

# **Water Wisdom**

## **1. Value**

- It is the most common molecule in human body and plays a role in nearly every chemical reaction in the body.
- It aids in digestion/absorption of food and regulates body temperature.
- It carries nutrients to cells and is the primary source of toxin removal.
- It cushions joints and protects tissues and organs.
- It is 75% of body weight, 80% of brain, 90% of blood, 96% of liver
- The liver uses water to metabolize fat thus the more water available to the body the more fat is shed.

## **2. Dehydration**

- Water is lost to the air every time we exhale at the rate of approximately 2 cups/day, it evaporates through our skin at the rate of approximately 2 cups/day, and it passes in our urine at the rate of approximately 5-6 cups/day.
- In the course of an average day without exercise we lose 8-10 cups of water.
- Coffee, tea, and soda contain caffeine which has a diuretic effect and increases the loss of fluids through urination.
- A drop as little as 5% in body fluids cause 25-30% loss of energy.
- It is established that 80% of our population suffers energy loss due to minor dehydration.
- The kidneys filter 400 gallons of fluid each day, if there is not enough water, they recycle the water too much and deposits may be left behind which form into stones. The kidney stone is made up of the same minerals as found in tap or bottled water.
- In 37% of Americans, the thirst mechanism is so weak that it is often mistaken for hunger.
- Even mild dehydration may slow down metabolism as much as 3%.
- The function of every cell is controlled by electrical signals sent through the nervous system. Our nerves become electrical waterways and if the fluid thickens due to dehydration or contamination, the signals get distorted leading to ADD, chronic fatigue syndrome, anxiety, depression and Alzheimer's.

#### **Mild dehydration symptoms:**

- because your kidneys will begin to conserve water, your urine will become concentrated and will be amber colored as opposed to a normal light-tinted yellow color.
- constipation and/or bloating may be noticed
- dry skin, mucous membranes, and lips
- thirst, often extreme
- flushed face

#### **Moderate dehydration symptoms:**

- fatigue
- sunken eyes or sunken fontanel (soft spot on head) in infants
- lack of tears in crying infant
- "doughy" skin that doesn't bounce back when pinched
- dizziness / vertigo / lightheadedness
- up to 30% decline in physical labor capacity, muscle cramping
- headache
- cold hands and feet
- problems concentrating
- drowsiness
- fainting
- impatience and extreme irritability

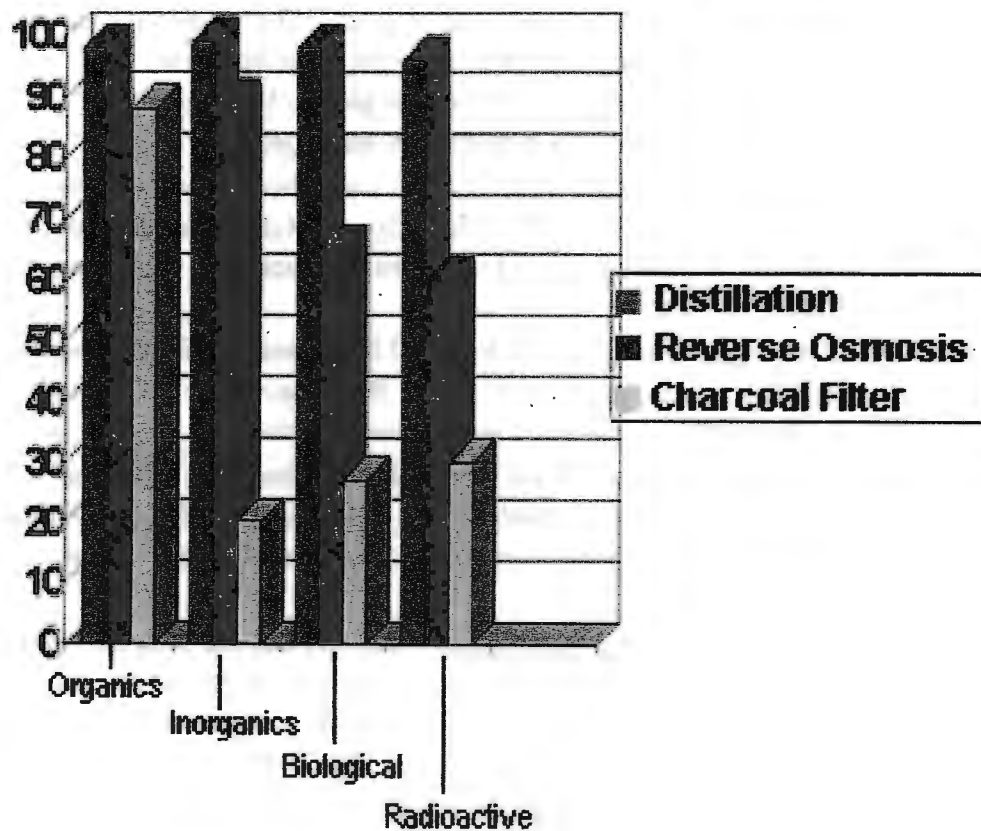
### **3. Water Today**

- Today it is common to find trace amounts of nitrates, pesticides, heavy metals, radioactive compounds, petrochemicals and parasites coming from the local municipal water supply.
- The toxins and free radicals in these waters are made significantly more toxic to humans by the addition of chlorine.
- Chlorine is a compound mandated by the public health department.
- Chlorine aggravates the respiratory system, hardens arteries, destroys protein, causes free radicals and genetic mutation.
- 24 of the major cities in the US contain traces of over the counter pharmaceutical drugs in water.

