

A Wanderer's Wisdom

Timothy P. Doty, Physiology 442

It's such a thrill to climb a hill, one huge incredible task.
But climb a mountain up where the air is 'thin,' is it possible? You ask.
Why yes it is, most certainly, but you mustn't climb too fast.
And if you're smart and really fit, you won't need an O₂ mask.

A climb below 3000 metres should leave you in the clear.
But as Pb begins to fall, it might strike a bit of fear.
Overconfidence and a lack of knowledge, will get you in trouble with mother nature.
Because if you do you will get caught, and be in a world of danger.

It's not the fraction of inspired air, for F_{IO₂}'s the same.
But as you ascend P_{IO₂} drops, and the atmosphere's to blame.
Ask Messner, Scott, and Carsolio, they'd say altitude's a test.
They'll also say that when you climb, to partake in frequent rests.

Take careful note of your exact location, as well your latitude.
Knowing why may preserve your health, and I'll have earned your gratitude.
Denali's pressure is a little lower, at twenty thousand feet.
Than at that same altitude, on a Himalayan peak.

As you climb your heart rate will rise, as well minute ventilation.
These first effects will undoubtedly slow, progress to your destination.
More CO₂ is expired, according to a simple reaction.
And this will put carbonic anhydrase, into immediate action.

In order to correct this state, this state of alkalosis.
It will take some time to acclimatize, a gradual 'metamorphosis.'
Your renal system will increase, the bicarbonate it passes.
And take my word, you'll be surprised, it could fill up many glasses.

Your kidney has another job, when PaO₂ is low.
It will stimulate red blood cell growth, by releasing EPO.
More erythrocytes within your blood, with that you'll have good luck.
A raised hematocrit will bring, your O₂ levels up.

Think of what it feels like, after consuming many 'drinks.'
AMS is ten times worse, you'll be running surely for the sink.
Diarrhea, a ripping headache, an unmistakable *malaise*.
And when you're asked you should NEVER say, "it's really just a *phase*."

Inhibit carbonic anhydrase, this is one way to save your hide.
The pharma-co-logically selected route, acetazolamide.
DIAMOX, as it's commonly called, won't always do the trick.
The fool-proof cure is to descend, down where the air is 'thick.'

If you ignore your wavering health, or climb as though in a race.
You'll eventually be a troublesome case, and end up with HAPE or HACE.
At this point most people shake, and begin to think of home.
Rapid descent, with O₂, and dexamethasone.

So remember the wisdom in these words, and you should do just fine.
Climb high, sleep low, and the rest will adjust with time.
You'll want it to be an adventure, not an epic or odyssey.
Take your harness and biners and don't forget, your physiology.