

Keeping your body Hydrated

GOOD signs:

- Peeing a lot
- Urine is Clear

BAD signs:

- Haven't urinated in a few hours
- Urine is Dark yellow
- Muscle soreness & cramping
- Headache & discomfort
- Nagging hunger, after or shortly after eating
- Chills, clammy skin
- Rapid heart rate at rest
- Feeling tired
- If you are real thirsty, it's too late.

What to do to stay hydrated

- Several days before start drinking more water, cut back on the coffee and alcohol
- On your way to the trailhead, start drinking water with some electrolytes. 1 liter
- Start drinking early in the day, even if you don't think you need to.
- Better to have it in your belly, than on your back.
- Avoid alcohol and caffeine; they are diuretics which cause your body to expel fluids
- Avoid carbonated drinks; they create gas in your stomach, taking up space, and may decrease your desire to drink.
- Drink electrolytes or Sport drinks (not energy drinks). Have a separate container for this drink. For most of our training hikes you will want 3 liters of water and 1 liter of electrolytes. That's about a gallon of fluids!
- Too much water or only water can lead to Hyponatremia (not enough salt)
- Replace about 18 oz every hour (or approximately 2 cups, or ½ liter).

Sport Drinks

Gatorade was the first and is the biggest brand name in Sports drinks. There are many other brands available at Outdoor sports stores. For long hikes, the brands that have a lot of carbs/sugar may not be your best choice because of the "Sugar Crash" effect. You will want to experiment with these to see what works for you.

>>>Do it before Big Bear, don't try something new then! Your body may not react well.

Consider getting your carbs from your food. This is not a debate about sugar

Several brands that are no to low carbs:

- Nuun (no carbs, plus vitamins, comes in tablets)
- Vitalyte (lowest sugar content)

Bring something cold to drink for the end of the hike in your car when you get done.

Heat Related Illness & Dehydration

Water makes up 80% of your body.

FACTS about fluids

- 8 hour hike may result in 2-3% loss of fluid body weight. Everyone's sweat rate is different, and environmental conditions will have an effect on different days; heat, humidity, altitude, cloud cover, etc.
- Through sweating you lose electrolytes (potassium, sodium, chloride and magnesium)
 - Can be replaced with carbohydrates, sports drinks, tablets
- Thirst is not an indicator of need
- During moderate exercise in a cool climate an average person can lose up to 1 cup or more per hour. The same individual can lose up to four times that amount per hour in a hot and humid climate.

The bodies cooling system.

- As body temperature increases, the blood vessels dilate sending more blood to the skin areas to help cool it.
- The sweat glands are activated; the evaporation of fluids in the body out through the skin, cools the body. As long as you are sweating, you will stay cool, but you have to have enough fluids in your body to do so.
- Sweat consists of electrolytes (salts)
- On humid days, it is harder for evaporation to occur. Even harder if you are wearing cotton.

Dehydration

- At rest your body could lose up to 3 liters of water a day
- Under extreme conditions; 1-2 liters per hour through sweat and urine.
- Water is the primary lubricant for the joints.
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Stages of Dehydration

- **Mild:** dry mouth, normal pulse, darkened urine, mild thirst
- **Moderate:** very dry mouth and nose, rapid pulse, thirsty, dark urine
- **Severe:** very dry mouth, no urine, no tears, no sweat
 - Alternated mental state; drowsy, lethargic, disoriented, irritable
 - Shock: rapid, but weak pulse, rapid breathing, pale skin

Other side effects of Dehydration:

- Heat Cramps: painful muscle cramps and spasms, usually sweating profusely
- Heat Exhaustion: headache, nausea, rapid pulse and breathing, dizzy
- Heat Stroke: Body producing heat faster than it can cool itself. Body core temperature rises above 104 degrees. Resulting in neurological and vascular collapse.

Article from Backpacker.com

Like wine to the gods, water is the nectar of athletes. "Losing just 1 percent of weight from water loss can impair performance," says Colleen Cooke, a sports nutritionist at the Boulder Center for Sports Medicine. For the past 7 years, countless hikers and mountaineers have turned to her for advice on nutrition. Their #1 question: "How do I stay hydrated?" Here's what she says.

Drink early: while you sleep, you lose as much as 1.5 pounds of fluid through sweat and respiration. Before breaking camp, replenish with 16 to 24 ounces of water, sports drink, or decaffeinated tea.

Sip often Some hikers walk for 3 hours, sip a few ounces on a rest break, and pay for it at the end of the day, says Cooke. Instead, drink 4 to 6 ounces of liquid every 20 minutes; it'll help you feel strong, even on the last hill.

Add Electrolytes "Sweat is made up of sodium and potassium, which need to be replaced," says Cooke. If they're not, you'll likely feel sluggish. Sip a sports drink (powdered versions work well in the field) or munch on salty snacks.

Eat carbs "Every gram of carbohydrate you eat pulls three grams of water into your digestive system, which helps keep you hydrated," explains Cooke. Cooke recommends a 60/20/20 carb-protein-fat ratio for backpackers on multiday trips.

Watch for signs Headaches, dizziness, or difficulty concentrating can signal dehydration. The fix: Rest, eat, and drink. Anxiety, a weak or rapid pulse, and clammy or hot, dry skin point to serious dehydration. Set up camp--a long rest, a good meal, and lots of water are your best bets for feeling stronger in the morning.

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1 gallon = 3.875 liters

1 quart = .945 liters

1 cup = .237 liters

1 liter = 1.06 quarts

1 liter = 4.25 cups

1 liter = 33.8 ounces