

# OVER-HYDRATION?

## WATER, SUPPLEMENT RECOMMENDATIONS SHOULD VARY

BY TOD SCHIMELPFENIG, NOLS WILDERNESS MEDICINE INSTITUTE CURRICULUM DIRECTOR

ENDURANCE ATHLETES ARE CHALLENGING conventional wisdom on the limits of human performance. The growth of ultra-marathons has been a fertile field for research in nutrition, hydration, and heat illness.

This summer's buzz has been about *Waterlogged*, a book written by well-respected endurance athlete and exercise science researcher Tim Noakes, M.D. As the title implies, *Waterlogged* speaks to the dangers of over-hydration and argues we are drinking more fluid than necessary. It also questions the need for salt intake during exercise. This book challenges decades of hydration dogma.

### HOW MUCH SHOULD I BE DRINKING?

It is a myth that hydration, by itself, prevents heat exhaustion, heat stroke, or altitude illness. It certainly helps us tolerate heat, altitude, and cold, but the only illness hydration prevents is dehydration.

We have been told that thirst is a poor measure of hydration, to drink before we get thirsty and after our thirst is quenched. Athletes have been advised to drink 250-300 cubic centimeters of water every 20 minutes—almost a liter an hour—during exercise. We have learned to “stay ahead of thirst,” and we experience a steady diet of advertisements for sports drinks.

However, Noakes believes the sports drink industry has spun the research to devalue our sense of thirst and drive their sales. He argues thirst is a fine-tuned mechanism, a sensitive indicator of the need to drink. He believes exaggerating fluid needs causes the over-hydration (hyponatremia or low blood sodium) seen in marathons of late.

Current wisdom tempers the water-pounding rhetoric. The goal of drinking water is to prevent dehydration. We exercise and sweat at different rates in heat and cold, in dry and humid air, at sea level and at altitude. Athletes need to follow the ancient guide “know thyself.”

NOLS' guideline of three to four liters

of fluid a day has served our students well for decades in the outdoors and is an appropriate reference point.

### SHOULD I ADD ANYTHING TO MY WATER?

Competitive athletes face the question of whether to drink plain water or sports drinks with sugar. Research supports participants in athletic events longer than one hour drinking solutions containing 4-8 percent carbohydrates. On wilderness expeditions, daily nutrient intake should be based on well-balanced meals and on-trail snacks, not sports drinks or energy gels.

### SHOULD I TAKE SALT SUPPLEMENTS?

Athletes once gagged down salt tablets on hot summer days to replace sweated electrolytes. On wilderness courses in the '70s, the instructors solemnly doled out crystals of rock salt as a cure for all that ails you.

Noakes thinks salt supplements are unnecessary, that we obtain ample salt with a balanced diet. Distance athletes tend to disagree and find they may need to take salt tablets while they exercise. People working hard and long in hot weather should consider electrolyte supplements but, as with many things, in moderation.

Adding salt to your diet will not prevent over-hydration. Excessive water intake will still tip this balance to hyponatremia.

### SUMMARY: HYDRATION ADVICE FOR THE OUTDOORSPERSON

Ultimately, water and electrolyte intake should be determined by such factors as temperature, body composition, and length and intensity of exertion.

Fluid needs vary from person to person, activity to activity. Monitor your performance and learn from experience.

A good starting point is three to four liters of water each day. Thirst and dark, odorous urine are indicators of the need to hydrate more. But don't force fluids when you're not thirsty. Finally, simple



Though it's important to hydrate, hyponatremia is a legitimate consideration. *Rich Brame*

water and a balanced diet are effective in most cases. Individual athletes may prefer or need supplements, but again, this is an individual and variable decision. ◻

### WILDERNESS MEDICINE QUIZ

Hyponatremia in athletes is commonly caused by

- a. Not eating salt supplements
- b. Exercising in the heat
- c. Drinking too much water.
- d. Excessive sweating

Answer on page 26.