

# SOUTHWESTERN NEWS

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## **OBESE INDIVIDUALS MAY BE MORE SUSCEPTIBLE TO ALTITUDE SICKNESS, RESEARCHERS REPORT**

DALLAS – Aug. 19, 2003 – Obese individuals traveling to a high-altitude destination should take extra precautions, according to researchers at UT Southwestern Medical Center at Dallas and the Institute for Exercise and Environmental Medicine.

In a study conducted at the institute, a joint venture between UT Southwestern and Presbyterian Hospital of Dallas, researchers report that obesity may be associated with the development of acute mountain sickness (AMS), which is often caused by rapid ascent to altitudes of 2,500 meters, or 8,250 feet, above sea level. Symptoms include headache, nausea and vomiting, fatigue, weakness, dizziness, lightheadedness and sleep disorders.

The researchers' findings, reported in today's issue of *Annals of Internal Medicine*, also suggest that impaired breathing during sleep may be related to increased levels of AMS in obese individuals.

"Based on the results from our study, obesity may be an important factor in the development of acute mountain sickness," said Dr. Tony G. Babb, assistant professor of internal medicine at UT Southwestern and the study's senior author.

"We recommend that when traveling to high altitudes obese individuals, even those without a history of AMS, take precautions to ensure a slow, gradual ascent," Dr. Babb said. "In addition, these individuals should consider taking the prescription medication acetazolamide, which has been effective in preventing altitude sickness in susceptible travelers."

The study included nine obese men and 10 nonobese men who spent 24 hours in a decompression chamber. The barometric pressure was held steady at the equivalent to an altitude of 3,658 meters, or about 12,000 feet. Study participants completed an AMS self-report questionnaire that measured symptoms associated with altitude sickness at sea level and during decompression. Symptoms were measured at six hours, 12 hours and 24 hours.

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## **ALTITUDE SICKNESS - 2**

Seventy-eight percent of obese study participants – seven individuals – developed AMS after the 24-hour exposure. Of the nonobese study participants, 40 percent (four) reported significant AMS symptoms.

“Symptoms of altitude sickness were more severe in the obese study participants, which indicates the occurrence of AMS may be closely related to increased body weight,” Dr. Babb said.

Acute mountain sickness usually occurs in individuals exposed to an altitude exceeding 2,500 meters who have not acclimated themselves to the altitude before engaging in physical activities. Symptoms usually appear within 12 to 24 hours. Mountain climbers, trekkers, skiers and travelers to high-altitude destinations like the Andes or Himalayas are at greatest risk.

Other researchers contributing to the study were Dr. Ge Ri-Li, lead author of the study and former fellow at the Institute for Exercise and Environmental Medicine; Dr. Benjamin Levine, professor of internal medicine at UT Southwestern and medical director of the institute; and researchers at the Institute for Exercise and Environmental Medicine.

The study was funded by the American Lung Association and the U.S. Wilderness Medical Society.

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