

## Coping With A High-Elevation Environment

Wilderness trips take place between 9,000 and 13,000 feet above sea level. Approximately 15 to 20 percent of people traveling above 8,000-10,000 feet from lower elevations will experience mild Acute Mountain Sickness (AMS). AMS is caused when your body does not get as much oxygen as it is accustomed to. As elevation increases, atmospheric pressure decreases, resulting in less oxygen being inhaled with each breath. Fortunately, the human body can acclimatize to high altitudes; unfortunately, it takes several days for acclimatization to kick in.

The symptoms of AMS are similar to those of the common flu; and include fatigue, headache, nausea, vomiting and difficulty sleeping. While all of these symptoms are unpleasant, they need not interfere with a student's successful participation in Wilderness. Generally, symptoms occur within the first 12 to 24 hours at high altitude and subside by the second or third day.

**Here are some things you can do immediately before Wilderness Session to help minimize your chances of getting AMS:**

- If you travel to Carbondale from below 5,000 feet, **arrive as early as your schedule will allow**. A day or two at 6,200 feet (Carbondale's elevation), or in Denver at 5,280 feet, will help you acclimate and avoid the above-mentioned symptoms.
- Acclimatization is often accompanied by fluid loss, so **drink lots of fluids** (at least 3-4 quarts per day; water is best) to remain properly hydrated.
- **Don't overexert yourself upon arrival** at high elevation. During daytime, light activity is better than sleep because respiration decreases during sleep, exacerbating the symptoms.

Acclimatization is inhibited by dehydration, overexertion, tobacco, alcohol and other depressant drugs. Wilderness Leaders are trained to recognize AMS, and plan the beginning of the trips accordingly; nevertheless, all Wilderness groups will begin their trips at high-altitude trailheads. To minimize your chances of experiencing AMS, we strongly recommend that students arriving from below 5,000 feet plan on arriving at altitude (above 5,000 feet) at least 24 to 48 hours prior to the beginning of Wilderness. An extra night in Denver (5,280 feet) or Carbondale (6180 feet) will assist with acclimatization.

### Sources

Curtis, Rick, *Outdoor Action Guide to High Altitude: Acclimatization and Illnesses*, Director, Outdoor Action Program < <http://www.princeton.edu/~oa/safety/altitude.html> > visited on 5/25/05

*All About Altitude Sickness*, National Renewable Resource Energy Laboratory, Golden, CO, [http://www.nrel.gov/visiting\\_nrel/altitude.html](http://www.nrel.gov/visiting_nrel/altitude.html) > visited on 5/25/05

Wilkerson, James A., *Medicine for Mountaineering & Other Wilderness Activities*, The Mountaineers, Seattle, WA 1998.