

High altitude workout: old-wives' tales and misinformation

BY MARK RACKAY

Sports teams often dread having to play Colorado teams because of the high altitude we have here, giving us a home court advantage. Other athletes use high altitude training to give them an edge when they return to compete at lower elevations.

I know that when I travel to the lower elevations, like my whitetail hunt in Alabama for example, I feel like I can run and climb without ever getting out of breath. Much the opposite is true for my southern friends when they visit out here. Those guys walk through the woods mopping the ground with their tongues and hanging onto trees all the way. It may be partly because they overindulged in adult beverages the night before, but most of it is because they live at sea level.

Training at altitude is full of old-wives' tales and misinformation. For example, people believe that training at altitude is beneficial because the air is thinner, and that is not the case. The difference is more about barometric pressure than oxygen content.

The air at an altitude of 6000 feet is still 29% oxygen and your body can only use about 10%. If you climb to 14,000, there is only 53% of the oxygen that is at sea level. The difference is your ability to extract the oxygen from the air and deliver it to your bloodstream. When you are at sea level, your body utilizes the weight of the atmosphere to assist in delivering the air to your lungs.

The weight of the atmosphere actually helps push the air into your lungs, moving the air from an area of higher pressure to an area of lower pressure. This carries over to the cellular level in your body, whereby the pressure then allows the air to be pressed into your bloodstream.



If you are planning some serious recreation at altitude, you may want to consider a high altitude workout. Special to DCI, MDP/ Mark Rackay

When you work out at altitude, you experience less barometric pressure. This means the air is not forced into your bloodstream as easily, making your body work harder. In time, your body will grow more red blood cells to help ease the struggle of delivering oxygen to the bloodstream. These cells carry oxygen through the body, resulting in better overall physical fitness.

Training acclimatization time needs to be longer as the altitude increases. The U.S. Olympic athletes train for 14 days at 6500 feet in altitude, then move up to 8000 feet for an additional 28 days to train.

The benefit of high-altitude training does not last forever. Most coaches agree that the best duration of positive performance lasts only about four

weeks. The lifespan of a red blood cell is only 120 days, so after four months, all the benefits of high altitude work out should be gone from the body.

If you are training at altitude for a sporting event, like a big game, a bike race, or a marathon that will be held at a location near sea level, you may see problems. Remember that the air at altitude is very dry; usually humidity is nonexistent. Competing at sea level, the humidity is much higher. In Florida, the humidity was so high that I swear fish swim in it. Regardless of the humidity, you should see faster times, better strength and faster recovery times if you train at altitude and compete at sea level.

There is a belief that athletes who train and live at lower elevations, and plan on a race or competition at high altitude, should get there a few days early to prepare for the event. This in itself is not completely true.

When you are not accustomed to physical activity at altitude, you have only two options. The first is to take part in the event immediately. If you do the event right away, your body will not have time to start adapting to the altitude, and you will not have all the challenges to your cardio-pulmonary system.

When you wait a couple days, your

body has just enough time to figure out that you aren't in Kansas anymore. Once your body begins to figure that out, it makes changes to survive at the increased altitude and any attempt at performance will cause stress to your body.

If you can't take part in the event immediately upon arrival, then you should wait 7 to 10 days, in order to allow your body to fully acclimate to the higher altitudes. Some research shows that 60 to 72 hours prior to an event is good for performance. Long and short, you will have to experiment to find out what works best for you.

I know that living and working out at 6500 feet gives me an advantage when I head up to 10,000 feet on a hunting trip. Hiking up and down those hills is tough enough when you are acclimated, I can't imagine what my friends from sea level feel like when they get here. I know they sure think I am in great shape when I visit them. I won't let them in on the high-altitude training secret I get by living in Colorado.

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