

# LIVING AT ALTITUDE

## The pros and cons of a high-altitude lifestyle

by Laura Anderson

**L**iving at high altitude has its advantages — namely beautiful scenery, majestic mountains, clean air and inspiring recreation opportunities. But the thin air (with less oxygen) and decreased atmospheric pressure can also be tough on your system, particularly if you're not used to it. So why do we put ourselves through the abuse? No matter what your age or fitness level, if you're not used to the 7,703 feet of elevation in Gunnison, you could be susceptible to altitude sickness, also known as Acute Mountain Sickness.

Dr. Roanne Houck, naturopathic doc-

tor and creator of Acli-Mate, a natural mountain sports drink designed specifically to help low-landers acclimate to elevation, described the warning signs of Acute Mountain Sickness, which often exhibits symptoms similar to the flu.

"Altitude sickness is not totally understood, but symptoms include fatigue, nausea, headaches, vomiting, dizziness, insomnia, water retention and high blood pressure," she explained. "Generally, when people get here they think they're getting sick."

And for visitors who don't know better, that could mean an end to their vacation — and a decrease in the tourism revenues that mountain communities depend on. That's actually how Houck got the idea for Acli-Mate.

"I read an article in a Denver newspaper that reported \$289 million (in tourism revenue) is lost in Colorado due to altitude symptoms," she pointed out. "If someone gets sick and the family leaves, then they might not come back. So I started researching what was on the market, which was not much."

For lowlanders, it can take anywhere from two weeks to three months to begin to feel comfortable performing any kind of rigorous exercise at altitude. But according to Sarah Baysden, director of Western State Colorado University's High Altitude Performance Laboratory (also known as the HAPLab) it can take two years for an athlete to perform as well at altitude as they did at sea level.

"It takes almost two years for you to feel similar (at altitude) to the way you feel at sea level and at least three months before you can start to feel comfortable doing high-intensity things," she said.

She also pointed out that athletes recruited to WSCU, particularly runners, often sit out from competition their first year "so they have a full year to adjust before they compete."

"I think with athletes, getting them here and getting them mentally prepared for what they're going to feel like is key," she said.

Baysden commented that that's also why training regimens — particularly rest days — are even more crucial at altitude.

"When you constantly live at altitude, your body never gets to that same oxygen flux and recovery for your muscle tissues because you're at constant hypoxia," she explained. "If you never give your body a break, you're not going to recover. It's a lot easier for tissue to repair, to reoxygenate red blood cells and get full rested recovery (at sea level than at altitude). This is why it's even more important to pay attention to training schedules, because your body is

## A FEW TERMS DEFINED:

**HYPOXIA:** when the body is deprived of sufficient oxygen

**HEMATOCRIT:** percentage of red blood cells in blood

**HEMOGLOBIN:** iron-containing, oxygen-transporting metalloprotein in the red blood cells

**COQ10 (COENZYME Q10):** a naturally occurring, vitamin-like substance that aids in energy production, cell growth and maintenance; also acts as an antioxidant

