

Structured water: the basis of vital life

Introduction

The purpose of this paper is to describe in general terms the relationship between water structure and magnetism and the interaction of energised or structured water with the function of living cells.

Resonate Research Pty Ltd has developed devices to condition water into a cohesive, living water structure that has life-affirming effects on soil, biology, plants, animals and humans. The devices use magnetism to energise and activate the water into a natural structure that is aligned to the health of living cells (coherence).

Water and biological coherence are fundamental to our energy systems and to optimise health, vitality and longevity. The science of water structure provides insight to the liquid crystalline molecular fabric that interconnects all parts and processes within living things. This living matrix gives a substantial basis for the term *holistic* and a scientific basis for alternative therapies for humans and animals (including homeopathy where the structured water is used as a base or carrier for other compounds or elements).

Water structure and energy (including cell polarity) are more critical to life function than the natural chemical constituents of water. The living world is in equal partnership with biology, the concentration of negative hydrogen ions (H⁻), and water.

What is Structured Water

Restructured water is water that has been activated or energised to permanently hold a negative voltage (- millivolts). This negative charge (anti-clockwise spin) is also known as *female*, *yin* or *anti-matter*. Water structuring occurs in nature when water moves in a natural flow of vortexes (left and right turning or anti-clockwise and clockwise turning). The *Yin* energy in structured (-) cell water will ignite the *yang* (male, fire or +) energy in cell metabolism for regulation and healing.

Most wild (pristine) rivers and some springs produce structured water in the presence of sunlight energy and natural biological conditions. Electrical stormwater is in an energised, negative voltage form before it hits the ground, air particles (eg, smog) or a surface. Some spring waters are also energised through contact with **magnetic forces** in the groundwater rock strata.

Most water that humans and domestic animals now utilise daily is toxic. This toxic water includes rainwater that is exposed to air pollution, soil water contamination (soil water for plants), and all the captured water in dams, tanks and pipes. The limited availability of clean, structured water is now a major limitation to a healthy life.

The technologies that restore and energise water are designed to enable water to *dance* a vortex frequency that frees or neutralises the water of its past, **vibrational memory** (ie. exposure to human made toxins in the soil, water bodies and air) and reorganise the molecular structure of the toxins into *life giving* molecules or elements. That is, the water returns to its natural, structured state where it is free of its toxic *load*. For example, urban water that is restructured and energised will

lose the toxic effects of fluoride and chlorine (through a process of water detoxification and change to a negative voltage), as the molecular structures of these compounds are changed by the restored water vibrations. Similarly, water in human-made structures, such as dams, tanks, pipes, ponds, etc. can be restructured and energised through technology that replicates water cycling (vortex) processes in nature.

Structured (coherent) water is more-dense and with smaller clusters of the water molecule. For example, it takes on a different crystalline structure with a less open angle and shorter distance of the hydrogen ion to the oxygen ion. In this state, water takes on photons of light and releases more oxygen (negatively charged) and negative hydrogen to living matter (eg. cells). For example, the consumption of structured or energised water will activate cell water, replace toxins from cells (ie. structured water cannot attach or hold onto toxins) and increase cell potential for life.

Background Science

Conventional science says that water is just H₂O and can exist in 3 phases or states, ie. liquid, gas (water vapour) and solid (ice). Recent research into the science of structured water at a cellular level by Prof. Gerald Pollack, says that water can be in a fourth phase or state and it is H₃O₂. This fourth phase is described by Pollack as exclusion zone (EZ) water because this water excludes things profoundly, including small molecules (eg. toxins). The science of the EZ water is discussed in detail in Pollack's book titled *The Fourth Phase of Water*. This water structure also occurs in nature with any form of flowing water in a natural state, and therefore excludes water in manmade pipes. This natural flowing water has current and includes ocean water, rain from electrical storms, deep waters (groundwater or deep spring water), pristine river water, and is often referred to as **bulk structured water**. This *living* water has a negative voltage (mV)/charge and therefore **all cell water has a negative voltage** because it is in a living cell (ie. a cell that has negative charge and therefore current). Pollack believes that **living cell water** is H₃O₂ structured water.

