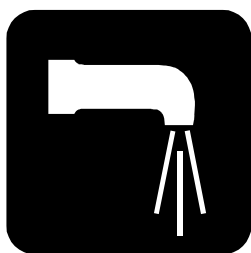


## Water Bottle Safety

A reusable water bottle is a great way to stay hydrated and to protect the environment.

- Choose a bottle made from a safe material: plastic, stainless steel, glass, enamel-coated aluminum. Consult the Decoding Plastic brochure for good options.
- Consult the Decoding Plastic brochure for clean use of your reusable water bottle.
- Most urban tap water in the US is safe to drink (potable). If you are traveling, opt for bottled water. In the wilderness, water sources may be contaminated; consult the Wilderness Hygiene brochure for safe water drinking in the wild.



## Resources

<sup>1</sup>[www.cdc.gov/nasd/docs/d001201-d001300/d001215/d001215.pdf](http://www.cdc.gov/nasd/docs/d001201-d001300/d001215/d001215.pdf). Accessed May 31, 2009.

<sup>2</sup>[www.cdc.gov/niosh/hhe/reports/pdfs/2000-0060-2904.pdf](http://www.cdc.gov/niosh/hhe/reports/pdfs/2000-0060-2904.pdf). Accessed May 31, 2009.

<sup>3</sup>[http://www.acefitness.org/fitfacts/fitfacts\\_display.aspx?itemid=2639](http://www.acefitness.org/fitfacts/fitfacts_display.aspx?itemid=2639). Accessed May 31, 2009.

<sup>4</sup><http://www.cdc.gov/nutrition/everyone/basics/water.html>. Accessed May 31, 2009.

For additional information consult the CDC website: <http://www.cdc.gov/nutrition/everyone/basics/water.html>.



*Center for  
Hygiene & Health  
in the Home and Community*

The Center for Health and Hygiene in the Home and Community serves as a national and international resource for information and education, applied research, professional training, and conferences. The Center focuses on issues relating to hygiene and infection control in areas such as:

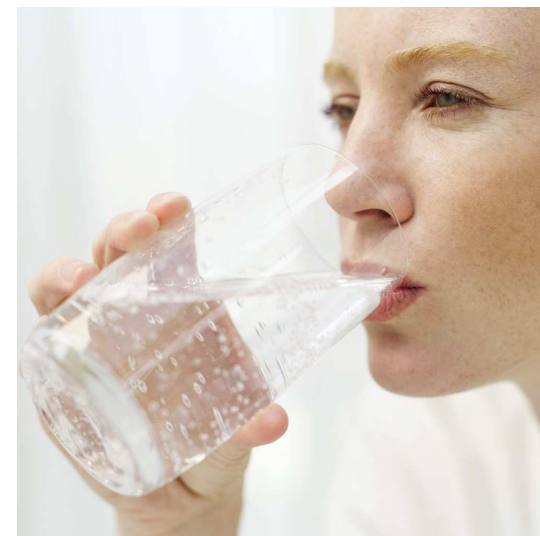
- Consumer food safety
- Home hygiene
- Daycare
- Preschool
- Homecare
- Sports and leisure activity
- Travel and hospitality

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## Dehydration and Water

### Drinking Safety



June 2009

## Introduction

With the start of summer, we should all be more vigilant about staying hydrated. Dehydration is the loss of body fluids and electrolytes (e.g. salt.) It can occur from sweating, but also bleeding, vomiting, or diarrhea.<sup>1</sup> Symptoms progress as the body's water deficit worsens:

- loss of appetite, impatience, and headache with a 4 to 6% deficit;
- vertigo, shortness of breath, cyanosis, and spasticity with a 6 to 10% deficit;
- death when 15 to 25% of body weight is lost.<sup>2</sup>

The Food and Nutrition Board released new dietary reference intakes for water in 2004. 80% of water intake should come from beverages, and 20% from food (soups, fruits, vegetables, etc.)

- For women: 2.7 L (91 oz)/day; this equals nine 8 oz glasses + food
- For men: 3.7 L (125 oz)/day; this equals twelve 8 oz glasses + food<sup>3</sup>

Water needs will increase with:

- Hot weather
- Exercise
- Fever
- Diarrhea or vomiting
- High altitude

Some people may have fluid restrictions because of a medical condition and should follow their healthcare provider's advice.<sup>4</sup> Don't rely on thirst to tell you when to drink – once you are thirsty, you are already low on fluids. The best indicator of proper hydration is urine output and color: ample, light-colored urine shows that your body is well-hydrated.<sup>1</sup>

## Hydration Hints For Exercise

You can lose more than 1 quart of water during 1 hour of exercise. The American Council on Exercise recommends the following:<sup>4</sup>

- Drink 17 to 20 oz of water two hours before the start of exercise.
- Drink 7 to 10 oz of fluid every 10 to 20 minutes during exercise.
- Drink 16 to 24 oz of fluid for every pound of body weight lost after exercise.



## What Should I Drink?

Since water makes up more than ½ of the human body, it is the best choice of fluids to prevent dehydration, even during exercise. Sports drinks help replace lost electrolytes during high-intensity exercise exceeding 45 to 60 minutes.<sup>3</sup> Sugar-salt solutions (like sports drinks) can facilitate sodium and water absorption by the body, and provide energy during vigorous exercise. Ideally, you should drink fluids at 50-60°F, in small quantities (5-7 oz), and at frequent intervals (every 15-20 minutes.)<sup>2</sup>

Sugar-sweetened beverages (like fruit drinks, some sports drinks, and non-diet sodas) contain added sugars. They provide water and some electrolytes, but also calories, which may impair weight control.<sup>4</sup> Alcoholic beverages can worsen dehydration, but caffeinated drinks like coffee won't.

In cases of severe dehydration – a loss of 10-15% of body fluids requiring medical attention -

a solution of ½ tsp salt and ½ tsp baking soda in 1 quart of water can replace lost fluid and salt.<sup>1</sup>

## Can I Drink Too Much Water?

Water toxicity (hyponatremia) can develop from drinking too much water without replacing sodium (salt.) This is very rare and usually occurs during endurance activities in hot weather. Early symptoms include difficulty thinking and decreased energy. Coma and seizures develop as hyponatremia worsens. Most people need to increase their total body water by 1 gallon for hyponatremia to develop.<sup>2</sup> This requires drinking so much water that, despite urination, the body fluids are diluted with more than 1 extra gallon of water.

## Drinking Enough Water

Tips from the CDC :<sup>4</sup>

- Carry a water bottle for easy access at work or when running errands
- Freeze some freezer-safe water bottles for ice-cold water all day long
- Choose water instead of sugar-sweetened drinks. Avoiding one 20-oz soda will save you about 240 calories
- Choose water when eating out; this will save you money and calories
- Add a wedge of lime or lemon to your water; you may drink more water with the improved taste

