

Hiking in Colorful Colorado

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I have tried to explain to my friends who live at lower elevation and on flatter terrain that hiking here is not merely a walk but rather a sport. It requires preparation, training, and the correct equipment, so as not to get struck by lightning, develop hypothermia from unexpected grapple, or worse develop altitude sickness. Some very fit but overly bold friends from sea level have come to Colorado and failed in their attempts to summit our 14'ers. While I sit watching the

snowfall and hope that the wildfires are now mostly contained, I can once again dream of summiting our peaks. May you feel uplifted as you enjoy the beautiful photos taken by my friend Mario Santiago and learn about the benefits and risk of hiking at altitude.

Fifty Eight. There are 96 mountain peaks that we have above 14,000 feet in the United States and 58 of them are in the state of Colorado. Many Coloradoans have taken up the sport of hiking for their love of the great outdoors, only to follow in the footsteps of John Muir. John Muir has had many great quotes about the mountains, the most famous, "The mountains are calling and I must go." Another favorite is, "In every walk with nature one receives far more than he seeks."



Hiking does many wonderful things for your health.

- Lowers stress levels and decreases anxiety
- Improves mood and enhances mental wellbeing
- Reduces risk for heart disease
- Lowers blood pressure
- Lowers cholesterol levels
- Improves control over weight
- Lowers body fat
- Improves bone density
- Improves osteoarthritis outcomes
- Increases flexibility and coordination
- Enhances relationships with friends and family
- A better quality of life



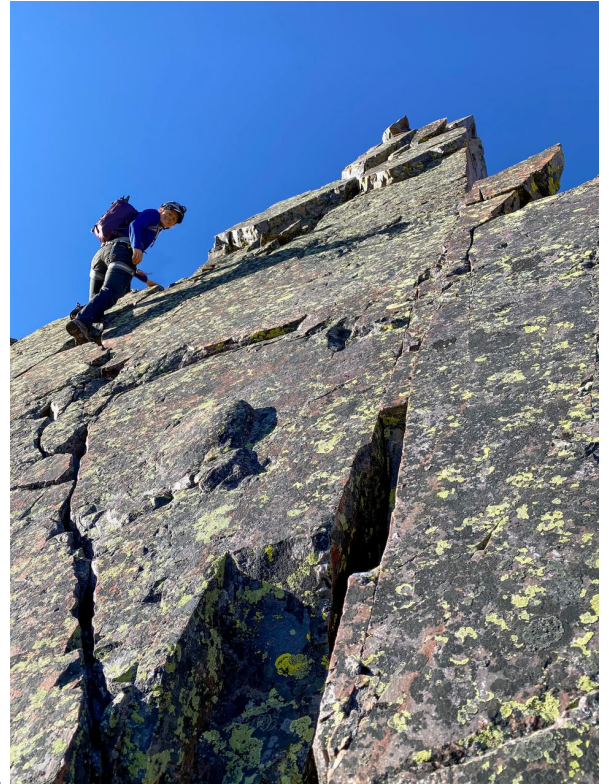
So, pick a trail that matches your fitness level in distance, elevation gain, and altitude, put on a good pair of hiking socks and stable shoes, lather on the sunscreen, and grab a hiking pole or two. Throw on a backpack with full water bottles, a phone/map/compass, a whistle, a raincoat and layer of clothes for anticipated weather. Plan to hit the trails early before the afternoon lightning rolls in if you are going to venture above tree line. Ideally bring 2 friends or 1 friend and a dog to help chase away the wildlife and be prepared to manage altitude sickness in you or your travel partners.

Altitude sickness is the umbrella term that includes 3 syndromes. The mildest is known as acute mountain sickness (AMS), and the more severe forms of altitude sickness are high altitude pulmonary edema (HAPE) and high altitude cerebral edema (HACE). Altitude sickness is the result of a decrease in the amount of ambient oxygen. At sea level (NY), air is 21% oxygen, at 5280 ft above sea level (Denver) it is 17% oxygen, at 10,000 ft above sea level (Leadville) it is 14% oxygen, and at the top of a 14'er, air is only 12.3% oxygen! Yikes!

Low oxygen causes more rapid shallow breathing and your body will lose much more water and much faster than at sea level. The symptoms of AMS are headaches, nausea, vomiting, tiredness, trouble sleeping and dizziness. If you notice these symptoms, stop and rest, do not go any higher in altitude. It is safe to take ibuprofen or Tylenol, or even medication for nausea. But, do not use these medications as a crutch to go higher in altitude. Drink water and stop smoking, drinking alcohol and exercising immediately. Go down 1000-2000 feet in altitude and your symptoms will improve in 24 hours and resolve in 3 days. Oxygen bars may temporarily relieve symptoms but as soon as you leave the bar the benefits are gone. The treatment only works while you are getting it. Dave and I both agree that this is not a suitable treatment option.

If you want to try to avoid altitude sickness before it starts, avoid salt and eat foods rich in potassium, such as bananas, leafy greens, avocados, potatoes, and tomatoes, as they may help you acclimate better. Train for high altitude hikes. Climb slowly and take it easy. There is no need to rush (unless you see thunderclouds... then you can rush down). Avoid alcohol and caffeine as they are dehydrating and replace the drinks with plenty of water. If you aren't urinating clear AND more than usual, you aren't drinking enough. You can also consider talking to Dave or I about taking acetazolamide if you are planning a trip to a high altitude country like Nepal or Peru, or want to climb Mt. Kilimanjaro.

Acute mountain sickness can progress to more deadly forms of altitude sickness as mentioned above. HAPE causes noncardiogenic pulmonary edema. This means that your lungs begin to fill with water. Usually this occurs from heart failure, but not in this case. With HAPE the actual blood vessels get leaky and water moves from inside the blood vessels into the tissue and air spaces of the lungs, preventing oxygen from getting in to the lungs and carbon dioxide from getting out. The threat of HAPE occurs over 8000 feet and results in cough, shortness of breath with activity that progresses to shortness of breath at rest, difficulty walking, fever, fatigue, and eventually a cough with frothy blood tinged foam or sputum. If any of these symptoms occur, this is a life-threatening emergency, and you need to briefly rest then descend 1000-2000 feet, get oxygen, and go to the hospital immediately. The order of these events will depend on your location, but they should be done as soon as possible.



The other more deadly form of altitude sickness is HACE, which causes your brain to swell with fluid the same way that HAPE causes the lungs to swell with fluid. A person with HACE often doesn't realize they have it because they are too disoriented. It is usually their hiking companion, who notices the confusion, disorientation, lethargy and other symptoms of acute mountain sickness and must lead them down

the mountain to help. As with HAPE, it occurs over 8000 feet and is a life-threatening emergency. The patient needs you to get them to a place that is 1000-2000 feet lower in

altitude, they can rest, get oxygen, and go directly to the hospital. (even if they disagree!) The order of these events will depend on your location, but they should be done as soon as possible.

If you feel symptoms of altitude sickness you should assume that you have it and monitor yourself closely and with the help of others. Stop climbing, rest and descend and see if the symptoms improve.