This H₃O₂ water is biologically vital or life-affirming and this notion has been the centre piece of scientific study by Dr. Albert Szent-Gyorgyi, Boris Derjaguin (physical chemistry of colloids and surfaces), Dr. Martin Chaplin (structure, function, behaviour and properties of liquid water), Dr. Mae-Wan Ho (states of water), Gerald Pollack (EZ water) and many others associated with water science including Viktor Schauberger (the vortex science) and Dr Richard Freymen (negative charge of the earth).

This water structure science gave rise to many terms associated with the **fourth phase of water**, including living water, living energies, structured water, energised water, activated water, exclusion zone (EZ) water, etc. These terms acknowledge the amazing anomalous properties of water, including how negative voltage water is the basis of healing. Dr. Albert Szent-Gyorgyi famously said that **life is water dancing to the tune of molecules**.

However, regardless of this new insight into the science of structured water, there is little attention given to water science in the mainstream of public and private science. The whole idea that H₃O₂ water or structured water is not bulk water (H₂O) or that it can heal, have homeopathic properties, and some form of memory is beyond the belief system of mainstream science.

Some people on Earth have access to structured water all the time through glacial melt water, the so-called *sacred or healing* spring waters and pristine river water. This paper describes a way of making your own structured water and enjoying the benefits that natural water brings to cell life and therefore health.

Magnetism Effects on Cell Water

The most common approach to energise structured water for health and healing qualities is through magnetism. The standout research on the link between magnetism and health was undertaken by Albert Ray Davis (*Magnetism and its Effects on the Living System: 1974*) and Dr. Robert O Becker (*The Body Electric: Electromagnetism and the Foundation of Life*). This research jointly confirmed some critical aspects of the application of magnetism for biological function, ie. separateness of the magnetic pole effects on living systems. They found that the **positive pole** (South on the magnet) is the signal of a stress or injury in the body and that the **negative pole** (North on the magnet) governed healing and normalisation of body functions.

It has been known for some time that the Earth has a negative charge and the atmosphere (space above the ground) has a positive charge (magnetic energy from the sun). Humans release excess positive charge into the Earth through physical contact (bare feet or hands) with the Earth (eg. soil or sand on the beach, etc.) or with plants (eg. trees). This process is natural and is called *Earthing or Grounding*.

This scientific work, particularly by Davis also found that:

- The positive charge is produced by a clockwise spin in water and the negative charge is an anti-clockwise spin
- Positive charge produces oxidation, acidification, excitation, activation and stress.
- Negative charge produces reduction (opposite of oxidation), alkalinity, calmness, relaxation and anti-stress.
- The pineal gland needs to absorb the Earth's negative charge to release melatonin for healthy sleep. Melatonin is enhanced by the sun's red light in the early morning and diminished by the sun's blue light in the afternoon.
- Most electro-magnetic energy in the home (TV, computers, and other electrical appliances) emits positive magnetic signals that diminish body functions, eg. melatonin, etc.
- The spin of electrons in the body is anti-clockwise with a negative charge and the body water is predominately negative charge and therefore the body electricity is negatively charged.
- The flow of blood through the body produces negative magnetic energy. The inhaled oxygen carries the Earth's negative magnetic energy to cells.
- The body's negative magnetic energy maintains the buffering system of the cell water pH in a normal and slightly alkaline state. Therefore, acidic conditions in the body's cell water promote mental and physical degradation or deprivation of body functions (eg. inflammation).

This research confirmed that the excessive build-up of **positive charge** in the body electricity was detrimental to health and that exposure to a **negative charge promoted healing and general**

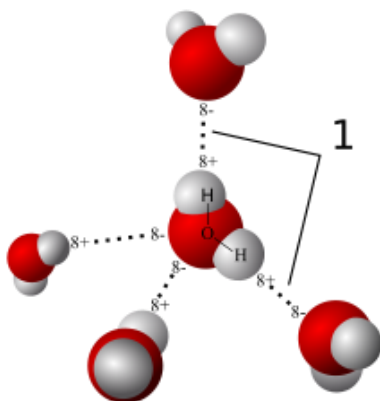
wellbeing. This research has enormous implications for the quality and charge of water consumed for body functions.

