

Head Bonks

No doubt you have been reading a lot about concussions. Although the injury itself has been considered trivial ("Walk it off!"), we know that the late effects of concussions, especially repeated ones, can be devastating. One only needs to see one of the many TV interviews of former NFL players or boxers with chronic traumatic encephalopathy (a condition probably caused by repeated concussions) to appreciate that this is a very serious problem.

What exactly is a concussion? In spite of how much attention the injury has been getting, that question is complicated. There actually is no "test" for a concussion. A national organization of neurologists came up with the most succinct definition: "...a trauma-induced alteration in mental status that may or may not involve loss of consciousness..." The common denominator is some external impact to the brain that disrupts its function momentarily, but does not cause bleeding or other visible injury. Thus, the fancy imaging of the brain we can do these days, such as CT scans, does not show anything with a concussion. Indeed, current practice guidelines recommend against obtaining x-ray studies in patients with classic histories of concussion.

The diagnosis of concussion is usually made by features in the history. The typical story is the development of confusion and amnesia following a blow to the head. There may be a brief period of unconsciousness immediately following the injury, but most concussions are not associated with unconsciousness. Amnesia usually involves the circumstances of the injury and some period of time prior to it. Confusion may be manifested by asking a question several times, lack of awareness of time/place/person, or distractibility. There is frequently headache and dizziness, and some vomiting is common. The impact causing the concussion is typically low-velocity. In the backcountry, a trip and fall or being struck by an

object are possible scenarios.

Although concussions are very common, they are extremely uncommon backcountry events. Most published series of backpacking medical incidents include few if any concussions. On the other hand, it is estimated that two million or more sports-related concussions occur in the U.S. annually. You are at much greater risk in the ball park than in the Adirondack Park!

That being said, like any medical problem, a suspected concussion in the wilderness is a much bigger deal than one in a college football stadium. Time, terrain, and distance from the trailhead can create a real crisis.

Backcountry responses to concussion

Let's first consider situations that demand immediate evacuation. An injury that is of high velocity (e.g., a fall from more than one's height), loss of consciousness that persists beyond ten minutes, deep scalp laceration or palpable skull defect, blood draining from an ear, clear fluid draining from the nose, and persistent vomiting merit evacuation. This has to be assisted—"self-evacuation" is not an option for head injury.

While awaiting help, keep the individual warm and quiet, and protect the airway. Unless evacuation will be delayed excessively, it is prudent to avoid eating and drinking, especially if vomiting is present.

If the individual regains consciousness within ten minutes, and

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none of the above features are present, it is reasonable to observe him or her in place; no further travel should occur, however. If the symptoms improve over a twenty-four-hour period, it is probably safe to resume travel. If improvement does not occur, and particularly if symptoms that had improved return, then evacuation is again indicated.

Even a minor concussion, especially if it was not the first, can have long-term consequences. No matter how rapidly things improved, a visit to one's physician at the conclusion of the trip is always in order.

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