

Cairn Stone Adventure Tours

Grand Canyon *Rim-to-Rim* & all Extreme Hikes

Fuel For The Canyon

By Coach Ron Gunn

Three Important Areas: Extreme day hiking in the Grand Canyon, especially below the rim, requires special attention when fueling your body. The three important areas are water, electrolytes, and energy foods.

Water: It is very important to keep your body hydrated. The Grand Canyon environment can be insidious because you can become easily dehydrated without knowing it. In this dry, arid climate your sweat is not noticeable because it evaporates immediately. Your intake of water on a typical October day in the canyon should be about 6-8 ounces every 30 minutes. Drink even if you don't appear to be thirsty, because once you do feel thirsty, problems may have already started.

Electrolytes: A serious condition for extreme hikers in the Grand Canyon is hyponatremia or "water poisoning." The Canyon Rangers rescue more people who drank too much water than who were dehydrated. (Google search for more information). This condition happens when your blood chemistry changes with excessive water compared to the electrolytes. This condition can be avoided by taking adequate amounts of salt and other electrolytes. This can be done through sports drinks, dissolving tablets, energy bars and gels, and other foods which contain sodium, potassium, chloride, calcium, magnesium, phosphate, and sulfates. Note that for the very long hikes you cannot carry enough liquid (premixed) so use the powder or tablet form for electrolyte supplementation. Mix at water stops. I have listed below some of the best sources for electrolytes:

Cliff Bars (cliffbar.com)
Cytomax Powder (cytomax.com)
e-Gel (cranksports.com)
Gatorade Powder (gatorade.com)
Gookinaid Powder (vitalyte.com)
GU20 & GU Gel (guenergy.com)
Hammer Products (hammernutrition.com)
NUUN Tablets (nuun.com)
Powerade Powder (us.powerade.com)
Powerbar – Gels & Bars (powerbar.com)

Propel water (no electrolytes)
??Ultimate Powder??
Bananas
Granola Bars/Cookies
M&M's/
Marathon Bars
Peanut Butter Crackers
Trail Mix (sweet & salty)

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Food: Eat or drink on a regular basis. It would not be uncommon to burn 4,000 – 6,000 calories during a *rim to river to rim* hike. The canyon is no place to go on a diet. A 10 hour hiker could easily burn 400 calories or more per hour. And “vitamin J” is OK in the canyon. Highly refined carbohydrates are your most ready source of energy. Proteins and fats should be avoided for the most part, because they take longer to convert to energy and, also, rob precious energy in the digestive process. Complex carbohydrates like fruits, also, take longer to digest and the roughage may cause other “problems” that you don’t want on the trail. During the later stages of the *rim to river to rim*, I have found a caffeinated drink or gel very helpful. The caffeine seems to stimulate the release of fatty lipids in the blood stream, which gives you a boost. I know Red Bull has helped a lot of my friends up Jacob’s Ladder. Whatever you use don’t forget to **“Dance with the one that brung ya.”** In other words – train with the electrolytes and energy foods that work for you. Don’t walk into the Bright Angel store the day before your big hike and pick up your supplies. **You should be training now with the same weight and supplies that you will use in the Canyon.**

Bladder Water System: I, also, highly recommend the use of a good quality bladder water system, such as a *Camelback*. They are very efficient on the trail, you can drink while still watching your step. The only drawback is that initial drink of warm funky water in the hose. I, also, suggest putting ice cubes in your bladder.

Dehydration Check: A good way to check your water and electrolyte consumption is to watch your urine. **It should be slightly yellow. “If your pee is clear, the end is near!”** If it is clear, you are not getting enough electrolytes. This can be due to drinking too much plain water. If you pee more than once per hour with clear urine you are over hydrating. Ladies, you can't be too modest to pee during long hikes. Remember: **“if you don’t pee – you will be on your knee.”**

It is, also, important to know the difference between an energy drink, an electrolyte drink and a sports drink. Read the labels. Many electrolyte drinks and tablets are low calorie and supply very little energy and some sports drinks, such as Propel, have no electrolytes. One last point; load your water, electrolytes, and energy foods smartly. If your day-pack exceeds 16 pounds, you may reach a point of diminishing returns. Use your water stations wisely and don’t over pack liquids or foods. A six pack of Red Bull on your back coming out of the canyon may hinder you more than help.

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"Dance with the girl/guy what brung ya" If you did not train with it don't add it at the last minute. This is one reason why we have day-pack inspections.

DRINK RIGHT, EAT RIGHT, HIKE WELL!

The Grand Canyon Rangers say they rescue more people in the Canyon from drinking too much water than are dehydrated. Follows is general information about this condition. You will have no high tech medical tests in the Canyon however watching your urine will keep you healthy. Watch the frequency of urination, **1 to 4 hours**, and the color:

- **Slightly Yellow = OK**
- **Clear = need electrolytes**
- **Dark = dehydrated, need water with electrolytes**

Your safety is a priority. Our training program is designed to be proactive so you will know what to do; for prevention and for corrective action, at the earliest symptoms. Follow my instructions and nothing you will do will become life threatening. We had one incident in 9 years that was life threatening and it happened to someone who could not attend my lectures as they lived on the East coast. Two S. Rim to N. Rim hiker groups had someone that succumbed to the abnormally hot conditions that year. They took to very different courses of action: One group stopped, waited in the shade while that person re-hydrated and regained strength. That group emerged 4 hours delayed and very tired but healthy. The other group pressed on and gutted it out with a person that could not even keep liquids down. She was tough but emerged dehydrated and severely electrolyte depleted. This resulted in an emergency helicopter ride to the hospital – it could have cost her life.

Having difficulty? Review the basics of your training listed above. If you are low on energy, cramping or not feeling right the most likely cause is one of those listed above. The repeated experience of our Grand Canyon hike veterans is that when they get into trouble, the solution is in their day pack.

Remember it will always be better to risk coming out in the dark or even sleeping on the trail than to put yourself unnecessarily into a worse situation.