

# Ready, Set, Hydrate



Hydration rules. Find the right balance for you.

**Q: How does dehydration affect performance?**

**A: If you're dehydrated, your performance will suffer. Here's what happens...**

- Exercise generates body heat—lots of it—which your body primarily gets rid of by increasing blood flow near the skin and through sweat. Dehydration compromises this process by decreasing your blood volume and rate of sweating. It also makes your heart work harder, which generates even more body heat. The result, your core body temperature rises and endurance takes a dive.
- When environmental temperature goes up, performance usually goes down. When it's hot outside, your body absorbs heat from the environment. As your body temperature rises, more blood goes to your skin to cool you, and less oxygen-rich blood is available for your muscles, lungs, heart, and other organs.

**Q: When do I need a drink with carbohydrates and electrolytes?**

**A: Strenuous exercise lasting more than an hour takes more than water ...**

- One of the best ways to meet ACSM recommendations for carbohydrate intake during exercise is to drink a fluid replacement drink with four to eight percent carbohydrates.
- Sweet tasting fluid-replacement drinks taste good so you're more apt to drink more and get the carbs you need. They also aid fluid absorption and provide a quick source of fuel for active muscles.
- Fluid replacement drinks with added electrolytes are an easy way to replace the sodium you lose in sweat.
- Consuming a sports drink while training enhances fluid intake and re-hydration.
- Most regular sports drinks are specifically formulated to meet these recommendations.

**Q: How do I keep from getting over-hydrated?**

**A: Follow a smart hydration plan to prevent dehydration AND over-hydration and achieve a healthy balance.**

- Hyponatremia happens when you lose salt and fluids through sweat, but only replace fluid. It typically affects endurance athletes whose water consumption over several hours far exceeds the amount of sweat they lose. As a result, they experience a dangerous electrolyte imbalance caused by low blood sodium levels. This can lead to disorientation, confusion, seizures, and even death. Unfortunately, signs of hyponatremia are difficult to distinguish from heat exhaustion or heat stroke. Therefore, the best defense is a smart hydration plan that provides not too much, but just the right amount of fluid to match sweat loss.

## Get Smart: Nine Tips for Top Hydration

Smart hydration is the key to feeling good and staying healthy when you exercise, whether it's 30° or 95°. Learn how to hydrate right and experience exercise in a whole new way.

1. Serious about breaking a sweat? Know your sweat rate. (*calculate your sweat rate at <http://www.hydratation.thecoca-colacompany.com>*)
  2. Don't wait till you're thirsty to drink—follow a smart hydration plan.
  3. Learn how to drink when you compete. Practice drinking to your sweat rate when you train.
  4. Exercising more than an hour? Rehydrate right by replacing fluids AND sodium.
  5. Plan for fluids when on the move: take 'em with you, know where to find 'em, have money to buy 'em.
  6. Don't ignore the warning signs of dehydration.
  7. Weight lost during exercise is dehydration. Rehydrate with 16 ounces of fluid for every pound you lost.
  8. Choose a flavored drink you like—hydration goes down easier when it tastes great.
  9. Start well-hydrated. The ACSM recommends drinking 16 to 20 ounces of fluids two hours before an event.
- For more details on the nine rules of hydration, visit [www.hydratation.thecoca-colacompany.com](http://www.hydratation.thecoca-colacompany.com).*

## Important Facts About Hydration

**Power Your Athletic Performance with Real Facts.**

Weekend warrior? High-performance athlete? Either way, when it comes to keeping your cool, it pays to get the facts on sweat, hydration, and keeping your energy level high. When you're in the know, you can get and keep your healthy glow. And when you're properly hydrated, you're more likely to turn in your best performance.

**Not All Sweat is Created Equal ...**

Sweat cools your body down when you're hot, right? Yes and no. Sweat cools your body down when it evaporates from your skin. But sweat that drips off your skin does little to cool you down when you're exercising.

