured side so painkillers will usually be advised. Adequate rest from activity at this stage of the injury will ensure a good recovery.

Physiotherapy treatment is not always required for the low grade joint injuries but will be necessary if recovery is slow or if the grade of injury is higher. Guidance on appropriate exercises and return to sport will be an integral part of treatment, mobilisation techniques for the shoulder complex may also be used if the movement is not returning to normal.

Does this injury require surgery?

Sometimes surgery is necessary for grade III AC joint injuries but this is uncommon. It was a more popular procedure in years gone by but the results were not always satisfactory and it was found to settle just as well without surgical intervention. These days surgery is only likely to be considered if the joint is very unstable and has not recovered well or if the end of the clavicle has dislocated and caused damage to, the muscle tissue above. Surgery will involve fixing the joint with wires to hold it in place. Physiotherapy will be required after such surgery to regain movement and strength and guide the return to sports.

How long will it take to play sport again?

It is important to remember that every individual is different and the speed with which an injury recovers will vary from person to person. As a guide the following timescales are an average recovery scale but professional advice should be sought if you are unsure about returning to a particular activity or sport.

Grade I: 7-14 days

Grade II: 3-6 weeks

Grade III: 6-12 weeks.

Following professional advice should help you achieve optimal recovery and you should not return to any contact sports until you are fully confident using the shoulder in a normal manner.

Clinics at:

Point West, 116 Cromwell Road
Kensington, London.

The Lodge, Parkside Hospital
53 Parkside, Wimbledon, London.

In Conclusion

The AC joint is a part of the shoulder that is commonly injured and can be very painful. It is particularly vulnerable in contact sports. It is an injury that will usually fully recover, but this depends on the severity. You should always seek medical attention for any injury that causes pain and limitation of movement so that guidance can be given to enable an optimal return to sports.

Sam Wilde

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If you have any specific questions about the AC joint or any other medical treatment please contact us on **0870 2000 878** or reception@puresportsmed.com

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