



The Wonders of Water

Did you know that most people can survive no more than 7 days without water (Williams 2005)? Because of its numerous and diverse functions in the body, water is often regarded as the most important nutrient. Although there is rigorous proof of its benefits, scientists still have trouble objectively advising people how much they need to drink daily to maintain favorable health. Len Kravitz, PhD, program coordinator of exercise science and researcher at the University of New Mexico at Albuquerque, plunges in for a look at this mysterious nutrient called H₂O.

Water 101

Water is intricately involved in numerous functions of the body, including the transport of oxygen, nutrients and waste products into and out of the cells. Drinking water contains several electrolytes (substances in solution that conduct an electric current), including calcium, chloride, fluoride, magnesium, potassium and sodium. Water is necessary for all digestion and absorption functions, and it lubricates mucous membranes in the gastrointestinal and respiratory tracts.

courtesy of

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Water is the medium for most chemical reactions in the body, especially those metabolic reactions involved in energy production. The body uses water as a coolant, helping to regulate body temperature during exercise, when fever is present and in hot environments. Water also serves as a cushioning component between joints, in the spinal cord and in the brain.

Water and Special Populations

At different times in your life, you may need to pay special attention to water intake.

Older Adults. With age, thirst becomes a less effective indicator of the body's fluid needs, so older adults who rely solely on thirst signals increase their risk of becoming dehydrated. Seniors who relocate to places where the weather is warmer or dryer are also more susceptible to dehydration.

Pregnant or Breast-Feeding Women.

Expectant mothers and those who are breast-feeding need additional fluids daily to stay hydrated. Women at risk of gaining too much weight are encouraged to consume more water (no calories) and limit their consumption of sweetened fluids (with calories).

Water and Exercise

In an hour of light exercise in a cool or moderate environment, the small amount of water you sweat out is easy to quickly replace. However, endurance exercise is different. The American College of Sports Medicine (ACSM) recently released its newest Position Stand on exercise and fluid



How Much Water Do You Need?

The Institute of Medicine (IOM) published its Dietary Reference Intake for water in February 2004. The committee explains that drinking fluids represents about 81% of total water intake, with 19% of water being provided by foods. So, the recommendation for actual fluid intake is 3.0 liters for men and 2.2 liters for women. Since 1 liter = 33.8 fluid ounces, men are advised to drink 101.4 fluid ounces, or 13 cups (a cup is 8 fluid ounces) of drinking water and other beverages per day, and women are advised to drink 74.4 fluid ounces, or 9 cups, per day.

replacement in an effort to guide exercisers toward safe and enjoyable participation in endurance exercise (Sawka et al. 2007). The stand says that each person will have different and variable water losses, so one blanket recommendation is not possible. However, it discusses the importance of hydrating before, during and after exercise. ■

References

- Institute of Medicine. 2004. *Executive Summary, Dietary Reference Intakes for Water, Potassium, Sodium, Chloride, and Sulfate*. National Academy of Sciences, Food and Nutrition Board. Washington, DC: National Academy Press.
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- Williams, M.H. 2005. *Nutrition for Health, Fitness & Sport* (7th ed.). Boston: McGraw-Hill Higher Education.