**All Beverages Hydrate ...**

The Institute of Medicine of the National Academy of Sciences has found that all beverages, including those with caffeine, contribute to total daily hydration. If you're not in the mood for water, it's okay to reach for something else you enjoy like a sports drink, tea or a soft drink.

**Beat Your Thirst to the Punch ...**

Listening to your body is a big part of any training program. But there's one time when you might want to overrule your natural instincts. Research shows that when you're hot and sweaty, your thirst mechanism may lag behind your body's needs. So go with the American College of Sports Medicine (ACSM) recommendations and drink before, during, and after exercise.

## Myth: Never let them see you sweat

No way! Sweat is a good thing and so is smart hydration. Just make sure you replace the salt and water you lose when you sweat with the right fluid replacement drink.

**Refresh. Refuel. Rejuvenate.**

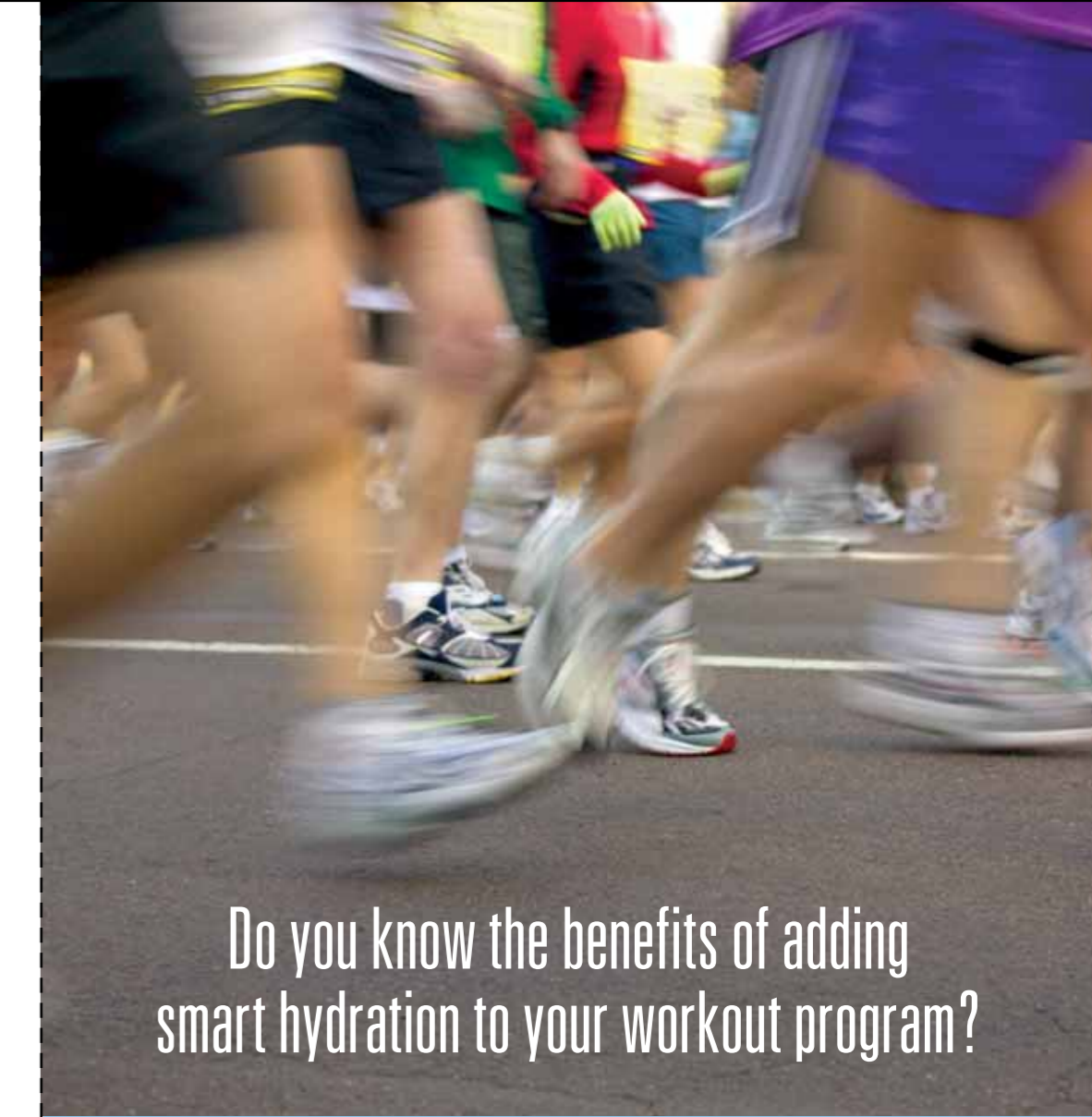
**Cool Your Body and Watch Your Athletic Performance Take Off.**  
Discover how you can power your athletic performance with smart hydration.