However, this research by Davis only raised more questions about the links between magnetism and water in living cells. Since the 1990's the major focus has been on the structure of water and why water is a fundamental, life-affirming molecule. In 2015 Dr. Jerry Tennant published the 3rd Edition of his book **Healing is Voltage** and his claim that the on/off switch for cancer is the polarity of body water. In previous publications of his book, Jerry described how new cells are made when the cell charge is -50mV, and when cell water charge falls to zero mV or into the positive mV charge zone then disease will occur. Clearly, the negative charge on oxygen has a major role in sustaining high negative charge at a cellular level and the idea of flooding the body with oxygen is a major strategy in disease prevention. For example, in the absence of oxygen, the blood glucose undergoes fermentation to lactic acid and the cell pH then drops to 7 (or zero mV) and finally down to 6.5 or +30mV. In this acidic zone the DNA loses its positive and negative radical sequence. In addition, the amino acids entering the cell completely loses its control mechanism. Chromosomal aberrations may occur, followed by a cascade of cellular degradation (toxicity), including cancer feeding on glucose. Therefore, it is critical to sustain cellular charge in a high negative (-) mV zone with fresh, natural foods and negatively charged water.

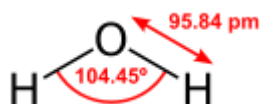
It is likely **that water extracts or attracts from nature the elements or energies (eg. sunlight energy: visible wavebands of red, green, yellow and blue) that have an affinity with its structure** (eg. negative Hydrogen ions: H⁻). It is already known that different waters around the world have qualities that are claimed to be healing and this healing capacity may be linked to water structure. The discussion below is about the probable link between water structure and health.

Water Structure

It is commonly known that water is a simple compound of H₂O and it is the most abundant substance on Earth. Water is fundamental to life and exists in the atmosphere (as vapour) and deep into the Earth's mantle. Most living things comprise at least 70% water by weight (albeit that 99% of human molecules are water molecules), and it readily bonds with other elements through its unique electric dipole in which the positive (+) and negative (-) charges are separated. The oxygen carries the negative charge and the hydrogen carries the positive charge. Hydrogen can bond with other electro-negative atoms, such as oxygen and nitrogen. Therefore, water has such a wide diversity of structures and possibilities in nature.



While water is the most studied substance on Earth, it is remarkable that the science behind its behaviour and function is so poorly understood. The small size of its molecule belies the complexity of its actions and its capabilities. Liquid water's unique properties and nature fit ideally into the requirements for life as no other molecule. An important feature of the structure of water is its capability to change the angle of the hydrogen ion to the oxygen and the distance of the hydrogen ion to the oxygen ion.



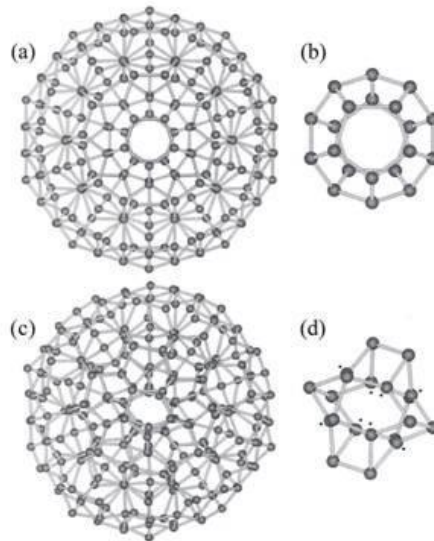
Water structures

The late Wilse Robinson and his group in Texas Tech University Lubbock in the United States revived the *two-state's* theory of water in the 1980s. By the early 1990s, they could show that the experimental measurements of the density of water over the range of -30 C in the super-cooled region to 70⁰ C could be accurately fitted to the *two-state's* model. They envisaged low-density regions in the liquid with intermolecular hydrogen bonds.

Liquid water is best described as an intimate mixture of two liquid phases: one that has three-dimensional hydrogen bonding, an open and less dense structure, lower hydration capability; and one that consists mostly of hydrogen-bonded chains, with a denser, more compact structure and **greater hydration capability** for all life forms.

X-ray diffraction data on liquid water, and other structural data on different forms of ice, indicated that high-density and low-density water (HDW and LDW) differ in bonding in larger water structures. At ordinary temperatures, liquid water consists of rapidly inter-converting LDW clusters where the second neighbour intermolecular O---O distance is 0.45 nm, and compact, HDW clusters where the corresponding O---O distance is 0.35 nm. In super-cooled water, LDW clusters predominate, and hence its volume shrinks when heated, as more and more HDW clusters form until 4⁰ C, when practically all the clusters are HDW, and the water is at its maximum density.

