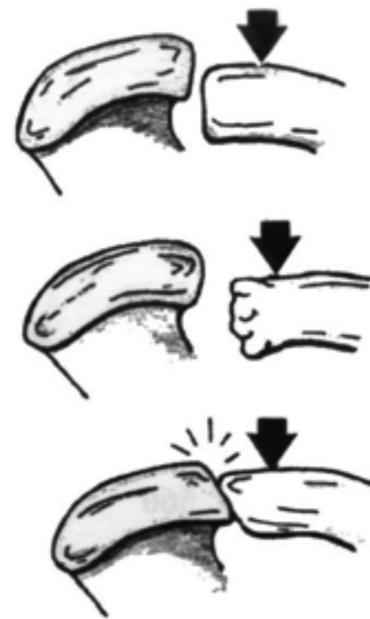


AC Joint Arthropathy

Shoulder Anatomy

The AC joint is located at the tip of the shoulder where the shoulder blade (scapula) and collarbone (clavicle) come together at a point called the acromion – on the upper surface of the shoulder blade. These two bones are held together by tough, sinewy tissues—ligaments that tie the bones together. One group of ligaments envelope the joint to form a capsule that covers the joint; these ligaments are termed the acromioclavicular ligaments. Another set of ligaments stabilize the shoulder by holding the clavicle in place by attaching it to a bony knob on the surface of the shoulder blade called the coracoid process. These ligaments are called the coracoclavicular ligaments.

There is a pad of cartilage in the joint between the two bones that allows them to move on each other. Cartilage is an elastic connective tissue that has slick qualities to it which allows movement in the joint and protects the bones. As a person moves her/his shoulder, the joint shifts slightly to allow the shoulder to move freely but to continue to be supported by the clavicle.



What is Acromioclavicular Joint Arthropathy of the Shoulder?

AC joint arthrosis is common in people who are middle aged or older. It develops when the cartilage cushioning the AC joint in the shoulder begins to wear out or becomes inflamed. While most people experience wear and tear in their joints as they age, the development of AC joint arthrosis may cause severe degeneration, disabling the shoulder joint or deforming it in some way, sometimes making it appear larger. Spurs, or spiny projections from the bones, may develop around the joint. With this condition, there is usually pain and swelling that limit the motion of the arm.

Acromioclavicular Osteoarthritis



Causes of AC Joint Arthropathy of the Shoulder

The principal cause of AC joint arthrosis is use. As a person uses his/her arm and shoulder, stress is placed on the joint. This stress produces wear and tear on the cartilage, the cartilage becomes worn over time, and eventually arthritis of the joint may occur. Another cause is an old injury to the AC joint, such as shoulder separation. Any activity that can put pressure on the joint, either normal or excessive, may eventually cause the arthrosis condition.

Persons who must use their arms for extended periods of time are susceptible to AC joint arthrosis. Constant overhead lifting, such as weight lifters or construction workers, can increase the incidence of the disease. Other susceptible individuals are athletes participating in contact sports or engaging in any

activity, which may result in a fall on the end of the shoulder. Any blunt force to the shoulder in the course of work, household activities or accident may cause, over time, an osteoarthritic condition of the AC joint.

Symptoms of AC Arthrosis

One of the first signs that a person may have arthrosis of the AC joint is pain and tenderness in the front of the shoulder around the joint. Sleeping on that side may cause pain and restlessness. There may be a decrease in shoulder motion. Compression of the joint, such as bringing the arm across the chest may result in increased pain. Pulling the affected arm underneath the chin as tight as possible usually causes pain at the AC joint if an arthrosis condition is present. The pain may encircle the shoulder, the front of the chest and the neck. There also may be some swelling at the site of the joint. If the AC joint had been injured some time in the past, there may be a snap or click as the shoulder is moved and a larger bump over the joint on the shoulder that is affected, compared to the other shoulder. Throwing a ball with control is impaired because of pain just before release.

