

“When the well’s dry, we know the worth of water.”

Benjamin Franklin

Water is Essential for Life.

Our bodies need a continuous supply of pure water to maintain the delicate balances which sustain life. We are able to go without food far longer than we can without water. Only our need for air would outrank water. Every function of the body is dependent in some way upon water. Hormones, nutrients, brain and neurotransmitters all need water for the manufacture, transportation and utilization of nutrients in every cell, organ and system.

What roles does water play in body functions?

1. Solvent - In chemistry water is known as the universal solvent; in the body it serves the same role. It provides the basis for all of the body’s chemical processes.
2. Transport - Water circulates throughout the body as blood, lymph, cerebral spinal fluid, etc. In these fluids nutrients like oxygen, vitamins, and minerals flow to the cells while waste products like metabolites, CO₂, and other waste products are carried away in water-based fluids.
3. Regulates temperature and pH - When the temperature of the body rises due to exercise or other exertion, water is lost; as sweat this serves as a coolant to the body. Water also helps the body maintain delicate pH balances. The blood absolutely needs to be maintained at a pH between 7.3 and 7.4.
4. Provides volume and mass - Water helps to give cells shape by providing the fluid for extracellular fluids (the fluid between cells) and intracellular fluids (fluid within the cell). The intracellular fluid accounts for approximately 40% of the total body weight.
5. Body lubricant - Water acts as a lubricant in a number of different ways. For example in a joint it forms synovial fluid; in the lungs it helps with breathing by forming surfactant.

Water and the human body.

To further understand water’s many roles, let’s take a look at its distribution throughout the body. In a male’s body 55% to 75% of the total body weight is water, and a female’s body is from 50% to 60% water. The total amount is dependent on total body fat. Fat cells contain less water than muscle cells. Muscle tissue, which is approximately 50 to 70% water, holds almost half of the body’s total water content. The bones are 20 to 35% water, the grey matter of the brain is 70 to 85% water and blood can be as much as 80% water. The ideal water content of a male is 60% with 63% in the cells and 37% in the Extracellular spaces. For women the ideal percentage of water would be 55% with 58% intracellular and 42% extracellular.

When you consider the importance of water to our existence, its importance to life is indisputable. Everything your body does, it does so with the help of water.

How much water do I need?

How much water one should drink is open to a vast difference of opinion. There really is no iron-clad formula. For example a 5 foot 2 inch female working indoors is certainly going to have a different requirement than a 6 foot 3 inch male doing construction. A basic rule of thumb would be: Drink pure water whenever thirsty!

Coffee, tea, juice, and certainly soda pop do not count as a beneficial intake to maintain fluid balances. Once the chemical structure is altered such as in coffee, tea or pop the water loses its ability to be used in its vital roles.

As a general guideline drink two eight-ounce glasses of water before breakfast, and a glass of water about a half an hour before lunch and supper. Drink an additional couple of glasses between meals and a glass before bed. It is advisable to increase the amounts drank during periods of exertion, stress, or when air

temperatures are warmer and drier. Pay attention to your body signals and you will become more aware of your need.

“Nearly 70 percent of Americans are worried about the quality of their drinking water, according to a recent survey. Much of their concern centers on how water looks, tastes or smells. Unfortunately, water that is hazardous to your health usually looks, tastes and smells just fine.” Consumer Reports, January 1990. It is important that the water you drink be free of harmful chemicals and pollutants such as chlorine, fluoride and nitrates to name a few. For further information on the importance of purity and reducing external toxicity refer to the toxin section.

It is wise to have your water tested for impurities; call your local extension office for more information. If your water is found to be substandard or undesirable contact me by email for information on water filtration systems.