*For more hydration tips, visit [www.hydratation.thecoca-colacompany.com](http://www.hydratation.thecoca-colacompany.com) today.*



This brochure was developed in collaboration with The Beverage Institute For Health & Wellness of The Coca-Cola Company.

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Do you know the benefits of adding smart hydration to your workout program?

# Hydration Tips from *The Coca-Cola Company*

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Title: Hydration Brochure

AD: RS

Job No: 5705

Size: 24" x 9"

Start Date: 8.09.06

Version: 11

Modify Dates: 11.01.06, 10.10.06, 9.18.06, 9.12.06

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## Hydration. It Powers Health, Fitness, & Athletic Performance.

Kudos to you. You're one of millions of people across the country who is making exercise a part of their life. Getting active and participating in athletic events is a great first step to a healthier, fuller life. Understanding hydration is the next. Because when you're on the move, keeping your body cool and hydrated is key to achieving your best performance. So, whether you're running a few miles or 26, biking a city block or cycling 50 miles, hitting the gym, the tennis courts, or the soccer field, the more you know about hydration, the better.



## Ready to Get Smart About Hydration? No Sweat. Smart Hydration Changes Everything.

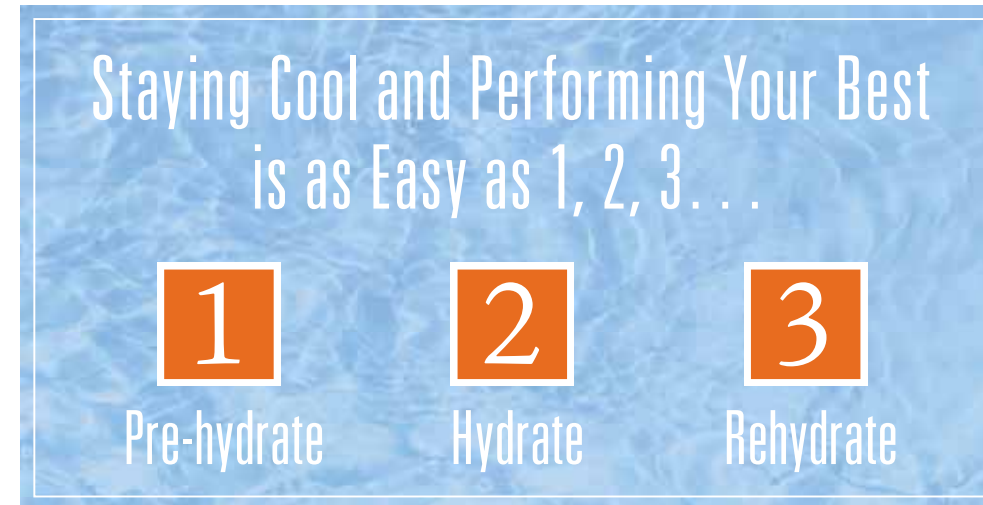
### Your Top Questions Answered

Meet Dr. Mindy Millard-Stafford, Ph.D, professor in the School of Applied Physiology at Georgia Institute of Technology and an advisor to The Beverage Institute for Health and Wellness of The Coca-Cola Company. Mindy focuses her research on thermoregulation and fluid replacement during exercise. She has published dozens of articles and research abstracts, serves on scientific panels, and has been a nationally ranked triathlete—so she knows the ins and outs of hydration. Here are her answers to your biggest hydration questions.