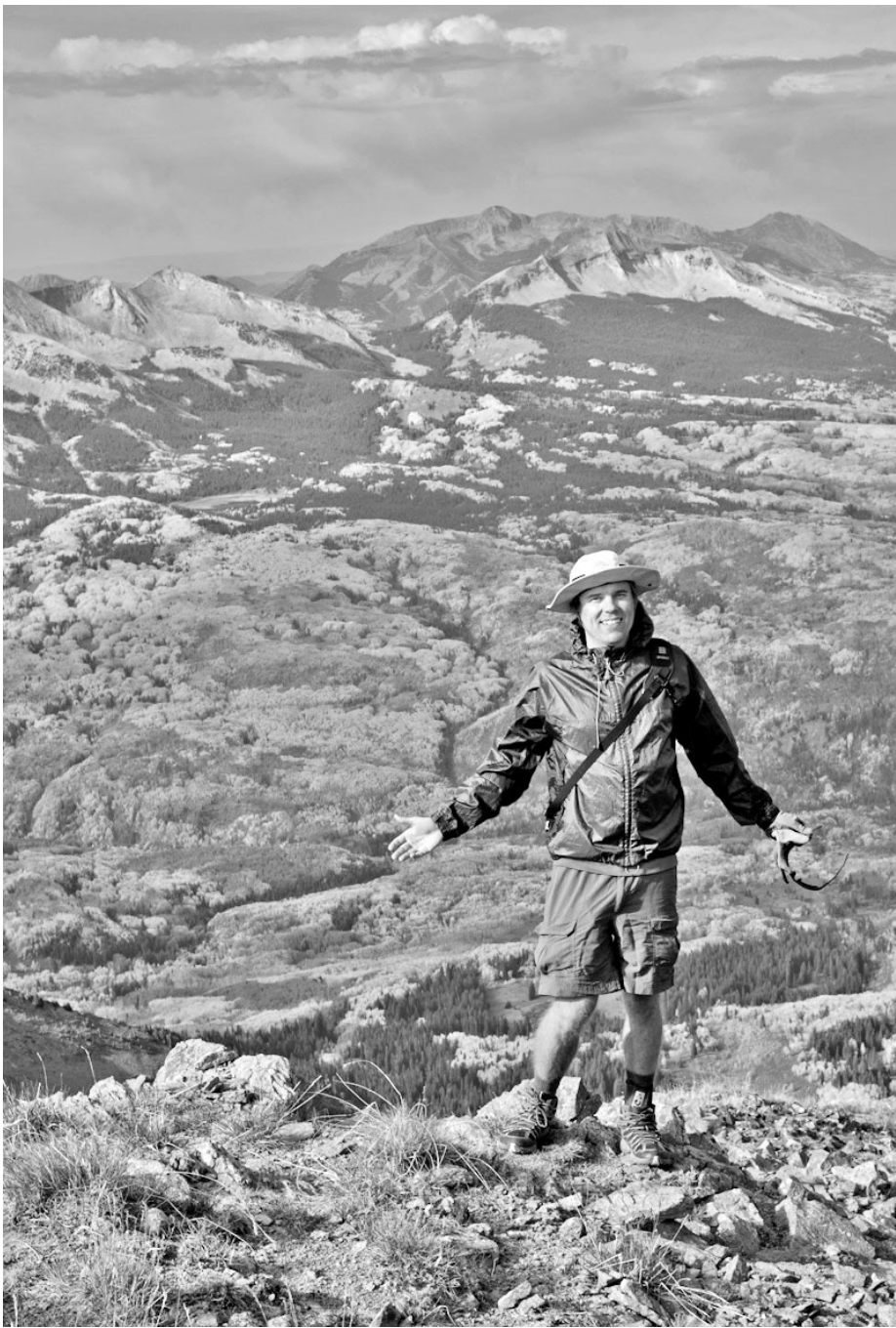


Photo by Matt Burt


Altitude ► D14

NATURAL INGREDIENTS

# ACLI-MATE®

## MOUNTAIN SPORT DRINK


Altitude Aid • Hydration  
Energy & Performance • Recovery



# ACLI-MATE®

## ENDURANCE SPORT DRINK

Performance & Energy  
Reduced Muscle Fatigue & Cramping  
Hydration • Recovery



Available at local outdoor retailers and natural food stores  
or buy before you travel at:

# ACLI-MATE®.com

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent disease.



## ALTITUDE

► from page D13

never as comfortable as it is at sea level.”

But despite that, the body does adapt to the stress.

The U.S. Air Force Academy in Colorado Springs has been at the forefront of acclimatization studies. One such study, released in the fall of 2010, followed freshmen for a year and compared those who came from “moderate” altitude, or about 5,000 feet, to those who came from sea level. That study concluded that students from moderate altitude had higher concentrations of hematocrits, hemoglobin and iron than those who had moved to altitude from sea level — even after a year of training. Participants from sea level also recorded slower times in 1.5-mile runs and lower composite physical fitness test scores.

