

## Preparing for higher altitudes

As a trainer and coach with a residential training and retreat center, I have seen the effects on athletes from a variety of different sports arriving at higher altitudes unprepared: fatigue, dehydration, a pounding headache and the simple difficulty of breathing. From lessons learned working with clients at Active at Altitude, my 8,200-foot-high activity center and training facility in the eastern shadow of Rocky Mountain National Park, I have this advice for anyone prepping for the mountains while breathing the dense, sea level air.

**Start fit** Accumulated exercise and training--not a mad fitness cram the week before your trip--will increase your  $VO_2$  max (the fastest speed at which your body can get oxygen from your lungs to your gasping muscles) and leave your cardiovascular system far stronger to cope with the effects of thin air.

**Slow Down** Many people increase their exercise load before they head to the mountains with the belief that they will arrive fitter but instead arrive physically depleted. I recommend tapering (a reduction of exercise) as a way to stockpile glycogen in your muscles, amp-up the concentration of red blood cells in your veins, build more blood plasma and increase the enzyme activity in your muscles. Two weeks before heading to the high country, knock 40 percent of the time off your standard exercise routine. A week out, reduce your standard physical output by 65 percent.

**Tank Up** Fat soluble vitamins (like A and D) will stay in your system after you arrive at altitude. Take daily amounts of water soluble vitamins (like C and B) to help your body cope with the stress of high altitude exercise. Adequate complete protein intake will ensure that your body has a full compliment of Amino Acids to repair itself at night.

Also add additional carbohydrates to your usual meals - your body will be going through additional stress once you start being active at higher elevations, and you will burn more carbohydrates than usual. As carbohydrate is the primary fuel source for relatively intense exercise, it pays to make sure the tanks area full when you arrive! Add 5% to your carbohydrate intake for 5 days prior to arrival at altitude. That's typically around 75 - 100 calories, or an additional banana or 2 pieces of whole wheat bread per day.

**Hydration** Your body will be used (hopefully) to being hydrated already. Take the opportunity to prepare your body for the additional load placed when you are at altitude. You will be losing significantly more fluids than at comparable exercise intensity at lower elevations. Avoid alcohol and caffeine in the 2 weeks prior to coming out, and for the duration of your stay. Both are diuretics that cause you to lose additional fluid to process. Drink at least a couple more glasses or 1 x 20oz sports bottle of water additionally per day in the week prior to arriving at altitude. Use slices of fruit in the water if necessary to add taste.

**Asea** This is a communication supplement. It is of particular benefit to athletes as it increases endurance capacity. Start taking Asea (it is a liquid supplement) before you come to altitude, and it will help to make your adjustment to altitude easier. I have been using the supplement myself since August 2009, and recommend it to all the athletes that I coach. See more information at [www.asea4athletes.com](http://www.asea4athletes.com). Asea has received its athletic drug testing certifications – it has been declared clean and ok for competitive athletes to use without fear of containing any banned substances.

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