### Q: Why should I prehydrate before an athletic event?

#### A: Pre-hydrating is an essential part of training and competition ...

- **Good hydration starts before you start moving.** The American College of Sports Medicine (ACSM) recommends drinking 400-600 ml (about 14 to 20 ounces) of fluid two hours before exercise to make sure you're adequately hydrated.<sup>1</sup>



- **Athletes who are dehydrated when they start competing don't perform as well.** Why? Starting your workout dehydrated reduces the amount of fluid circulating in your bloodstream and bathing your body's cells. Less circulating fluid makes your heart work harder during exercise, which drives up your heat production. It also limits your body's ability to produce cooling sweat. The result: your body's core temperature rises faster and endurance suffers. Increased body temperature also affects your mental performance, with attention and vigilance the first to suffer.

In a study by Dr. Larry Armstrong and colleagues, subjects completed 5K and 10K runs in either normally hydrated or dehydrated conditions.<sup>2</sup> When dehydrated by ~2% of body weight, their running speeds were six to seven percent slower in both events

<sup>1</sup> American College of Sports Medicine. Position Stand on Exercise and Fluid Replacement. *Med. Sci. Sports Exerc.*, Vol 28, No. 1, pp. i-viii, 1996.  
<sup>2</sup> Armstrong LE, Costill DL, Fink WJ. "Influence of diuretic-induced dehydration on competitive running performance." *Med Sci Sports Exerc.* 1985 Aug;17(4):456-61

### Q: How much should I hydrate while I'm exercising?

#### A: Hydrate early and often to replenish every drop of water lost to sweat.

- This is an important guideline from the American College of Sports Medicine. The ACSM also recommends that athletes drink according to a consistent plan. Here's why...
- Drinking only when you're thirsty may not be enough to replace sweat lost during exercise.
- Perform light to moderate exercise in a cool, dry environment, you'll lose about a cup of sweat or more per hour. Perform the same exercise in warm, humid weather and you can lose more than a quart of sweat in an hour. Also, the more acclimated to hot weather you become, the more sweat you will lose.
- As an athlete, a hydration plan provides you with a guide to how often and how much fluid you should drink. To do this right, you'll need to know your sweat rate, since sweat rates can be very different for each person. (calculate your sweat rate at [www.hydratation.thecoca-colacompany.com](http://www.hydratation.thecoca-colacompany.com))

#### These basic guidelines from the ACSM can help keep your body safely hydrated:

- Drink plenty of fluids during the 24-hour period before an event, especially during the meal prior to exercise, to promote proper hydration before exercise.
- Consume 14 to 20 ounces of fluid about two hours before exercise to stay hydrated and allow time to excrete any excess water.
- During exercise, drink to your sweat rate. Drink early and at regular intervals to replace water lost through sweating.
- For strenuous exercise lasting longer than one hour, drink liquids that contain four to eight percent carbohydrates and approximately .5-.7 grams of sodium per liter of water. This helps delay fatigue and replace what you lose sweating. (Regular sports drinks are formulated in light of these recommendations.)

### Q: I drink before. I drink during. Why do I need to drink again after exercise?

#### A: A smart hydration plan helps stop dehydration and over-hydration in their tracks.

- However, daily temperature and humidity changes can have a big effect on how much fluid you lose. How quickly and completely you re-hydrate is critical if you plan to exercise again in a short time. Re-hydration means more than replacing the amount of fluid you lose—it also means replacing the electrolytes (primarily sodium) that you lose in sweat.
- If you weigh and then re-hydrate with 16 ounces of fluid for every pound you lose, you'll quickly restore your fluid balance. This is important in hot, humid weather.

For every drop you give, get every drop back.



We offer over 80 ways to



hydrate, energize, nourish, relax



or enjoy every drop of life.