Diagnosis of AC Arthrosis

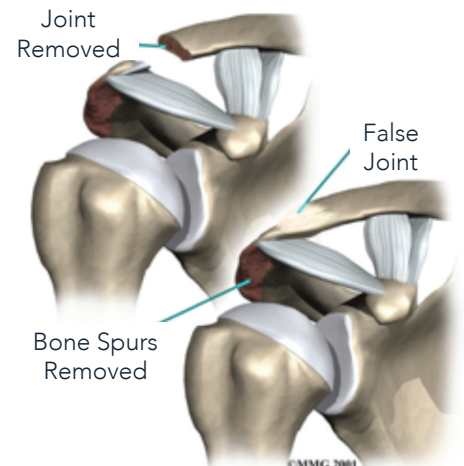
Usually the diagnosis of AC joint arthrosis is made during a physician's physical examination. In the course of the examination, Dr. Gudeman will look for tenderness over the AC joint and the presence of pain with compression of the joint. An injection of local anesthetic, such as lidocaine, will reduce the pain temporarily and confirm the diagnosis. X-rays may be used to reveal a narrowing of the joint and the presence of bone spurs around the joint. If a surgical procedure is to be performed, the interior of the joint may be examined by the use of arthroscopy to determine the extent of damage to the cartilage, tendons and ligaments to confirm the diagnosis.

Treatment of AC Joint Arthropathy

The goal of treatment for AC joint arthrosis is to eliminate pain and restore movement to the shoulder. This can often be done with conservative treatment methods such as rest, anti-inflammatory medication, a cortisone injection and physical therapy to modify habitual ways of moving the arm. If these treatment methods fail to bring sustained relief, surgery is an option that gives significant benefit to nearly 95 percent of the people who try it.

Initially treatment may be conservative, consisting of rest and non-steroidal anti-inflammatory medications such as aspirin, ibuprofen and naprosyn. Ice may be applied for 20 minutes at a time, daily or several times daily, to decrease the pain and inflammation at the joint. Cortisone, a very strong anti-inflammatory steroidal medication, may be injected into the joint if the pain persists after the administration of non-steroidal medications. Usually one or two injections of cortisone are sufficient to decrease pain and swelling. In order to avoid further aggravation of the condition, there should be a lessening of activities that tend to put undue stress on the shoulder. Once the cartilage is gone there is no way of replacing it at the present time.

Should rest, ice, medication and modifying activities not work to reduce the pain and swelling, surgery may be the next step in treatment. The most common procedure for surgically treating AC joint arthrosis is resection arthroplasty. In this procedure, the last half-inch of the collarbone is removed, leaving a space between the acromion on the roof of the shoulder blade and the cut end of the collarbone. The major ligaments still remain intact. Scar tissue develops to replace the joint to allow movement to occur without further abrasion of the ends of the arthritic bone. This procedure maintains the flexible connection between the acromion on the



shoulder blade and the collarbone. The surgery can be done either through a small one-inch long incision or using an arthroscopic technique involving several smaller incisions.

With either surgical technique, recovery and results are similar. Usually the patient can go home wearing an arm sling the same day as surgery. Stitches are removed typically after one week. The patient may begin motion of the shoulder immediately. Complete motion usually returns in about four to six weeks, strength tends to return after a few more weeks and full recovery can be expected in about three months. Most patients achieve a high level of pain relief from the surgery; nearly 95 percent return to their normal routine of activity and sports with few complications. An occasional patient may experience pain or fatigue with extreme use of the shoulder in lifting or exercise, particularly if the shoulder is not in good physical shape. However, most patient experience very good results, often becoming more active than before surgery.

Possible Complications of Arthroscopy Surgery

Although surgery for AC arthrosis is usually without any significant problems, there may occasionally be unforeseen complications associated with anesthesia, including respiratory or cardiac malfunction. The surgery itself may be complicated by infection, injury to nerves and blood vessels, fracture, weakness, stiffness or instability of the joint, pain or the need for additional surgeries. Since this is an elective procedure, you should evaluate and compare the surgical risks with the expected benefits.

Post-Operative Expectations

After the operation, pain management consists primarily of oral narcotic analgesics and application of ice. If your surgery was performed under a regional block, your shoulder may remain sufficiently numb for 8 to 12 hours after surgery. Initially, this may decrease the need for oral pain medication.

Follow Dr. Gudeman's instructions concerning care for your arm. The area where the incision was made will temporarily be swollen and bruised and applying ice is an effective way to relieve pain and control swelling. It is important to keep the wound clean and dry. If a bulky dressing covers the surgical site do not remove it unless told to do so.

Informative Websites

www.orthoinfo.org
www.sportsmed.org
www.aana.org



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- Scott Gudeman, MD

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