

When a bicycle ride goes south

by

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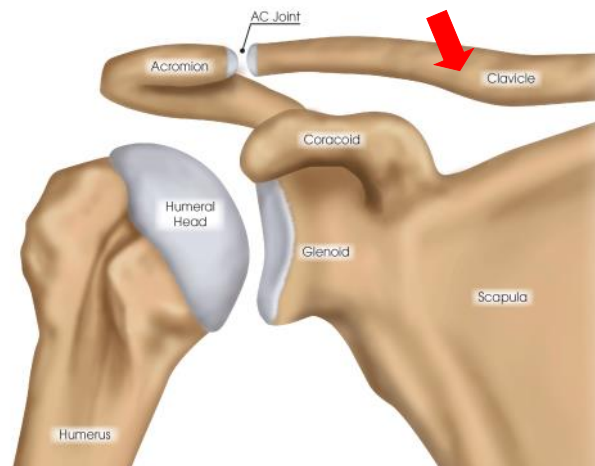
It is time to dust off those bike seats and get back in the saddle! With warm weather approaching, people will soon be enjoying outdoor exercise. Riding a bike is one of the most popular outdoor activities and great form of exercise. Unfortunately, no matter your level of biking experience, accidents happen. Bike accidents can result in injuries to the head, neck, hip, knee, shoulder, elbow and hand. However, injuries to the clavicle, or collar bone, are most common when riders land on their shoulder or an outstretched arm used in their attempt to brace the fall. A five-year study of the Register's Annual Great Bike Ride Across Iowa (RAGBRAI) revealed 44.4 percent of all fractures were to the clavicle.

How do you know if you have injured your clavicle?

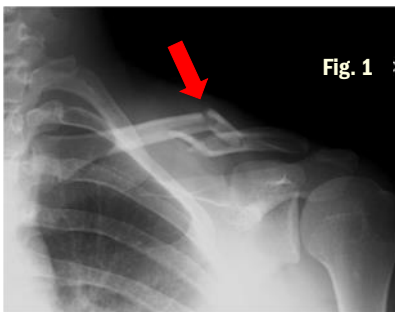
After you fall, it is often painful along the clavicle, or on the top of the shoulder and the pain can travel down the side of the arm. Typically, the pain does not extend past the elbow, and if it does, there may be another injury present. Along with pain at rest, it is usually difficult to raise your arm from your side and movement usually worsens the pain.

What should I do?

If you had a bike accident and are concerned you may have broken your clavicle, you should see an orthopaedic surgeon, or go to an orthopaedic immediate care clinic, especially if there is any obvious bony deformity. Injuries involving the clavicle are best diagnosed by taking a detailed history, performing a physical exam and taking X-rays of the clavicle and shoulder to make a proper and timely diagnosis and insure the most effective treatment is prescribed for the best outcome.



How is a fractured clavicle injury treated?



Cyclists most often break their clavicle (“collarbone”) in the middle third of the bone (Fig. 1). Most mid-shaft clavicle fractures heal on their own without complications in six to 12 weeks. Children typically heal faster than adults. Fractures with significant displacement, more than 2 cm, have a higher risk for not healing, or healing with deformity that may result in shoulder limitations. Significantly displaced and open fractures (when the bone breaks through the skin) require surgery to restore the proper bony alignment and promote healing. Patient

lifestyle factors, such as smoking, can prevent normal healing.

For minimally displaced clavicle fractures, initial treatment consists of ice, compressive dressing and over-the-counter medication to relieve pain and reduce swelling. An arm sling usually is recommended.

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Patients should avoid risky activities, including excessive arm movement, smoking, etc., until the fracture heals, usually six weeks, or longer. Pain generally subsides after two to four weeks as the fracture begins to heal and use of the arm becomes more comfortable for activities of daily living that do not involve overhead motion.

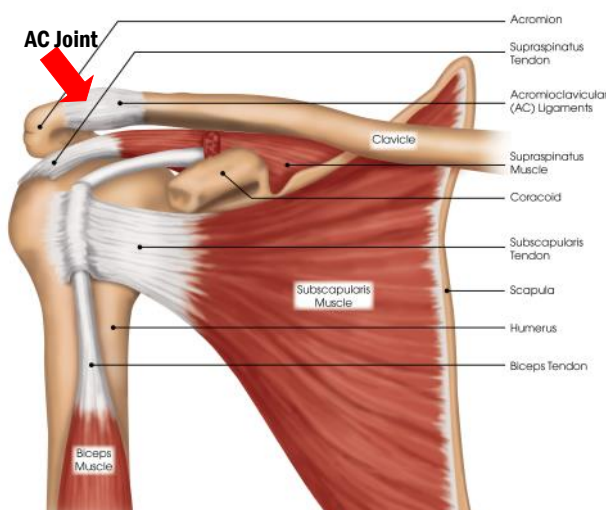
For significantly displaced fractures, open fractures, or fractures associated with neurovascular or other multiple extremity injuries, surgery is recommended. Surgery stabilizes the fracture in the proper position to allow bone healing and mobilization by the patient. Surgery consists of repositioning the fracture fragments and holding them in place with plates, screws, wires, sutures, or pins. After the fracture heals, these fixation devices may be removed, if needed.



Post-operative X-ray of a fractured clavicle repaired with a plate and screws

Exercises to regain shoulder motion and strength lost as a result of the injury and healing process are necessary before returning to sports and activities. These exercises may be done on your own, or you may be referred to a physical therapist or athletic trainer for further evaluation and treatment. Return to sports requires healing of the bone and usually takes three to four months depending on your age and severity of the fracture.

Although the most common bone-related injury in cycling is fracture of the clavicle, a separated shoulder, which also involves the clavicle, is another common cycling injury.



Acromioclavicular separation or “separated shoulder”

Acromioclavicular (AC) joint sprains are injuries to the ligaments at the joint where the clavicle attaches to the acromion (roof of the shoulder) of the scapula (shoulder blade). These injuries are commonly referred to as “shoulder separations.” The ligaments that run from the clavicle to the acromioclavicular ligaments, or to the coroclavicular ligaments of the scapula, help anchor the collar bone to the scapula. A sprain indicates the ligament between the bones is either stretched or torn, and disrupts the stability of the clavicle. AC joint sprains are graded I through VI, from least to most severe.

The treatment and outcome depends upon the severity of the ligament injury. The time to return to activities varies by the type of sport and position, arm injured (dominant versus non-dominant), and severity of sprain. Lower grade sprains (I, II, and most III’s) generally do not require surgery and most patients can return to activity in two to six weeks. Treatment consists of rest, ice and anti-inflammatory

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