Lowlanders generally aren’t affected by altitude until they reach 4,500 to 5,000 feet. But after that, the affects of altitude are compounded about every 1,000 feet — so the affects of going from 6,000 feet to 7,000 feet can feel the same as jumping from sea level to 4,500 feet.

According to Baysden, athletes often come to altitude to train because decreased oxygen forces the body to produce more hematocrits to aid in oxygen fixation — basically, a natural form of blood-doping — which will give them more stamina at sea level.

If you’re new to the altitude, Baysden recommends starting your training regimen slowly and allowing plenty of time for your body to rest. If you work out regularly at sea level, she said to step back your training to the level you were at two to three months ago in order to not overload your system.

Houck and Baysden agree that the best way to combat altitude sickness is staying hydrated. According to Houck, the rule

## “You’re body is never as comfortable (at altitude) as it is at sea level.”

**Sarah Baysden**

Director, High Altitude  
Performance Laboratory

of thumb is to consume half your body weight in ounces of hydrating fluids every day.

In 2002 Houck began designing and testing her own formula for a sports drink to aid acclimatization, and in 2009 Acli-Mate was launched into the mainstream marketplace.

“My approach to acclimatization is to look at it differently — how to support the body’s ability to adapt to stress. It doesn’t matter what the stress is — work, under-sleep, over-training or altitude,” she said. “Acli-Mate works so well just on the idea of supporting hydration ... and pathways that help the body adapt to stress.”

It contains electrolytes for hydration, Vitamin C for adrenal support plus B-vitamins and CoQ10 to aid energy production, as well as calcium and magnesium to help with cramping, heart palpitations and headaches.

Houck also recommends plenty of sleep — seven to eight hours per night for men, and eight to nine hours for women — as well as limiting consumption of caffeine, alcohol and junk foods.

Houck pointed out that populations living at altitude are generally “healthier” and “hardier” than those at sea level, though it likely has to do with more than altitude alone. It’s possible that because towns are generally smaller, “you walk or bike and are more active in daily life,” she posed.

It may also be a matter of survival of

the fittest — often health conditions drive people to lower elevations where oxygen levels are higher, and living is easier.

But for those of us who choose to stay at altitude, is there an advantage? Baysden said the benefits are often mental as much as physiological.

“According to a lot of athletes that I’ve talked to, when they’re dealing with training here, it makes them mentally tough because it’s always hard — even easy days are hard,” she said. “But that gives them a competitive edge because they’ve got this mental edge from competing at high altitudes.”

And that statement is backed by statistics. According to a 2011 Colorado Springs *Gazette* article — “Air Force study: Altitude acclimatization takes longer” — research has shown that since 1968, 95 percent of medalists in the Olympics or world championships in events longer than 800 meters “have been exposed to altitude.”

So next time you’re hiking a peak or riding singletrack or running a hill — huffing and puffing along the way — think of how much tougher you’re becoming. Take a breath of that thin, cool air and savor its freshness. Look around and absorb the beautiful scenery, and you might start thinking, “I could get used to this.”

(Laura Anderson can be reached at the Gunnison Country Times at 970.641.1414 or [laura@gunnisonstimes.com](mailto:laura@gunnisonstimes.com))

## REAL

► from page D7

could achieve my goals. It was an acceptance that I will have set backs — and lots of them. It was understanding that no part of this process would be easy.

I still struggle every day to will myself to the gym. I still break into my chocolate stash in the freezer, and carbs will forever be the bane of my existence. Some days, I just don’t feel up to giving it 100 percent. And when I am faced with one of these setbacks, I still have to tell myself that it doesn’t make me a failure. It makes me human.

