

Shoulders

Although back pain gets a lot of attention, shoulder pain is rapidly becoming at least as common a musculoskeletal complaint bringing folks to their primary physicians. This is not surprising, as the shoulder is one of our most complex joints—allowing movement in at least three directions, one of which is rotation. Although ankle injuries outnumber all other orthopedic mishaps in the backcountry, shoulder pain certainly occurs as well. Fortunately,

shoulder injuries rarely affect one's ability to travel, so evacuations from the backcountry for shoulder injuries are very unusual.

Understanding shoulder injuries requires a very basic anatomy lesson. The joint is made up of three bones: the top of the upper arm (humerus), the end of the collar bone (clavicle), and a projection of the shoulder blade (acromion). The joint is held together by the tendons of several arm and shoulder muscles (the rotator cuff).

If one reads many wilderness medicine books or takes a wilderness first aid or first responder course, one would think that shoulder dislocation was the most common backcountry shoulder injury. Indeed, it is the only injury in the "Shoulder" section of some such books. In fact, dislocation, in which the head of the humerus is pulled out of the shoulder joint, is an uncommon wilderness mishap. I have never seen it in the backcountry, and it does not appear in many databases of wilder-

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ness injuries. What is more, reduction of such a dislocation is not likely to be successfully done by the uninitiated, despite simplistic cartoons in those wilderness first aid books.

Of course, a fall producing significant torque can certainly dislocate a shoulder, or fracture one of the bones comprising the joint. Such an injury will produce immediate pain and difficulty moving the shoulder in one or more of its directions. Comparison to the unaffected side will often demonstrate a significant deformity. There is little that can be done in the field for such an injury, and precisely diagnosing it is impossible and practically unnecessary. The arm should be arranged in a position of maximal comfort, with a combination of slings, padding, and strapping, and evacuation arranged. While a "walk out" could be feasible, remember that the combination of pain and lack of the balancing function of the affected arm could make this very hazardous. Pain and blood loss (especially from a fractured humerus) may also contribute to shock.

In the wilderness (as in the front country), most shoulder pain occurs with either trivial injury, or none at all. A little-understood process often called "shoulder impingement syndrome" (SIS) is the culprit. SIS causes shoulder discomfort that may localize to the outside of the upper arm. It makes it difficult or impossible to lift the affected arm over the head, and often disrupts sleep. Camping activities such as putting

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on a heavy backpack can either cause SIS or (more likely) worsen a smoldering case. There is no definitive test for SIS (indeed, its cause is not clear), and physicians diagnose it by history and physical examination. In the field, anti-inflammatory medications such as Advil® and gentle range-of-motion exercises are about all that can be done. Decisions about continuing the trek will be driven by one's ability to tolerate discomfort.

SIS is most common in individuals whose employment or sport involves a lot of repetitive overhead work. Most cases of SIS respond to physical therapy aimed at maintaining range of motion and strengthening. Maintaining full motion is crucial. Longstanding SIS can lead to "adhesive capsulitis," in which shoulder motion is significantly compromised, and which is very difficult to treat.



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