Fluid Needs

Why Beverages are Important
All beverages are mostly water, which is a nutrient that is essential to life. Every body function depends on water, and you can live only a few days without it. Your total body weight is 55-75% water, which is approximately 10 to 12 gallons. Water makes up about 83% of blood, 73% of muscles, 25% of body fat, and 22% of bones.

Eighty percent of your total fluid intake comes from beverages of all kinds, and the other 20% comes from foods. Fruits and vegetables—fresh, frozen and canned—contain lots of water. For example, watermelons, tomatoes, lettuce and celery contain more than 90% water, and oranges are 87% water.

Milk, soymilk, juice and soup all supply water to the body and contain other nutrients.

Benefits of Drinking Water
Choose water as your primary beverage. It is usually inexpensive and readily available. Water is also thirst quenching, contains no calories, fat, cholesterol, or caffeine, and is low in sodium. Water’s other benefits include:
- Prevents dehydration
- Regulates body temperature to about 98.6° F
- Reduces fluid retention
- Gives the feeling of fullness when consumed with a meal
- Carries nutrients and oxygen to the cells
- Provides moisture to skin and other tissues
- Helps prevent constipation
- Cushions joints
- Helps strengthen muscles

Tap water, especially from large municipal water systems, is just as safe as bottled water and less expensive. If bottled water gets a person to drink more water, then the added expense may be worthwhile. Be aware, however, that some bottled water is actually reprocessed tap water, and others have added sugar and sodium.

How Much is Needed?
On an average day, a healthy adult needs 8 to 12 cups of water to replace the amount lost through perspiration, breathing, urination, and bowel movements. These fluids must be replaced to avoid dehydration and to keep the body working normally. When eating a high fiber diet, extra water is needed to process the additional roughage.

In general, one quart of water is needed daily for every 50 pounds of body weight. The exact amount of water needed depends on: age; gender; weight; health; level of physical activity; foods eaten; any medications taken; and the weather.

Thirst is one sign that you need fluids. Your current fluid intake is probably adequate if you drink enough water to quench your thirst, you feel well, and you produce a normal amount of urine that is colorless or slightly yellow. However, do not wait until you feel thirsty before drinking something. Sometimes the brain doesn’t get the thirst signal. Older adults often lose the ability to sense thirst.

What Determines Water Needs?
Exercise: When involved in an active sport that makes you sweat, drink plenty of water throughout the day, not just during the activity. Sweat, or perspiration, is the body’s natural way of cooling down, especially on a hot day or when your body gets a real physical workout. Without fluids, your body overheats. To replace fluid loss, drink plenty of water and juice or milk before, during, and after
physical activity. These fluids prevent dehydration and the tiredness that accompanies it.

To avoid cramps and dehydration during activity, drink fluids at regular intervals, and continue to replenish with water after the activity is completed. A good rule of thumb is to drink a cup of fluid every 15 minutes during and immediately after exercise.

Drink the following amounts of fluids when exercising rigorously or in very hot weather:

—2 cups during the two hours before exercising;

—1 to 2 cups within 15 minutes of the activity;

—½ to 1 cup every 15 to 20 minutes during exercise. (One medium mouthful of fluid equals about 1 ounce, and 8 ounces equals 1 cup.)

—3 cups for each pound of body weight lost.

For most physically active people, water is the best fluid choice. Sports drinks are necessary only for endurance athletes and people who have exercised for an hour or more, because they lose sodium and potassium through sweating.

Environment: In hot or humid weather, drink additional water to replace what is lost through sweating and to help lower body temperature. In winter more fluids are required due to loss of skin moisture from heated indoor air. Extra water may be needed in cold weather if you sweat while wearing insulated clothing. High altitudes (greater than 2,500 meters or 8,200 feet) cause an increase in fluid needs, and recirculated air on planes promotes dehydration, also.

Health Conditions or Illnesses: Fever, vomiting and diarrhea cause the body to lose extra fluids that must be replaced with water or other solutions such as Gatorade. Sometimes intravenous water and electrolytes may be necessary. Certain health conditions prevent the body from getting rid of water—heart failure and diseases of the kidney, liver, adrenal and thyroid. People with urinary tract stones usually need to increase water intake.

Pregnant or Breast-Feeding: Women who are pregnant or breast-feeding need additional water.

The Institute of Medicine recommends that pregnant women drink nearly 10 cups of fluids a day, and women who breast-feed should get about 13 cups of fluids daily.

Tips for Drinking More Water

- Drink a glass of water as soon as you get up each day.
- Every morning, fill a 64-ounce to 96-ounce container with water for the day. When you drink all the water in the container, you have met your daily water need of 8 to 12 cups.
- Drink water with meals and snacks.
- Add slices of lemon, lime or orange to water for a hint of flavor.
- Start your meal with soup occasionally.
- Enjoy water breaks instead of coffee or tea breaks.
- Take water bottles* with you to work and when running errands.
- Keep a cup of water on your desk to sip on as you work at the computer.
- When passing a water fountain, stop and take a drink.
- Instead of a soft drink, or soda, reach for bottled water in the convenience store, as well as from the vending machine.
- At social gatherings substitute sparkling water for alcoholic drinks, or alternate them.
- Pack bottled water in your carry-on luggage when traveling by plane. Drink 1 cup of fluid for every hour of your flight.
- Drink water before, every 15 minutes during, and after physical activity.
- Weigh before and after exercise. The difference is almost all water. Replace each pound lost with 2 cups of water.

