Water

- Water is the most abundant liquid on earth and makes up 55% to 65% of body weight (1).
- Water makes it possible for your body to perform virtually every function that your body needs to perform for life. It is responsible for waste removal, transport of nutrients, hormones and everything else your body needs, as well as joint lubrication and regulating your body temperature (1).
- Almost all liquids that you consume contribute to your body’s total supply of water, including foods. All of these combine to make up total body fluids. However, water is one of the best sources of fluids because other sources often contain less healthy ingredients such as added sugars.

Consequences of Dehydration

Dehydration is when your body loses too much water (1). It has consequences to your body:

- Changes in mood and brain function may occur with only mild dehydration, such as increased fatigue, decreased ability to concentrate, dizziness, speech incoherence, anxiety, panic attacks, agitation, delusions, hallucinations, and lower reaction time (1,3,4,6). These consequences may not be reversible (7).
- Dehydration can contribute to blood clots, kidney stones (8), kidney diseases, hypertension (5,10) and constipation (11).
- Chronic dehydration, or low levels of dehydration over a long period of time, has been linked to colon and bladder cancers, obesity, lung illnesses, fever, diabetes, heart failure, ulcers, medication overdose, and falls (5,9).
- Coma and death may occur with the loss of 20% to 30% of body water (1,8).

Types of Dehydration

There are two basic types of dehydration:

- **Water loss dehydration**—your body loses too much water, but does not lose other minerals. It is caused by hot or dry weather, severe illness or injury, excessive sweating, fluid restriction, fever, and diarrhea (1,5). Symptoms include:
  - Anxiety, restlessness and altered mental status (1)
  - Low blood pressure (1)
  - Weak, fast heartbeat (1)
  - Cool, clammy skin (1)
  - Thirst and dry mouth (1)
  - Extreme tiredness (1)

- **Water and salt loss dehydration**—your body loses both salt and fluids. Water and salt loss dehydration is caused by certain medications such as diuretics, vomiting, diarrhea, and altitude (1,5). Symptoms include:
  - Headache (6)
  - Dry mucous membranes (like your nostrils)
  - Dry tongue and mouth
  - Tiredness (6)
  - Upper body weakness
  - Dry arm pits (1)
  - Difficulty speaking
  - Confusion (5), learning problems, and impaired short-term memory (1)
  - Sunken eyes (1)
  - Extreme weakness (1)
  - Decreased muscle strength (5)

People at increased risk for dehydration include those who are ill, the elderly and young children (6). Older individuals may not adequately sense thirst because these mechanisms may weaken with age (1).

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Water Intoxication

- It is possible to get too much water. When you do, it is called **water intoxication**. Water intoxication is rare, but this is why it is best to pay attention to your body signals about thirst.
- Sodium, a mineral that helps control the fluid balance in your body, needs to be kept within a specific range in your blood. When your blood becomes too watered down from drinking too much water too quickly, or from drinking only water when losing both water and salt, sodium levels get too low. This can cause severe consequences, including death.

Water Needs

- To calculate how much fluid you need in a day, divide your body weight in lbs. by 2. This is the amount you should drink every day in ounces. If you then divide that number by 8, you will know the number of cups of water you need in a day.
  - For example, if you weigh 150 lbs., you need at least 75 oz. \(150 \div 2 = 75\), or 9–10 cups \(75 \div 8 = 9.4\) of fluids every day.
  - But if you weigh 250 lbs., you would need at least 125 oz. \(250 \div 2 = 125\), or 15–16 cups \(125 \div 8 = 15.6\) of fluid every day.
- Follow your thirst. Your body is generally very adept at sensing your body’s need for water. Paying attention to and following your body’s signals for water is one of the most important things you can do to prevent dehydration. However, in adults over 50 years, these mechanisms may not work adequately. You should make sure that you drink at least your calculated water needs every day.

Caffeine

Caffeine is a *diuretic*. In other words, it causes you to lose fluids. Caffeinated drinks are not good for helping you rehydrate if you are dehydrated. However, if you regularly drink caffeine, caffeine will probably not increase your risk for becoming dehydrated.

Sports Drinks

Blood is not only full of water and cells, but also small molecules called **electrolytes**. When you lose water in sweat or vomit, you lose electrolytes too, which can also lead to severe consequences. Sports drinks can help replace lost electrolytes, but they also contain sugar and salt, so you will usually only need water to rehydrate. Following are times when you might want to have a sports drink instead of water:
- When you are exercising for a very long time (more than 1 hour)
- When you will be outside in the heat for a long time
- When you have severe vomiting or diarrhea

**REFERENCES**