Acromioclavicular Joint Injury

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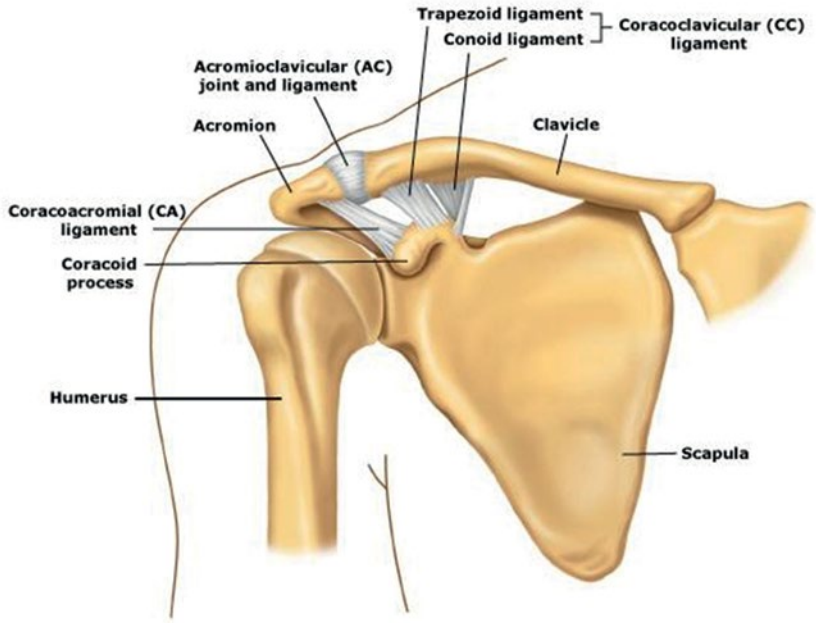
What is it?

The acromioclavicular (AC) joint is formed by the cap of the shoulder (acromion) and the collar bone (clavicle). It is held together by three ligaments. An acromioclavicular or AC joint injury refers to an injury to the joint.

The AC joint is strong, but its location makes it vulnerable to injury from trauma. Injury to the ligaments (also called shoulder separation) can occur as a result of a fall, direct blow, or hyperextension. There are several types of ACJ injury ranging from mild to that which will require surgery.



What are the symptoms?

The first sensation felt when the AC joint is injured is pain experienced on the top of the shoulder. This pain may be strong enough to stop you from using the injured arm and may cause you to cradle the arm close to your body. Depending on the severity of the injury, when you look at the site where the pain is coming from, there may be an obvious deformity or bump (note diagram 1). This is due to either displacement of the bones forming the joint or early bleeding and swelling around the injured structures. Lifting your arm out from the body and across the body will often cause intense pain at the top of the shoulder. Sleeping on that shoulder may also be very uncomfortable.

Diagram 1 indicates a deformity and obvious bump indicating that this person has a high probability of having sustained an ACJ injury.

Go online for more information

http://www.youtube.com/watch?v=EIXWemQxqdg

How did I get it?

The AC joint is usually injured following a direct blow to the point of the shoulder. The impact may be with a stationary object, such as the ground or wall, or with a moving object, such as an opponent. This impact can push the upper part of the shoulder blade beneath the end of the collarbone. This can injure the capsule surrounding the AC joint and the ligaments which support the joint. Watch the accompanying video to see a typical mechanism of this injury.

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The diagrams represent the more common ways of sustaining an ACJ injury during sporting activities.

What should I do?

If you have or suspect you have injured your AC joint you should cease participating in play and begin initial treatment. **The most important time in the treatment of an AC joint injury is the first 24—48 hours**. This is when bleeding and swelling around the injured tissues are most active. Although swelling is a necessary step in the healing process, too much can delay healing and cause further tissue damage. To control the amount of swelling and limit the degree of damage to the injured tissues, the shoulder should be rested and iced. Rest involves removal from play and limiting the use of the injured arm. If the pain is severe you may use a sling to support the arm and reduce the tension on the injured structures. Ice is very useful initially and helps decrease the amount of swelling. Usually 10 mins on, 10 mins off, 10 mins on every 2 hours is effective and decreases the likelihood of nerve damage from ice burn (note diagram 2).

Diagram 2 shows a method for icing of the ACJ injury

What shouldn't you do?

In the first few days following AC joint injury, you shouldn't undertake activities which increase blood flow to the injured tissues. These include hot showers, heat rubs, massage, the consumption of alcohol and excessive use of the arm. These can prolong bleeding and exacerbate the swelling resulting in further pain and an extended recovery.

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How is a diagnosis made?

A diagnosis is often made on history of injury and location of pain. Tests such as x-rays, CT scans and MRIs are rarely needed unless the injury is quite severe or there is a concern that there may be an associated broken bone.

Padding of an ACJ injury

Diagram 3 An injection into the ACJ. Note the precision requirements and the use of the ultra sound equipment to ensure correct location.

What does rehab involve?

The vast majority of AC joint injuries are low grade and heal within a couple of weeks without complication or any long term effects. A small proportion of injuries however do have longer term problems which is why appropriate diagnosis and management is important. In more serious injuries, recovery may be prolonged due to the extent and severity of damage to the injured tissues. Similarly, in more minor tears, recovery may be prolonged if the tear is not appropriately managed. This may result in ongoing shoulder pain and an increased risk of re-injury when you return to participation.

Rehabilitation should follow these guidelines.

Phase 1 - improve pain and swelling by avoiding provocative activities

Phase 2 - slowly begin to undertake activities of daily living

Phase 3 - increase strength and power and return to sport

The joint may be tender to touch for quite some time. If returning to a collision based sport it may be worthwhile padding the joint.

Sometimes if the injury is stable and early return to sport is desired, injections into the shoulder can be performed (note diagram 3). This should be reserved for high level athletes or those in severe pain. It should be avoided in the vast majority of ACJ injuries.

Do you have a question? Email info@sportsclinicnq.com.au