Water can have a low density and a high-density structure and is illustrated by Chaplin who developed a 280-molecule icosahedrons model that measures 3nm in diameter in its fully expanded form. The beauty of the model is that it can convert between a low-density fully expanded structure (ES) and a high-density collapsed structure (CS) without hydrogen bonds breaking; they only need to bend, with bond strengths about one percent smaller in CS.



Chaplin's two-states model of highly ordered icosahedral network that interconverts between the fully expanded low-density form (a) and the collapsed high-density form (c); with their respective central 20 molecules (dodecahedral) units (b) and (d).

Singularly, water ionizes and allows easy proton exchange between molecules, so contributing to the **richness of the ionic interactions in biology.**

Water flow

The **dynamics of water flow energy and vortex geometry are important factors in the design of water conditioning devices** for a wide range of applications. Water flows or behaves in a predictable vortex pattern based on its molecular structure and environmental conditions, ie. space dimensions in a river or pipe and the effects of external energies such as magnetism and gravity. For example, water current charge and direction can be influenced by the magnitude of magnetic strength.

The water vortex possesses extremely high and diverse levels of energy that can be utilised for an abundance of practical applications. The energy potential of vortices is possibly best exhibited by the most familiar kind of vortex, a tornado. The sheer forces caused by the rapid air velocity at the vortical apex of the tornado are evidence of the vast amounts of energy a vortex can generate. The same principle is true for vortices in a body of water. The energy of the vortices can be used for several applications by converting the mechanical energy of the vortices to other kinetic energy, such as electrical energy. That is, moving water creates energy or charge.



Water flow also has structure or vortex geometry. The vorticity in a vortex depends on how the speed of the particles varies as the distance from the axis, ie. particle speed is inversely proportional to the distance from the axis.

The fields (eg. magnetic fields) that operate to organise atomic structure are the products of spin vortices: it is the spinning dynamic that creates polarity in all its aspects (Yurth)

Water Science with Gerald Pollack

Dr. Gerald Pollack has undertaken much of the fundamental science on structured water and his findings and ideas can be summarised as follows:

- Cell (EZ) water has a fourth phase called exclusion zone (EZ) and is structured as H_3O_2
- EZ (**structured**) water has a negative voltage and is the water in all cells
- Structured water occurs in natural flowing waters and has a blue or green tint (fluorescence)
- Structured water is good for your health and the function of cells
- EZ and other bulk structured water has a spectral waveband peak in the 270 nanometers or UV region. The more water absorbs this light the higher the EZ presence in water. This highlights the importance of cellular exposure to sunlight in health (sunlight energy that is absorbed or penetrates inside the body to the EZ water in cells, and builds negative voltage in the cells)
- Structured water has no resistance. This accounts for rainwater falling at 10 times the speed of any object in air, and that structured water in a pipe has little or no resistance
- EZ water is the main component of blood and therefore blood can move effortlessly through tiny capillaries with a diameter smaller than the red blood cells, due to the EZ water having no resistance. The cardiovascular system also is assisted by radiant energy from the sun and this assists with blood flow that is 95% EZ water
- EZ water is denser than H_2O
- All proteins have a sheath of EZ water around them
- Cell health is a function of the presence and voltage capacity of the EZ water
- Structured water is more viscose. For example, egg white is highly viscose due to the presence of EZ water.
- The refractive index of EZ water is at least 10% higher than H_2O , ie. capacity to bend light
- The human body is constantly trying to discharge positive voltage/charge through urine, faeces, perspiration, physical contact of human skin with the Earth or vegetation, etc. and maintaining high negative voltage in cells. The human body can expend up to 50% of energy to convert positive charge water (all urban drinking water) into a negative charge for cells. Therefore, if you drink structured (negative charge) water then you have more energy available for cell regulation and healing. Cell will change polarity to positive charge when the body is overwhelmed with positive charge from de-structured water, non-organic and GMO food, low sunlight exposure, low contact with nature, and inadequate emotions of love, joy and hope in your life.
- Plants constantly have their roots in a negatively charged soil and this provides the negative (-) charge to the water in vegetable and fruit. This water stays negative up to 60 hours from harvest when the food is detached from its living system. The negative charge in the soil is sustained by structured water, soil carbon and microbial activity, and this charge is diminished through chemical fertilisers
- The best sources of structured waters are glacial water, deep groundwater, natural springs, pristine river water and rainwater (in unpolluted air)
- There is no connection between EZ water and alkaline water in terms of cell health.

