

High-altitude training presents nutritional challenges

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Many athletes choose to live and train at high altitude with the particular goal of increasing endurance performance. While the merits of altitude training and the best methods and timing of implementation can be debated, let's focus on changes in nutritional demands at higher elevations.

It is clear that any competition at altitude will benefit from acclimatization, or adaption to changes in physiological and metabolic demands. Systems that react to altitude and changes in oxygen pressure include cardiovascular, pulmonary and endocrine and the central nervous system, meaning changes in resting and maximal heart rate, rates of ventilation, blood pressure, V02 max and oxygen transport. Nutritional support of these adaptations and systems during altitude acclimatization is crucial.

As with any conditions, there is a range of nutritional demands. A mildly warm day will require different nutritional strategies as compared with one of searing heat and humidity; similarly, with rising altitude there will be greater effects. For the most part, when endurance athletes talk of moderate altitude, they are talking somewhere in the range of 5000 to 8000 feet (1,500-2,500 meters).

Here are some nutritional challenges athletes might face at moderate altitude.

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