



AdironDoc

Backcountry Health and Hygiene

“Most Likely” Mishaps

Wilderness medicine is big business these days. Organizations such as New England-based SOLO sponsor multi-day courses, designed to prepare the backcountry traveler for nearly any conceivable emergency. Many outdoor programs require a leader with such training to be present on any activity. The recent “friendly takeover” of the Wilderness Medicine Institute by the National Outdoor Leadership School had some of the trappings of the corporate mergers we read about daily in the *Wall Street Journal*: “synergies,” and stuff like that. Even *Time* magazine (October 18, 1999) recently weighed in on the importance of wilderness first aid courses for the weekend hiker.

Looking over the curricula of many such courses, one sees a dizzying array of topics, ranging from extrication and emergency childbirth to patient “packaging” and evacuation. The casual user of wilderness areas could be excused for wondering just how dangerous her sport is. After all, if a half-dozen or so national organizations are claiming to be the leader in providing training in the management of wilderness disasters, this must be pretty risky activity!

In truth, by almost any measure, backpacking is a safe sport. I'll exclude, of course, the “BASE” jumpers, who pack into places like Yosemite for the sole purpose of jumping off cliffs with parachutes. For most of us, the most dangerous part of our wilderness trek is driving to the trailhead.

This is not to deny that medical problems can and do occur on backcountry trips—even short day-hikes. On occasion, these result in early termination of the trip. More rarely, they set up a chain of events leading to disabling injury or death. What surprises most people, in my experience, is the rather mundane types of mishaps that constitute the bulk of such wilderness incidents.

It would be difficult to get an idea of what these common problems are by perusing the curriculum of a typical wilderness first aid course, or even by reading one of the many excellent books on the subject. On the other hand, knowing the situations that are most associated with injuries on hiking or

camping trips is important if we are to recognize and prevent them. What follows are the types of medical incidents most outdoor educators cite as “most likely” in backpacking treks. While not as dramatic as “emergency childbirth” and unlikely to necessitate “extrication,” these are real-world problems of which we should all be aware.

Stove mishaps. No regular piece of camping gear is associated with more serious injuries and fatalities than the backpacking stove. These mishaps are hardly ever mechanical; they result from human error. Carbon monoxide poisoning and dramatic clothing/tent conflagrations have occurred when individuals used stoves in tents. Although fairly stan-
dard on ma-
jor moun-
tainering
expeditions,
there is no
place for
this practice
among most
users of the
wilderness.

The best first aid is that which is never needed.

The more
stove injury
from spilled
t h o u g h
are more
their fore-
does not take much to upend a pot of boiling water. The perimeter of a busy stove should be a controlled area in any campsite. Sitting next to a stove should never be allowed. In decades of guiding, the only evacuation I have ever had to undertake for medical reasons was for a stove-related injury.

Ankle and knee injuries. Major fractures are quite rare among backpackers. Sprained ankles and injured knees, however, are the most common medical reason for evacuations from treks. A variety of specific injuries can occur to these two joints, but all share a common theme: a slip produces a powerful torque to the joint, followed by swelling and inability to bear weight. While knowing the specific diagnosis is important when the time for definitive treatment comes, the immediate, practical implications in the backcountry

are identical with most such injuries: moderate to severe pain in a hiker who may be unable to walk out unaided.

Some of these injuries are freak occurrences, which cannot be predicted or prevented. Others, however, can be seen coming by an experienced leader. Ankle sprains, for example, result from a hiker's misstep. Fatigue, darkness, wet surfaces, unbalanced or poorly secured gear, and poor hiking technique are a good prescription for such missteps. Knee injuries frequently occur as a heavily laden backpacker moves down a slope. Being overweight or tired and having weakness in the front thigh muscles (the “quads”) are antecedents to these injuries. (See my article on physical preparation, May/June 1999 *Adirondac*.)

Lacerations. Few of us look at pocketknives as a serious injury threat, but in some outdoor education programs hand lacerations from such knives have become a problem. Most, of course, can be cleaned and dressed in the field. Others, however, because of depth, contamination, or possible involvement of important structures in the hand, require hospital evaluation for definitive management.

Most of these injuries occur during meal preparation: opening the many tough plastic bags that make up commercial backpacking meal packs, or cutting bulk items such as dried meat or cheese. Repackaging food in bags that can be tied and cutting bulk items before packing are simple expedients that will minimize the need for knife use, especially when with a group of youth. Conveniently, these are practices endorsed for entirely different reasons by Leave No Trace ethics.

In coming issues, I will deal with the treatment of these types of injuries in hikers. For now, though, remember that the best first aid is that which is never needed. Vigilance around boiling water and cutting cheese at home the night before a trip are hardly as dramatic as learning how to improvise a backboard and cervical collar in the woods. For the vast majority of campers, however, they will be much more important. —Thomas R. Welch, M.D.