Further information about Dr. Gerald Pollack's science of EZ water can be found on YouTube.

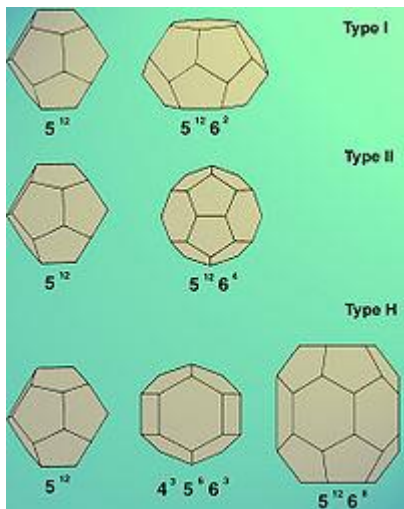
ORMES and Clathrate hydrates

There is good evidence to conclude that natural, living water in a H_3O_2 (EZ) and structured form will form with elements that are in cohesion with this water structure and exclude materials that are not in cohesion. It is likely that structured water is in harmony with ORMES and clathrate hydrates and these elements/ materials are part of the life-affirming properties of structured, cell water.

In the 80's and 90's David Hudson coined the acronym ORMES. This is a name for what he defined as a new state of matter. ORMES is an acronym for **Orbitally Rearranged Monatomic Elements**. The term ORMUS is also used to describe these elements. Hudson demonstrated, through his very detailed experiments and multiple testing, that at least 13 of the transition elements (Co, Ni, Cu, Ru, Rh, Pd, Ag, Re, Os, Ir, Pt, Au, Hg.), which are in the centre of the periodic table, can exist in a heretofore-unidentified state of matter. He claimed that this occurs when they are in a monatomic state.

He found that in this state they are chemically inert. In conventional chemistry, it is believed that all chemical reactions between elements take place because of the action of their outer electrons. David Hudson deduced that when these transition elements exist in a monatomic state and are not sharing or swapping their electrons with their near neighbours in a material structure like a crystal lattice, they become ORMES elements. At this stage the outer electrons of these elements form **cooper pairs** (a cooper pair is a quantum effect: or a pair of electrons bound together at low temperatures in a certain manner) and become **whirlwinds of light rotating at super speeds** around the atom. Again, because of this change they lose all conventional chemical reactivity. Another important change that takes place is the whirling electrons that have become light, set up a Meissner antimagnetic field. This antimagnetic field causes a levitating force against the earth's magnetic field and the element effectively loses 4/9's of its weight. Hudson says, at this same time the nucleus becomes high spin and shrinks to about 1/3rd of its original size and distorts to an oblong shape. A single atom in this state should be a very small and chemically inert atomic gas.

Clathrate hydrates (or *gas clathrates, gas hydrates, clathrates, hydrates, etc.*) are crystalline water-based solids physically resembling ice, in which small non-polar molecules (typically gases) or polar molecules with large hydrophobic moieties are trapped inside **cages** of hydrogen bonded water molecules. In other words, clathrate hydrates are clathrate compounds in which the **host molecule is water and the guest molecule is typically a gas or liquid**. Without the support of the trapped molecules, the lattice structure of hydrate clathrates would collapse into conventional ice crystal structure or liquid water. Most low molecular weight gases (including O_2 , H_2 , N_2 , CO_2 , CH_4 , H_2S , Ar, Kr, and Xe), as well as some higher hydrocarbons and Freon's, will form hydrates at suitable temperatures and pressures. Clathrate hydrates are not chemical compounds as the sequestered molecules are never bonded to the lattice. The formation and decomposition of clathrate hydrates are first order phase transitions, not chemical reactions. Their detailed formation and decomposition mechanisms on a molecular level are still not well understood.



Cages building the different gas hydrate structures.

Gas hydrates usually form two crystallographic cubic structures – structure (Type) I and structure (Type) II of space groups and respectively. Seldom, a third hexagonal structure of space group may be observed (Type H). The unit cell of Type I consists of 46 water molecules, forming two types of cages – small and large. The small cages in the unit cell are two against six large ones. The small cage has the shape of a pentagonal dodecahedron (5¹²) and the large one that of a tetradecahedron, specifically a hexagonal truncated trapezohedron (5¹²6²), together forming a Weaire-Phelan structure. Typical guests forming Type I hydrates are CO₂ in carbon dioxide clathrate and CH₄ in methane clathrate.

