

Water and life

Water sustains all forms of life, including human life. The Chinese character "sea" consists of three parts, namely water, man and mother. In other words, sea is the mother of mankind. Although water is all around us, it is one of the most mysterious substances on this planet. Scientists are still discovering amazing facts about water.

Most substances are lightest in the gas state, heavier in the liquid state and heaviest in solid form. However, water gets lighter in its solid form than in its liquid form, that's why ice floats in water. If water didn't have this mysterious property, lakes and ponds would freeze from the bottom up in the cold of winter, killing all living things within them. One can appreciate the great wisdom of the Creator in the preservation of life. Water not only sustains life, but also protects it.

More than 70% of our body weight is water; that translates into about 10 gallons of water for a person of 120 lbs. It is very important to have a good understanding of water and to drink the right kind of water. Water is a strong solvent; therefore, it carries many invisible ingredients: minerals, oxygen, nutrients, waste products, pollutants, etc. Sea water is salty because, through eons, it dissolved minerals and salts from the mountains and carried them down stream to the ocean. Inside the human body, blood (90% of which is water) circulates throughout the body distributing nutrients and oxygen, and collecting wastes and carbon dioxides, delivering them to the disposal organs. If water was not a strong solvent, it could not perform these functions.

Water molecule is H₂O; that is two hydrogen atoms and one oxygen atom stuck together. The shape of the water molecule is like a Mickey Mouse face; the head is oxygen and the two ears are hydrogen¹). Since oxygen is electrically negative and hydrogen is positive, the water molecule is electrically polarized. For this reason, a water molecule cannot exist independently; it must combine with other water molecules to form a five- or six-sided structure called a water cluster²). In lower temperatures, most of the structures are hexagonal; therefore, snow flakes are hexagonal.

In distilled water, at room temperature, one out of 10 million (1 in 10⁷) water molecules is ionized. When a water molecule is ionized, it is split into hydrogen ions H⁺ and hydroxyl ions OH⁻. Neutral water means that the number of hydrogen ions equals the number of hydroxyl ions in a container. The number is 10⁻⁷ times the entire number of water molecules in that container (that number we will call N). We abbreviate this by saying that the water has a pH value of 7).

Acid water has a larger number of hydrogen ions than that of hydroxyl ions. For example, the number of hydrogen ions in acid water, with a pH value of 4, is 10⁻⁴ times N, and that of hydroxyl ion is 10⁻¹⁰ times N. The law of nature is such that the exponents must add up to 14 (4+10). The

number of hydrogen ions in alkaline water, with a pH value of 9, is 10^{-9} times N, and that of hydroxyl ion is 10^{-5} times N. Note that 10^{-5} is larger than 10^{-9} by 10,000 times and, again, $5+9$ is 14. Because the exponents must add up to 14, pH value of 7 is considered neutral. Since the value of pOH is 14 minus the value of pH, we don't measure nor mention its value; it will be known once the pH value is known. For that reason, there are only pH meters and no pOH measuring instruments³).

Since alkaline water has more OH-s than H+s, there are more oxygen atoms in it than in neutral water; that's why alkaline water is sometimes called oxygen rich water. In the same manner, acid water is oxygen deficient water. An interesting trivial fact is that there are approximately 1025 H₂O molecules in a 10 ounce glass of water. If that water has a pH value of 10, there are approximately 10²¹ hydroxyl ions (OH⁻) and approximately 10¹⁵ hydrogen ions (H⁺). The number of hydrogen ions is one millionth of that of hydroxyl ions, which is negligible.

It is this abundant amount of hydroxyl ions that neutralizes acid hydrogen ions in our body to reduce the accumulated acid wastes, thus reversing the aging process.

1) Emiliani, Cesare - The Scientific Companion, John Wiley & Sons, 1988

2) Aihara, Herman - Acid & Alkaline, George Ohwawa Macrobiotic Foundation, Oroville, CA, 1986

3) Whang, Sang - Reverse Aging, JSP Publishing, Miami, FL 1990