

Staying Hydrated is a Cyclist's Full-Time Job

by Deb Jansen

When you're cycling across the state on RAGBRAI, water and sports drinks become your best buddies. But how can you drink without getting a sloshing, uncomfortable belly? And... how much should you drink?

You'll probably hear a variety of answers to that question, and there's a good reason.

How Much Do You Sweat?

According to the American College of Sports Medicine (ACSM), *sweat rates vary from 1 pound (16 oz.) to 4 pounds (64 oz.) per HOUR*, so only you and your body know how much you should drink to stay hydrated and avoid heat stress.

Of course, your sweat rate increases when you exercise in warm and windy conditions. RAGBRAI has plenty of both!

There's a formula to calculate your personal sweat rate. Weigh yourself before a one-hour training ride, and then again when you're finished. If you weigh the same, but drank a 24 oz. bottle of water or sports drink, you'll know you sweat approximately 1 1/2 pounds per hour in those weather conditions riding at that pace.



Whenever possible, sip every 10-15 minutes, and finish at least 16 ounces of fluid per hour. (Drink more

if you know you sweat more!) That way, you'll replace fluids at about the same rate as you lose them. A slow rate also minimizes the bloated feeling that comes from chugging a full bottle of water or Gatorade.

When you load the stomach with a lots of liquid, the belly has to empty the fluid into intestines, which in turn, release it to the bloodstream. (And, you guessed it, everyone's gastric emptying varies too!) Until then, fluid sloshes in the belly. If you ride with fluid in your belly, the stomach battles with leg muscles for the blood needed to do the work. The muscles win every time, and fluid sits there in the stomach and makes you feel bloated *WITHOUT* hydrating you.

Water or Sports Drinks?

Water is always important, but sports drinks are crucial during extended hours of exercise. As we sweat, the body also sheds electrolytes—chemicals needed to keep the brain, muscles, and vital organs working. Exercise professionals recommend sports drinks any time you exercise longer than 3 hours. During RAGBRAI, you'll be exercising at least 6 to 8 hours each day. And, you'll continue to sweat (and lose electrolytes) when you stop for the day.

Just as each person's sweat rate is different, the loss of electrolytes is varied as well. The average for 16 ounces (1 pound) of sweat is 400 mg sodium, 100 mg potassium, 10 mg calcium, and 5 mg magnesium. (See the chart for ranges and food references for replacement.)

A sports drink in one of your water bottles lets you replace at least some of those electrolytes wherever you are. For example, 32 ounces of Gatorade replaces the amount of sodium and potassium lost in 16 ounces of sweat. So, if you're on the road 6 hours, that means drinking a whole lot of Gatorade!

Electrolyte	Avg. lost in 1 lb (16 oz.) sweat	Food replacement
Sodium	400 mg (range 200-1600)	32 oz Gatorade= 440 mg sodium
Potassium	100 mg (range 120-600)	1 med banana=450 mg potassium
Calcium	10 mg (range 6-40)	8 oz yogurt=300 mg calcium
Magnesium	5 mg (range 2-18)	2 Tbsp peanut butter=50 mg magnesium

calcium, and magnesium. Yogurt banana-strawberry smoothies are a real treat—yielding loads of calcium, potassium, and magnesium. GORP (good old-fashioned raisins and peanuts) will help resettle your electrolytes too.

Warning Signs of Dehydration

- muscle cramps
- headache
- dizziness
- nausea
- increased heart rate
- vomiting
- faintness
- brief loss of consciousness

Warning Signs of Heat Exhaustion (a shock-like condition)

- dehydration signs (above)
- pale, clammy skin
- rapid, weak pulse
- loss of coordination
- decreased performance and impaired decision-making
- dilated pupils
- profuse sweating

Warning Signs of Heat Stroke (life-threatening condition)

- dehydration and heat exhaustion signs (above)
- extremely hot skin
- pale, ashen color
- body temperature exceeding 104 degrees

In case it makes you belch just thinking about that many sports drinks, you can also reach for cycling-specific snacks for help. A level handful of salted peanuts is a simple solution—delivering sodium, potassium,