Structured water is an electron (negative charged) enhanced state, compared with the non-structured (positive charged) water that most people drink from an urban tap. Structured water has a far greater capacity to activate light photons, and increase the biological and chemical activity of water.

Quantum magnetism

The MEA water devices have non-classical, geometric arrangements that are in harmony with the movement or dance of water. For example, physicists have observed a weird phenomenon called quantum magnetism, which describes the behaviour of single atoms as they act like tiny bar magnets.

Quantum magnetism is different from classical magnetism because individual atoms have a quality called spin, which is quantised, or in discrete states (usually called up or down). The focus is now on atoms' spin, as this is what makes magnets magnetic with all the spins of the atoms in a magnet pointed the same way.

This opens possibilities for increasing the number of atoms in a lattice, and even creating two-dimensional, grid-like arrangements of atoms, and possibly triangular lattices as well.

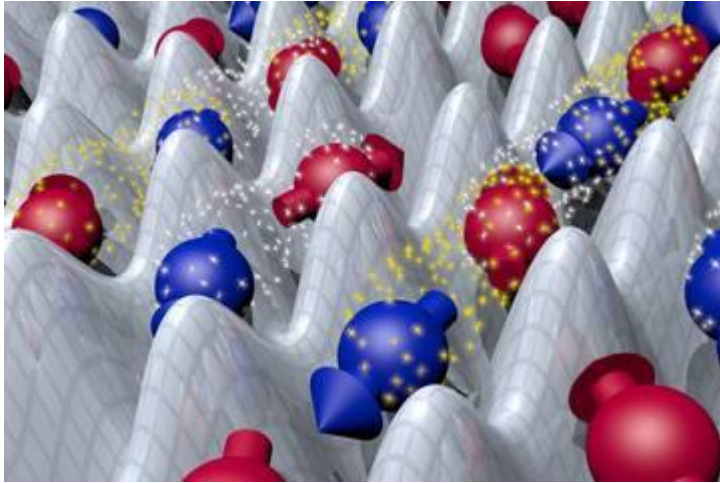


Illustration of ultra-cold fermionic atoms in an optical lattice potential. The atoms tended to tunnel into wells with others that had opposite spins and a line of atoms spontaneously organised with the spins in a non-random pattern, revealing a signature of quantum magnetism. CREDIT: Image courtesy of Thomas Uehlinger, ETH Zurich.

One debate among experts is whether at larger scales, the spontaneous ordering of atoms would happen in the same way. A random pattern would mean that in a block of iron atoms, for instance, one is just as likely to see a spin up or down in any direction. The spin states are in what is called a *spin liquid* or a mishmash of states. It could be that atoms spontaneously arrange themselves at larger scales under changed or non-classical conditions.

Such lattices could comprise configurations where the potential wells connect to three others, rather than two or four. Experiments have shown that atoms tend to jump to potential wells where the spins are opposite; but if the wells are arranged so that the atom can jump to two other atoms, it can't *choose* which well to go to as one of the two atoms will always be in the same spin state.

The question is: what happens to magnetism if the classical geometry is changed? This can happen when magnets are connected in a non-classical method (eg. connected like poles that should repel). It's no longer clear if spins should be up or down. In this quantum, magnetic state, what is the effect on water structure and function?

Light and Water Capacities

There are various aspects to water structure and its polarity. When water is moving and holds a continuous vortex action then the water will hold a negative charge. It is only when water is not moving that the water polarity changes to a positive charge (usually after about 48 hours of being held in storage)

It is already known from science that light is versatile because photon energy readily converts into other forms of energy. Examples:

- incident light of one wavelength converts to another wavelength, producing fluorescence;
- light powers the vibrational energy that drives Brownian motions (*the erratic random movement of microscopic particles in a fluid, because of continuous bombardment from molecules of the surrounding medium*).

- light releases electrons in semiconductors to produce the photoelectric effect.
- light separates charge in photosynthesis.

The other aspect of water is the versatility of the spirals within water that are spirals within spirals, cascading toward infinity. When magnetic energy is arranged in a unique pattern it seems to provide a life-force order to enter these water spirals (spinning dynamic) and it may be this life-force that controls the polarity. This magnetic field shapes the water structure in a manner that holds the negative polarity indefinitely, ie. once the water embraces and holds this unique life-force energy. Ultimately, it is the negative charge in water that activates the water to support the biochemistry of water molecules and capacities of biology in water to sustain plant and animal life.