### A parting thought

We are extremely fortunate to live in the Gunnison Country, folks. Sure, it’s a lot easier to stay active in the outdoors when you’ve got a playground like this, but I am most thankful for the people who inhabit it. You guys care about health and you work consistently every day to achieve it in your own ways. To you, I say thanks for altering the way I think and live my life. And to those who haven’t yet adapted to Gunny living, my simplest advice is to be realistic, not optimistic, about your health goals. This isn’t going to happen overnight. It’s not even going to happen over a month. And you’re not going to do it until you really want it. So dig in.



# Heights

PERFORMANCE. REHAB. HEALTH.

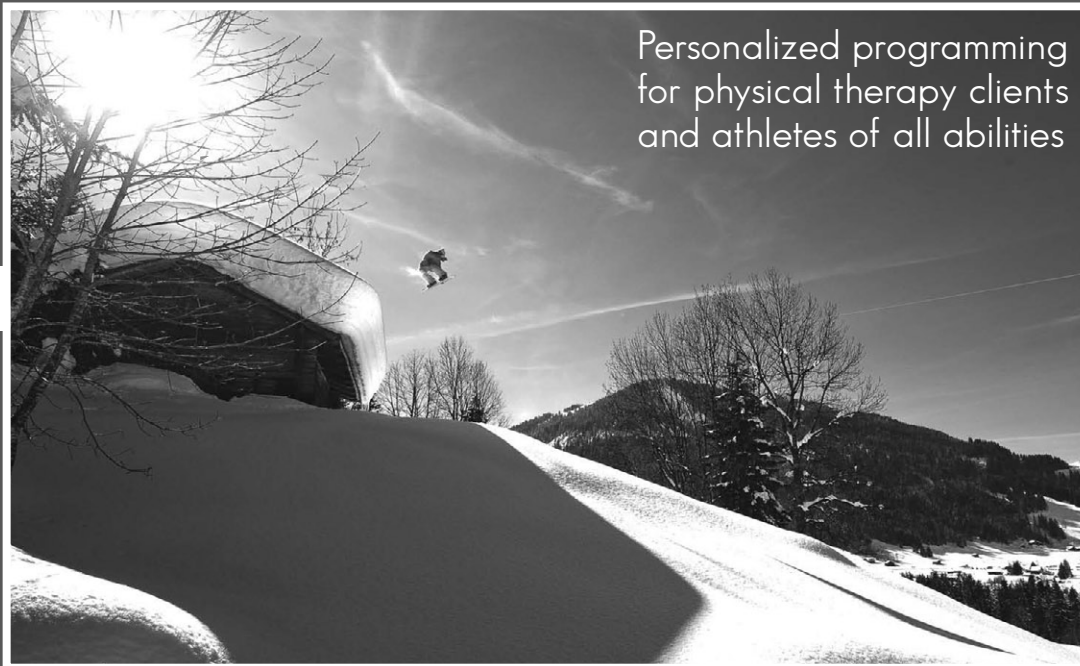
[heightsperformance.com](http://heightsperformance.com) | 970-641-7389

## PERFORMANCE TRAINING & PHYSICAL THERAPY

Health and wellness programming • Massage  
Nutrition • Performance psychology • Acupuncture  
Injury prevention screening • AlterG Anti-Gravity Treadmill

**718 N. MAIN ST., UNIT 18, GUNNISON**

Heights Physical Therapy LLC and Heights Performance LLC



Personalized programming  
for physical therapy clients  
and athletes of all abilities

We invite you to  
discover your  
choices for health  
and well-being  
support in the  
Gunnison Valley.



CRESTED BUTTE/GUNNISON  
**WELLBEING CONNECTION**

A COLLECTION OF THE FINEST SERVICES FOR

# Spirit, Mind, & Body

YOUR LOCAL SOURCE FOR SERVICES, CLASSES, WORKSHOPS AND EVENTS

For a full directory  
& community calendar  
of wellbeing events, visit us at:

[gunnisonwellbeing.com](http://gunnisonwellbeing.com) | 970-596-5386