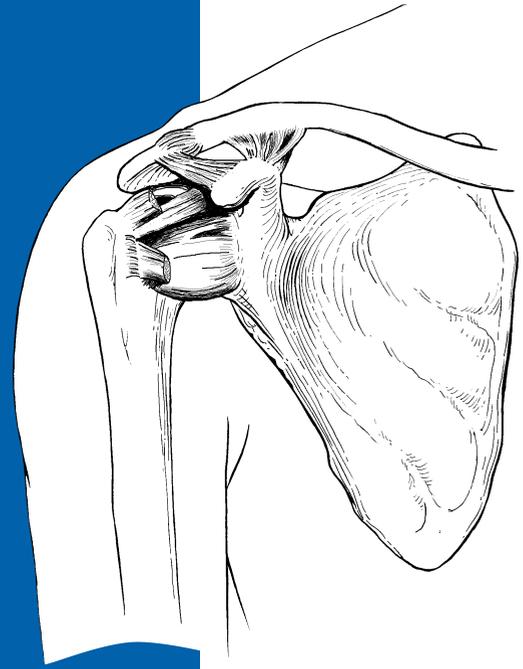
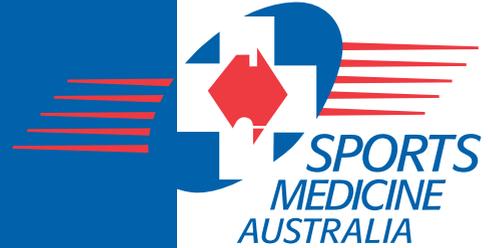


# Acromioclavicular (AC) Joint Injury



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## Acknowledgments

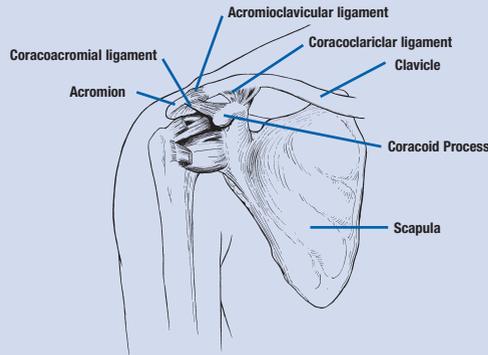
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# Introduction

The Acromioclavicular (AC) Joint is a common site of injury particularly for athletes involved in contact and collision sports such as Australian Rules football and rugby (League and Union).



## Functional Anatomy

The Acromioclavicular (AC) Joint makes up part of the shoulder structure. It is the point at which the lateral end of the clavicle (collar bone) meets with the part of the Scapula (shoulder blade) called the Acromion Process. It can be identified by sight and touch as the pointy protrusion near the top, outer edge of the shoulder.

The joint is surrounded by a joint capsule and is provided additional support by the acromioclavicular and coracoclavicular ligaments (The coracoclavicular ligament is made up of the trapezoid and conoid ligaments, see diagram). The acromioclavicular and coracoclavicular ligaments are usually damaged in the most common injuries to the AC joint.

## Causes of Injury

The AC Joint is a common site of injury particularly for athletes involved in contact and collision sports such as Australian Rules Football, Rugby League and Rugby Union.

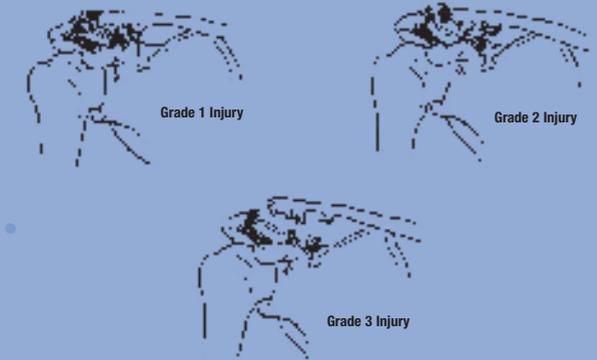
The injury often occurs as a result of a direct blow to the tip of the shoulder such as an awkward fall, or impact from another player. This forces the acromion process downward, beneath the clavicle. Alternately an AC Joint injury may result from an upward force to the

long axis of the humerus (upper arm bone) such as a fall which directly impacts on the wrist of a straightened arm. Most typically the shoulder is in an adducted (close to the body) and flexed (bent) position.

## Signs & Symptoms

Various systems exist to classify ligamentous damage to the AC Joint. Injuries to the joint are often classified as first, second and third degree or grade 1, 2 and 3.

Grade	Symptoms	Average time to return to sport
1	An athlete with a Grade 1 injury of the AC Joint will experience tenderness and discomfort during palpation or movement of the joint. Grade 1 sprains involve only partial damage to the joint capsule and the AC ligament.	Up to 3 weeks
2	A Grade 2 injury will involve complete rupture of the acromioclavicular ligament and partial tear of the coracoclavicular ligament. This tearing allows the clavicle to move upward, and as a result the bump on the shoulder is more pronounced. Pain is more severe and movement of the shoulder is restricted.	Minimum 4-6 weeks
3	A Grade 3 injury involves the complete rupture of the acromioclavicular and coracoclavicular ligaments. The bump visible in a grade 2 tear is even more pronounced in a grade 3 injury due to complete dislocation of the acromioclavicular joint.	Dependent on Management eg surgery



## Initial Treatment

The immediate treatment of any soft tissue injury consists of the RICER protocol - rest, ice, compression, elevation and referral. The RICER protocol should be followed for 48 - 72 hours. The aim is to reduce the bleeding and damage within the joint. The shoulder should be rested in an elevated position with an ice pack applied for 20 minutes every two hours (never apply ice directly to the skin). The arm should also be immobilised in a sling. This may be for as little as two days in a mild injury or up to six weeks in a more severe case.

The No HARM protocol should also be applied - no heat, no alcohol, no running or activity, and no massage. All these will lead to increased swelling and bleeding in the injured area.

A sports medicine professional should be seen as soon as possible to determine the extent of the injury and to provide advice on treatment required. A sports medicine professional may perform a physical examination and take x-rays of the shoulder.

## Rehabilitation

Most AC Joint injuries are treated conservatively using various combinations of strengthening exercises following the immobilisation phase and once pain permits. Surgery is usually reserved for cases where there is a complete dislocation of the AC Joint (Grade 3), or in cases where a less severe injury fails to respond adequately to conservative treatment.

## Prevention

Protective strapping to support a previously injured AC Joint may be of use particularly in contact sports or sports where full elevation of the arm is not so important. Protective padding is also used in sports such as Rugby.