### Typical Contaminants Are:

- **Organic:** Antibiotics, Fertilizers, Pesticides, Insecticides, Herbicides, Solvents, Growth Stimulants etc.
- **Inorganic:** Hardness Minerals, Phosphorus, Asbestos, Selenium, Sodium, Fluorine, Iron, Lead, Mercury, Barium, Nitrates, Copper, Lead, Chlorine, Arsenic.
- **Biological:** Organisms, Bacteria, Viruses, Parasites like Cryptosporidium, Chlamydia, Giardia Cysts.
- **Radioactive:** Radium, Strontium 90, Plutonium.

### Water Purification Comparison



#### 4. Purification of Water

Filtration- membrane pore size is measured from 1-50,000 angstroms

"particle filtration filters 10,000 angstroms or larger

"microfiltration filters 500 angstroms or larger (fiber, ceramic)

"ultrafiltration filters 30 angstroms or larger

"nanofiltration filters 10 angstroms or larger

"hyperfiltration filters 1 angstrom or larger

##### A. Bottled Water

- There are no government standards on bottled water.
- The FDA has less rigorous testing on bottled water than EPA does on tap water.
- In America \$20,000 is spent every minute of every day on bottled water.
- Meeting consumer demand for water bottles in the United States requires more than 15 million barrels of oil each year for manufacturing, transport, and disposal. That is enough oil to fuel approximately 100,000 cars for an entire year.
- According to Congress, 30 million plastic bottles enter American landfills and incinerators each year.
- The most common plastic used in water bottle manufacturing is PET, an environmentally unfriendly substance that actually requires 17.5 kilograms of water to produce only 1 kilogram of PET.
- A four-year study by the National Resources Defense Council (NRDC), released in 1999, found that one-fifth of the sampled bottled waters contained known neurotoxins and carcinogens.
- German researchers have found that the longer a bottle of water sits on a store shelf or in a household pantry, the higher the dose of antimony it contains, a potentially toxic trace element.
- According to *The Green Guide*, #1 (PET) bottles may be safe for one-time use, but reuse should be avoided because studies indicate they may leach DEHP—another probable human carcinogen—when they are in less than perfect condition.
- Plastic bottles which have a #3, 6 or 7 on the bottom should be avoided due to the presence of BPA (an endocrine disruptor) and probable carcinogens.

## **B. Carbon/Activated Charcoal**

- It is the oldest filtration method and universal absorbent dating back to Egyptians.
- It uses hyper filtration which removes microorganisms.
- It removes chlorine, pesticides and VOC which are volatile organic chemicals.
- Dissolved organic and inorganic substances are removed through absorption.
- Coconut shell carbon is a renewable resource.
- One pound of carbon media equals 125 acres.
- The micron rating of a filter determines the size of particles that can be removed mechanically by the filter. Micron ratings range from 50 to .5, with the smallest micron ratings being the most effective. A water contaminant that measures at .5 microns is approximately 40 times smaller than what could be seen with the naked eye.
- The greater the amount of carbon the more effective it is.
- The slower the flow rate the more exposure to carbon and the better filtration.
- Carbon filters do need to be replaced as they can become breeding ground for decaying organic matter.
- Activated charcoal (GAC) is carbon that has been treated with oxygen, providing holes that allow impurities to pass through and be exposed to the carbon. The longer the exposure to the carbon, the greater the amount of impurities removed.
- Carbon block filters (CBR) allow all water to contact carbon thus extending and increasing the amount of exposure to carbon.
- Carbon deteriorates in the presence of hot water.
- KDF is a media used in shower filters made of granulated copper and zinc. It performs more efficiently in hot water and is bacteriostatic.
- 600% more contaminants can be absorbed into your body in a ten-minute shower than in all the water consumed in a day because the hot water opens the pores and the chlorine vapors are inhaled.

### **C. Reverse Osmosis**

- It forces water under high pressure through a synthetic semi permeable membrane reducing inorganic minerals.
- It is affected by water pressure, temperature and PH.
- It usually employs more than one filter. The first one, usually a mechanical filter (ceramic), traps larger particles that would clog the RO membrane. The second one is the activated carbon filter.
- It removes most heavy metals, inorganic compounds and dissolved mineral salts.
- Leaves water 90 percent free of mineral and biological contaminants
- The use of an ultraviolet light as another step kills most of the small amount of harmful bacteria, viruses, cysts and worms that can pass through filtration.
- The quality of the membrane and the pressure of the water help determine how effectively the water separates the contaminants.

