

Online article and related content  
current as of November 22, 2009.

Supplementary material

Spanish PDF

<http://jama.ama-assn.org/cgi/content/full/287/17/2314/DC1>

Correction

[Contact me if this article is corrected.](#)

Citations

[Contact me when this article is cited.](#)

Topic collections

JAMA Patient Page

[Contact me when new articles are published in these topic areas.](#)

Related Articles published in  
the same issue

Pathogenesis of High-Altitude Pulmonary Edema: Inflammation Is Not an Etiologic  
Factor

[Erik R. Swenson et al. JAMA. 2002;287\(17\):2228.](#)

High-Altitude Pulmonary Edema

[Peter Hackett et al. JAMA. 2002;287\(17\):2275.](#)

Subscribe

<http://jama.com/subscribe>

Email Alerts

<http://jamaarchives.com/alerts>

Permissions

[permissions@ama-assn.org](mailto:permissions@ama-assn.org)

<http://pubs.ama-assn.org/misc/permissions.dtl>

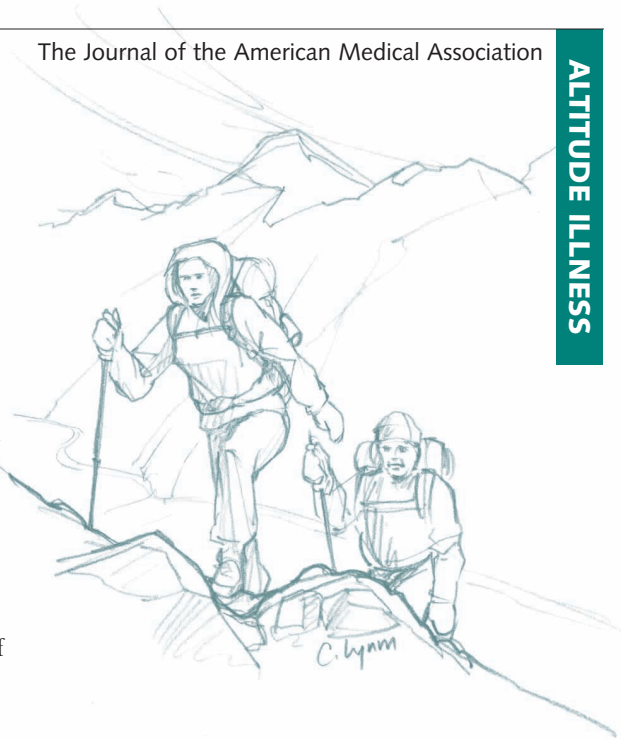
Reprints/E-prints

[reprints@ama-assn.org](mailto:reprints@ama-assn.org)

# Altitude Illness

Each year, millions of people vacation in the mountains for recreation such as skiing, backpacking, and hiking. Because the body is not used to the lower oxygen levels at higher locations, some people get **altitude illness** from being in these elevated places (6,000 feet or more). Not all people react the same way to being at high elevations, so if you are traveling in a group, be sure to note any symptoms you experience and take appropriate action even if the rest of the group seems fine.

The May 1, 2002, issue of JAMA contains an article about some of the underlying physical processes that contribute to one type of high-altitude illness.



## TYPES AND SYMPTOMS OF ALTITUDE ILLNESS

- **Acute mountain sickness (AMS)** involves symptoms such as headache, tiredness, lack of appetite, difficulty walking, dizziness, nausea, and difficulty sleeping. If symptoms are not severe, spend a night or two at the same altitude before trying to go higher. If symptoms persist, descend to a lower altitude until they improve.
- **High-altitude pulmonary edema (HAPE)** occurs when fluid accumulates in the lungs. Symptoms include breathlessness that persists after several minutes of rest, chest tightness, extreme fatigue, and dry cough that may become bloody. It is critical to descend to a lower altitude and to seek medical attention immediately.
- **High-altitude cerebral edema (HACE)** occurs when fluid accumulates in the brain. Symptoms include mental confusion, difficulty with balance and coordination, and hallucinations. A person with HACE usually cannot walk in a straight line putting heel to toe. Like HAPE, HACE also requires immediate medical attention.

## AVOIDING ALTITUDE ILLNESS

To avoid or minimize high-elevation illness, ascend slowly, limit activity at altitudes over 8,000 feet, and rest frequently. Drink extra water to prevent dehydration. If your symptoms persist, go down 2,000 to 3,000 feet until you feel better. If any symptoms become severe (such as those of HAPE or HACE), descend and seek medical attention immediately.

## FOR MORE INFORMATION

- Centers for Disease Control and Prevention (Travelers' Health)  
877/394-8747  
[www.cdc.gov/travel/diseases/altitude.htm](http://www.cdc.gov/travel/diseases/altitude.htm)
- Wilderness Medical Society  
719/572-9255  
[www.wms.org](http://www.wms.org)
- International Society for Mountain Medicine  
[www.ismmed.org](http://www.ismmed.org)

## INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page Index on JAMA's Web site at [www.jama.com](http://www.jama.com).

Sources: American Academy of Family Physicians, Centers for Disease Control and Prevention, Colorado Mountain Club, Frisco Medical Center, International Society for Mountain Medicine, Outdoor Action Program/Princeton University, National Outdoor Leadership School, CIWEC Clinic, Summit and Granby Medical Centers, Wilderness Medical Society

Lise M. Stevens, MA, Writer

Cassio Lynn, MA, Illustrator

Richard M. Glass, MD, Editor

The JAMA Patient Page is a public service of JAMA. The information and recommendations appearing on this page are appropriate in most instances, but they are not a substitute for medical diagnosis. For specific information concerning your personal medical condition, JAMA suggests that you consult your physician. This page may be reproduced noncommercially by physicians and other health care professionals to share with patients. Any other reproduction is subject to AMA approval. To purchase bulk reprints, call 718/946-7424.

