

## ***Unknown hazards of the high country*** **AWARENESS OF HIGH ALTITUDE PULMONARY EDEMA (HAPE) ESSENTIAL TO PREVENTION**



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**Editor's Note:** *This is the second in a four-part Mirror series on safe skiing. The series is prompted by the news that there are more than 600,000 ski-related injuries annually. Colorado and the Western Slope are world-renowned for skiing. The Montrose Mirror serves the region that skis at Telluride, Crested Butte and Powderhorn.*

MONTROSE – A third life has been lost while skiing or snowboarding in the Colorado high country this season. A 21-year-old skier named Daniel Giger passed away at St. Anthony Summit Medical Center on Sunday, Dec. 16, succumbing to injuries suffered at Breckenridge Ski Resort earlier that day.

In addition to Giger, two others have lost their lives skiing or snowboarding this year in Colorado; 44-year-old Bindu Pomeroy was killed snowboarding in the Vail backcountry late last month, and Bill Brockmueller, a 26-year-old University of Colorado graduate student, died Dec. 10--six days after hitting a tree at Eldora Mountain Resort.

To keep more skiers and snowboarders from being injured or killed, former ski instructor Randall White of Montrose has been offering ski safety seminars under the sponsorship of watchdog group Safe Skiing Advocates (SSA). Of last week's ski-related fatality, White said, "...the deceased was likely not skiing 'in the trees,' as that generally is slower and does not generate adequate speed and kinetic energy to kill..."

Skiing inherently involves high speeds

down steep hills, and even "Blue or steeper green slopes can generate enough kinetic energy to inflict lethal force," said White.

Falls, some spectacular, do happen regardless of how good a skier is, and collisions are not uncommon. Safe Skiing Advocates is pressuring local ski areas to further educate skiers and to have a ski patrol presence on the slopes at all times, so that impaired or out-of-control skiers and snowboarders can have an intervention.

Along with trees, obstacles, and out-of-control skiers, there are other hazards on the slopes that are relatively unknown but that can be just as deadly:

### **HAPE can be a killer at high altitudes:**

High Altitude Pulmonary Edema (HAPE) and Subdermal Hematoma injuries can pose infrequent but lethal risks too. In this part of the Ski Safety Series we will talk about the dangers of HAPE on the slopes.

The Mayo Clinic describes HAPE this way; "In normal lungs, air sacs (alveoli) take in oxygen and release carbon dioxide. In high-altitude pulmonary edema (HAPE), it's theorized that vessels in the lungs constrict, causing increased pressure. This causes fluid to leak from the blood vessels to the lung tissues and eventually into the air sacs."

Though little-known, High Altitude Pulmonary Edema (HAPE) can endanger those venturing into Colorado's high country. It is SSA's position that ski areas should not only patrol the slopes for dangerous conditions or out-of-control skiers or snow

boarders, but should also help educate patrons of the dangers of HAPE and Subdermal Hematoma – which is possible even though skiers wear helmets.

White noted that recently a young man on a vacation in the Colorado high country suffered a near death case of HAPE.

### **Prevention**

According to the website WebMD, "The best way you can lower your chance of getting altitude sickness is through acclimatization. That means you let your body slowly get used to the changes in air pressure as you travel to higher elevations.

Experts recommend that those travelling to higher altitudes do so gradually. At the first signs of altitude sickness, immediately move to a lower elevation, especially if developing any of these symptoms:

### **High-altitude pulmonary edema (HAPE) signs and symptoms:**

Shortness of breath after exertion, which progresses to shortness of breath at rest.  
 Cough.

Difficulty walking uphill, which progresses to difficulty walking on flat surfaces.

Fever.

Fatigue.

A cough that produces frothy sputum that may be tinged with blood.

***Obviously, dangerous out-of-control skiers and obstacles aren't the only hazard of skiing in Colorado's high country. In future safe skiing stories watch for information on Subdermal Hematoma injuries (even when wearing a helmet) and what can be done to make skiing safer for area families.***

***CORRECTION: There are 600,000 ski-related injuries per year reported, NOT ski-related deaths as reported in the Mirror Ski Safety article on Dec. 17.***