### **D. Distilled**

- It simulates nature's purification process which is called the Hydrologic Cycle.
- Water is separated from contaminants by evaporation, condensation and precipitation and left free of dissolved minerals.
- It removes bacteria, minerals, trace amounts of metals, organic minerals, inorganic minerals and nitrates.
- If inorganic minerals (and other substances like chlorine, heavy metals, bacteria, etc.) are removed from tap water, by converting it into pure distilled water, the result is improved absorption of all nutrients, including minerals, and improved elimination of wastes at the cellular level.
- The higher the inorganic content is in a per million count, the less effectively water transmits organic minerals to tissue sites.
- Organic minerals, derived from plants, have an ionic bond which can be broken down by the body and are seen by the body as nutrients.
- Inorganic minerals, derived from rocks/volcanoes, have a covalent bond which can't be broken by the body and are seen by the body as toxins as opposed to nutrients.
- A mineral like iron for example can be both organic and inorganic.

## 5. Enhancement of Water

### A. Water Ionizer

- It measures and affects the acidity/alkalinity of water
- It measures and affects the ionization or ORP (oxidation reduction potential)
- The ORP is the most important feature of the ionizer because this neutralizes free radicals. The higher the ORP the more likely to engage in a chemical reaction that neutralizes a positively charged free radical.
- A negatively charged molecule is a reducing agent and can donate electrons to reduce the charge of what it interacts with. It neutralizes free radicals and stops them from damaging tissues.
- Vitamin C,E, Alpha Lipoic Acid, and a vegetable rich diet are electron donors. Vegetable juice has a very high ORP.
- A positively charged molecule is an oxidizing agent and pulls electrons away.
- Free radicals are positively charged and are among the most damaging molecules in the body. They are highly unstable, electron deficient and a principal cause of disease.
- A high ORP can encourage certain friendly anaerobic micro flora which grow at a similar ORP in the intestines while it discourages other unfriendly anaerobic micro flora which grow at a different ORP.
- When it comes to the body an alkalizing activity is balanced equally by an acidic activity. For example, the pancreas creates an alkalizing juice to neutralize acidic food in the small intestines, and the byproduct is HCL, which is acidic. Interestingly enough HCL is the main ingredient in antihistamines which make us drowsy. This is why we are tired after an acidic meal.
- Alkalizing from outside the body results in a net gain of alkalinity for the overall body.
- When alkalizing water enters the stomach it produces a greater level of acid to bring the Ph to where the stomach wants it to be. The byproduct of this HCL creation is bicarbonates. They enter the bloodstream and neutralize acidic waste.
- There is a relationship between aging and accumulation of acids.
- Tap or spring water has dissolved minerals like calcium, potassium and magnesium which allow the water to be split by an electrical current. Distilled water can not be ionized or split.

## B. Reprogramming

- Water is changeable; it is able to absorb, transfer and release information in its structure. Therefore, even after physical purification, water still often carries unhealthy electromagnetic frequencies from poisonous substances.
- A magnetic field produces the effect of erasing the frequency memory on the passing water and improving the oxygen utilization of the water.
- Water that is polluted has molecules that are usually chaotic, or disorganized. This strong field created by the magnet also makes the water molecules coherent, more organized, and geared to healthier frequencies.
- Far-infrared energy is sometimes called "the wavelength (or frequency) of life", which causes the water molecules in the body to vibrate. This vibration can also be called energy, or "life force", which can give us more vitality. When the water flow is channeled through natural far-infrared honeycomb shaped ceramic materials, the water is imprinted with healing, far-infrared frequencies along with new shape patterns.

### Hippocrates Health Institute

- Supports the use of either distillation or organized molecule water systems.
- These are the only two that universally remove the pharmaceutical drug residues that have been found in every water system that has been tested for that.
- In addition, it removes the ethol chemical M.T.B.E., a well known carcinogen which is an additive to gasoline globally. This deadly chemical has been found in every water system that has been tested.
- Ionization is a post cleaning process, but as of now, there is no free-standing ionizer that removes serious chemicals and pollutants from public water sources.
- Ionizers can help to soften the hydrogen/oxygen (water) so that it is more hydrating to the body cells.

#### Additional Resources:

- Living Water by Olaf Alexandersson
- Your Body's Many Cries for Water: You Are Not Sick, You Are Thirsty! by Dr. Batmanghelidj
- The Hidden Messages in Water by Dr. Masaru Emoto is an eye-opening theory showing how water is deeply connected to people's individual and collective consciousness. It describes the ability of water to absorb, hold, and even retransmit human feelings and emotions. "...water is the mirror reflecting our level of consciousness."
- Inside the Bottle by Tony Clarke