Drinking Water

Pure, natural, living water is water from a pristine flowing stream, and it contains:

- a negative charge through its natural and constant vortex action
- minerals from the stream sediments and the natural environment
- a wide range of microbial activity (e. bacteria, fungi and yeast) from the natural environment (eg. plants)

Urban drinking water is never chemically pure as it is chemically altered with fluoridation, chlorination, pH balancing minerals, and is contaminated by chemicals from the land (eg. fertilisers, insecticides, herbicides, etc.). Groundwater (from springs or wells) always contains ions from a wide range of mineral ions (eg. Magnesium, Calcium, Sodium, Potassium, etc.). The positive charges of these ions are often balanced by the negative ions of carbonate/bicarbonate, and occasionally some chloride and sulphate. Groundwater in some regions contain unacceptably high concentrations of naturally-occurring toxic elements such as arsenic. It is very likely that natural waters in rivers, springs, etc. are chemically different based on the type and % of mineral and contaminant contents. Waters that contain the alkaline earth minerals, alkali metals along with carbonates and bicarbonates are generally better for human health as they provide most of the minerals that keep blood alkaline and therefore blood's capacity to carry a high saturation of oxygen (ie. between 100% to 98%). However, the human body requires Boron (from food and water) to metabolise most of these alkalising minerals and alkali metals, and particularly the fixation of Calcium, Phosphorous, Copper, Magnesium and Vitamin D for bone and muscle development, and to avoid osteoporosis.

Rain and snow are rarely exempt from contamination, because when water vapour condenses out of the atmosphere it always does so on a particle of dust which releases substances into the water, and even the purest air contains carbon dioxide which dissolves to form carbonic acid. In highly polluted atmospheres of some large cities, the impurities picked up by snow and rain are of major concern for human health. Air pollution is now the major cause of stroke in cities worldwide.

Human and Animal Body Water

The human body is equipped with a detoxification system (such as the cytochrome P450, a super family of enzymes), whose intelligent design makes it possible to degrade chemicals that did not even exist at the time in the distant past that these elaborate enzyme systems evolved. This adaptation to the environment is almost as if life is predesigned to be able to survive the burgeoning, geometrically expanding chemical onslaught of the past century.

Eventually these elaborate detoxification systems become overloaded, which naturally leads to the emergence of acute and chronic diseases. These are the chronic diseases that the conventional medical establishment often pretends do not have an environmental origin, and therefore are treated by suppressing the *symptoms of cellular poisoning* with pharmaceutical medications. This approach has resulted in humans becoming the sickest organism ever known to inhabit the Earth. However, it is possible that all healing in the future will be via structured water and in a form known as homeopathic or vibrational (frequency) healing.

Every cell in the animal and human body is designed to run at -25 to -75 millivolts (mV). The body heals by making new cells and this requires -50 to -75mV. Chronic disease occurs when voltage drops below -20mV. The quality and charge in water (polarity) are therefore critical in sustaining cell integrity.

The human and animal bodies are in resonance with the *living mathematics of nature or sacred geometry* (eg. **phi** or the golden mean ratio of 1:1.618). The human and animal bodies are self-regulating and self-healing systems that resonate in harmony with the frequencies of water. The human body is primarily water (ie. 99% of human molecules are water molecules).

Most humans and animals no longer have access to water that carries a natural, negative charge or voltage. Consequently, the body's capacity for self-regulation and healing has reduced dramatically through changes in diet and lifestyle since about the 1970's; and the increasing exposure to toxins in food, water and the air. Most people are now disconnected from the natural and negative energies of the Earth and have an over exposure to the positive electron flow from AC electricity and minerals (e. Lead, cadmium, mercury, etc.) that can accumulate in the body at toxic levels. The negative charge of the Earth is generated by solar winds, our ionosphere and lightning storms. When our skin is in direct contact with the Earth we maintain the same electrical potential as our planet.

All environmental vibration influences water structure and this vibration (either harmonious or disharmonious) can cause a change in the charge of the water. Water is influenced by energy forces on the known Earth (eg. magnetism, gravity, etc.) and possibly by many other energy forces unknown to science (ie. subtle energies). This fact has important implications for the way that water can be conditioned or treated by humans to function in a manner, in support of life functions.