*Every time you drink, bacteria from your mouth contaminate water in the bottle. Keep your water bottle clean or replace it often. Wash it in hot, soapy water or run it through a dishwasher. If you use a bottle repeatedly, make sure it is designed for reuse.

Other Smart Beverage Choices

Select other drinks that have a lot of calcium, vitamin A or vitamin C. This includes milk, fortified soymilk, vegetable and fruit juices. Make healthful drink choices based on the food labeling "5-20" guide. This means that a beverage is a very
good choice if it contains 20% of more Daily Value for calcium, vitamin A or vitamin C in one serving. On the other hand, 5% or less Daily Value per serving means that it is a poor choice.

**Milk:**
- Choose skim or 1% milk for the same amount of calcium but less fat and fewer calories than whole milk.
- For a sweet and fun treat, choose flavored low-fat milk—chocolate, strawberry, or other flavors.
- Drink milk with meals, including fast-food meals and school lunches.
- Make a quick Cool Smoothie in the blender. Combine low-fat milk or yogurt with juice and/or cut-up fruits.
- Fortified soymilk is a healthy alternative to cow or goat milk.

**Fruit & Vegetable Juices:**
- Choose 100% vegetable juice over fruit juice, which is a concentrated source of sugar and calories.
- Read the Nutrition Facts label and select fruit juices and fruit drinks that contain the highest % Daily Value (DV) for vitamin C.
- Mix two different vegetable or fruit juices for an easy snack drink.
- Make a Juice Float for an easy and delicious thirst quencher. Just combine several fruit juices and frozen-fruit yogurt.
- Freeze boxes or cans of juice, then tuck them in lunch boxes or backpacks for later.
- Select juice or water when buying a beverage from a vending machine.
- The calories in fruit juice or juice drinks add up, so drink no more than 12 ounces daily or dilute them in water. A better choice is cut-up fruits, which contain extra fiber in addition to the other nutrients.

**Limit Caffeine & Alcohol**
Limit beverages that contain caffeine and alcohol, as well as too much sugar and calories. Examples are sweet tasting liquids such as: soft drinks; tea sweetened with sugar; sports drinks; fruit juices and fruit drinks. Water and sports drinks are better choices than beverages containing caffeine, alcohol, or carbonation.

**Drink Less Soft Drinks, or Sodas:** Enjoy soft drinks, or sodas, in moderation. Avoid substituting them for water or calcium-rich milk. Although soft drinks are mostly water, they contain large amounts of sugar or sugar substitute and no nutrients. An average 12-ounce soft drink contains 150 calories, 9 teaspoons of sugar, and no nutritional value. Avoid diet sodas, which may promote weight gain in some people.

Follow these tips to reduce soda consumption:
- If you drink sodas, cut down to one a day, preferably 12 ounces or less.
- Replace sodas with water if you like to sip while you read, watch TV, or work on the computer.
- Drink sodas as a snack, not as a meal beverage. Enjoy water, milk or juice with your meals.
- Pour one glass of soda, rather than drink from a large bottle.
- Order the regular-size drink at a fast-food restaurant instead of the large, jumbo, or super-size cup.
- Soft drinks, coffee, and tea contain caffeine, which is a mild stimulant and can act as a diuretic. This promotes fluid loss through urination and contributes to dehydration. Although caffeine has a diuretic effect, this effect may be temporary and does not lead to cumulative total body water deficits.

**Drink Alcohol in Moderation:** Alcoholic beverages do not count toward your daily fluid intake. They supply calories and few nutrients, while having a diuretic effect on the body. Consumption of alcoholic beverages should be limited and preferably accompanied with food. The Dietary Guidelines for Americans, 2005 recommends that adults who choose to drink alcoholic beverages should do so sensibly and in moderation. The definition of moderation for women is up to one drink on any single day, and for men it is up to two drinks per day. Drink sizes include: 12 fluid ounces of regular beer, 5 fluid ounces of wine, or 1.5 fluid ounces of 80-proof distilled spirits. Each drink contains the same amount of alcohol.
Avoid Dehydration
Lack of water can lead to dehydration, a condition when the body does not have enough water to carry on normal functions. Dehydration is a health risk, especially for the very young and the very old. A 20% loss of water is life-threatening. Mild dehydration over time has been linked with increased cancer risk, reduced salivary gland function, kidney stones, and even fatal heart attacks. Thirst is the first symptom of dehydration. Fluids should be consumed before you feel thirsty.

Symptoms of Dehydration Include:
- Excessive thirst
- Fatigue
- Muscle weakness
- Headache
- Dizziness
- Dry mouth, lips and skin
- No urination or a small amount of dark yellow urine*
- Lightheadedness
- Increased body temperature
- Nausea
- Constipation
- Labored breathing

*If you are properly hydrated, urine should be clear to pale yellow. You should urinate every 2 to 3 hours.

Although it is extremely rare in healthy adults, it is possible to drink too much water. If you are concerned about drinking too much or too little water, let your doctor or a registered dietitian help you determine the amount that is best for you. See a doctor if you are always thirsty or urinate too much, because these may be signs of diabetes.

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This information has been reviewed and adapted for use in South Carolina by J. G. Hunter, HGIC Information Specialist, and K. L. Cason, Professor, State EFNEP Coordinator, Clemson University. (New 09/05.)

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