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Sports Nutrition Newsletters

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Knowing Your Nutrients

The University of Akron

All About Hydration **January 2018**

The Importance of Hydration

Water is the most important nutrient in the body.[1] In addition to transporting nutrients and removing waste, water regulates the temperature of the body, which is especially necessary during exercise.[1] **Proper hydration enhances training capacity, reduces risk of injury, and speeds up recovery.**[1]

The amount of water in the body is closely regulated.[1] This is apparent during exercise when the body sweats. Sweating causes the body to lose water as well as sodium.[1] As a result, the body is triggered to stimulate thirst and decrease the water and sodium lost in the urine.[1] These processes fight to keep the body in a balanced, hydrated state.

Dehydration is a concern for athletes and will impair physical and mental performance.[2] When exercising, a loss of only 1% of body weight (that is only 1.5 pounds in a 150 pound athlete) can impair the body's ability to handle physical activity.[1] Dehydration can lead to overheating because the body is not able to adequately regulate its temperature.[1] Dehydration reduces the muscles' ability to use glycogen (stored carbohydrates) as fuel, leading to fatigue.[3] In addition, dehydration can negatively affect mood and alertness.[3]

Tips to Tell if you're Hydrated

1. Weigh yourself before and after exercise. Compare your weights and determine how much you lost. Drink 16-24 oz for each pound you lost.[1]
2. Look at your urine color and volume before and after workouts. If your urine is consistently darker or decreased in volume after exercise, you probably need to drink more. You want your urine to be a pale yellow color.[4]
3. Look for salt stains on clothing after exercise. If you see stains, you are a "salty sweater."[4] Consume a drink that contains sodium to prevent muscle cramping and to replace sodium losses.[4]

There are steps athletes can take to prevent dehydration. First of all, they should be hydrated before exercise.[1] Athletes who are expecting to sweat heavily should drink about 1 oz fluid per 10 pounds of body weight, about 4 hours before exercise.[1] During exercise, athletes should aim to drink 4 to 7 oz every 10 to 20 minutes.[1] This drink should be a sports drink *if* the workout is vigorous, lasts longer than 60 minutes, or is in a warm climate.[1] Throughout the day, athletes should consume fluids to keep their bodies hydrated.[1]

Did you Know?

1 mouthful of fluid = about 1 oz.[1] Want to drink 8 oz of fluid? That will be about 8 mouthfuls!

Making Sense of the Myths

Myth: Drinking plain water is the only way to stay hydrated.

Actually, many different beverages and foods contribute to the body's hydration status.[5] This includes beverages like milk, juice, sports drinks, and even coffee.[5] Foods like soup, watermelon, celery, and pickles have high water content.[5] In fact, Americans get about 22% of their water intake from the fluid found in foods.[5]

Myth: Everyone needs eight glass of water per day.

Actually, there is no recommendation that meets everyone's fluid needs.[4] This is because fluid needs are affected by many factors including gender, body size, the environment, and exercise.[1] The adequate intake of fluid is about 12 cups per day for females and 16 cups for males.[1] This means that this amount of fluid is adequate to meet the needs for *most* people. Some people, like athletes, may need significantly more. Also keep in mind that this fluid requirement includes fluid from all foods and beverages, not just plain water.

Myth: People can't overhydrate.

Actually, overhydration has not been proven to have any benefits.[5] It even can cause a potentially deadly condition called hyponatremia, or low sodium in the blood.[4] To prevent this, people should drink when they feel thirsty and not drink an excessively large amount of water simply because someone told them to do so. Athletes may need to drink a beverage that contains salt or have a salty snack with water to replace lost sodium and prevent hyponatremia.[1]

Try making your own sports drink!

Here's what you need:

- 3 ¾ cups water
- ¼ cup orange juice
- ¼ cup sugar
- ¼ tsp salt

Here's how to make it:

- Mix all ingredients with ice and stir until the salt is dissolved.
- Keep chilled until ready to drink!

This recipe makes about 4 cups.

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About the Author

Michelle Dilling is a senior at the University of Akron and will graduate in May 2018 with a Bachelor of Science in Nutrition and Dietetics and a Psychology Minor. She will then pursue her master's degree in Exercise Science and Adult Fitness. She has been involved in sports throughout her life and continues to stay active as a competitive figure skater. In addition to being a student, Michelle is a private figure skating coach.

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