Scientific data have already confirmed the following health benefits for magnetised (restructured) water:

- improved digestion
- eliminates waste and toxins
- strengthens immune response
- reduces excess blood acidity
- reduces and balances cholesterol levels (prevents arteriosclerosis)
- helps blood circulation (prevents varicose veins)

For example, red blood cells can lose their charge and stick together. This can be a precondition for heart disease. Humans are very sensitive to energy and are more sensitive to *negative or toxic* emotions (ie. aggression, fear, etc.) than positive emotions (eg. happiness, hope, empathy, etc.) That is, toxic thinking and behaviour can trigger toxic water (ie. low negative voltage) in the body.

Many studies have shown that when people feel good, their thinking becomes more creative, integrative, flexible and open to information. Also, the sharing of positive emotions helps create and sustain social relationships among people. These meaningful and secure relationships can later be tapped into as a source of strength and this helps to build a cohesive and caring environment viewed as safe and supportive. Positive thinking is also the pathway to healing, taking responsibility for your health and the health of others (duty of care), and actions that restore the health of soil, water, plants, air, animals and humans.

Devices to enable a permanent negative charge in water

Water is known to lose its negative charge in about 2 days after being removed from a flowing state and placed in storage. Therefore, scientists and others have vigorously pursued the design of water conditioning devices since about the 1930's. Devices since this time have included a range of mechanisms using physical mechanisms to vortex water, energy transfer from existing energised spring water and magnetism.

The Phi'ón MEA devices have been produced through Phi'on's research company Resonate Research Pty Ltd from 2003.

Resonate Research has developed devices to condition water into a cohesive, living water structure that has life-affirming effects on soil, biology, plants, animals and humans. The devices use magnetism to energise and activate the water into a natural structure that is aligned to the health of living cells (coherence). The devices have been designed to embed and sustain a negative (-) millivolts charge in the water passing through the device. Research and other scientific studies since about the 1930's have confirmed the beneficial effects of negatively charged water on all living systems, eg. soil, plants, animals and humans.

Examples of the devices developed by Resonate Research are illustrated below:



The devices are available in various dimensions (ie. inside diameters of ½", ¾", 1", 1 and ¼", and 2") and adapted to many applications: including bottle top, under sink, out-door sprinkler, and in-line water (and other liquids like raw milk) supply systems. Innovation Patents have been granted by the Australian Government in 2016 for the core knowledge embedded in these devices and for a range of domestic, agricultural and industrial applications.

There is one view that magnetism enables a reversal of electron flow in water. The electron flow induced into water by motion is likely a function of speed and volume. In tests these two interesting factors become varied by the physical dynamics imposed by the device design, including materials in casings, magnetic configurations and spacing, along with capacitance.

There is the dispersion of electrons by the conductive film of the water boundary at the surface and the energy generating capacity of the materials. The sum of these variables brings into question: the result of the physical resistance pressure and the free electron discharge capability along its preferred flow direction. All Phi'on inline devices (excluding the Apollo bottle top device and the Iris under-sink/shower device) take on a positive (+) and negative(-) end and a negative charge in the water can only be achieved from one input end that needs to be determined by Phi'on by testing water flow in the device. The devices than labelled to show the water input end.

If the escape capacity of electrons along this flow falls short, then the system accumulates a critical charge and then fires it back in the reverse direction until the system attains a new equilibrium and stability (coherence). This coherence would be rapid due to the instantaneous capacitance discharge.

Copper is the best metal to utilise for the water flow pipe (inner) due to its high electrical conductivity and high thermal conductivity. This is because, resistivity to electron transport in metals at room temperature originates primarily from the scattering of electrons on thermal vibrations of the lattice, which are relatively weak in a soft metal like copper. Also, copper does not react with water. However, alloys tend to *manifest as couples* and will always add their own *dance to the party*. A Phion water (MEA) device will always entrain the energetic form of copper to the water, and this is beneficial as copper has considerable health benefits for cells, eg. metabolises iron to haemoglobin (red blood cells).

Test results show a special relationship between negatively charged water in the presence of copper and biology. *In many ways, copper is the opposite of iron and steel (the metals commonly used for agriculture and gardening). Iron is magnetic, copper is conductive. While iron tools can disturb the soil magnetism, copper assists the **flow of Earth energies** to nourish the plants.*