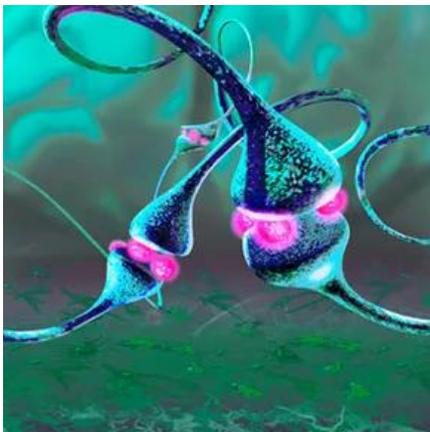


The body's electricity

Introduction

Without cell electricity there would be no life. Every cell of every organ and system in living species requires electricity or charge to function (ie. regulation and healing). This cell charge is critical for heart, nerves, muscles, and brain functions, in particular.

Everything we do is controlled and enabled by electrical signals running through cells. As we learned in intro physics, everything is made up of atoms, and atoms are made up of protons, neutrons, and electrons. Protons have a positive charge, neutrons have a neutral charge, and electrons have a negative charge. When these charges are out of balance, an atom becomes either positively or negatively charged. The switch between one type of charge and the other allows electrons to flow from one atom to another. This flow of electrons, or a negative charge, is what we call electricity. Since our bodies are huge masses of atoms with electrons, we can generate electrical current or charge.



When we talk about the nervous system sending *signals* to the brain, or synapses *firing*, or the brain telling our hands to grasp around a door handle, what we are talking about is electricity carrying messages between point A and point B. This could be compared with a digital cable signal carrying 1s and 0s that deliver cell coherence. However, electrons in our cells are not flowing along a wire; instead, an electrical charge is jumping from one cell to the next until it reaches its destination.

Electricity or cell charge is a key to survival. Electrical signals are fast at about 1 billion instructions every second. They allow for a nearly instantaneous response to control messages (eg. cell regulation and healing). If our bodies relied entirely on, say, the movement of chemicals to tell our heart to speed up when something is chasing us, we probably would have died-out a long time ago. However, this is a message that has not reached medical practice who think that the body function through chemistry.

The crucial signals that tell our hearts to speed up when we're in danger come from a mass of cells in our heart called the sinoatrial node (SA node). It is located in the right atrium, and it controls the rhythm of our heartbeat and the movement of blood from the heart to every other part of our body. It's our body's natural pacemaker, and it uses electrical signals to set the pace. However, our pulse is not the only thing that relies on electrical impulses generated by our cells. All of our cells are capable of generating electricity.

In this article, we'll look at the role of electricity in the body and find out how we generate it in the first place.

The starting point is simple: Right now, any cells in your body that are not actively sending messages are only slightly negatively charged or positive charge. This is a situation that starts to get interesting for the health of body organs and systems. For example:

- How does an organ or system generate charge?
- How does a cell sustain charge for wellbeing?
- What happens to this charge at the point of death?

Human voltage

The classic scientific view about how a cell functions goes something like this.

The methods for the generation of cell energy for use by the various body tissues include **aerobic respiration and anaerobic respiration**. In addition, the generation of energy in muscle tissue is different than the other methods of generating energy in the body.

The energy currency in the body is the ATP molecule, except in the muscle tissue that is **creatine phosphate** as the energy currency. ATP stands for **adenosine triphosphate**. ATP is an energy rich molecule due to the existence of phosphoanhydride bonds in its molecular structure. ATP is composed of one DNA base called **adenosine and three phosphate groups** connected to the DNA base. The hydrolysis of the ATP molecule generates ADP and a phosphate group that releases energy for use or consumption in other biochemical reactions that do not proceed without the ATP molecule.

The mechanism to generate energy in the muscle cells is entirely different than the mechanisms of energy generation in all other body tissues. Instead of the molecule ATP as a source of energy the muscle tissue uses creatine phosphate molecules. Creatine phosphate is also an energy rich molecule which has also energy rich bonds that upon hydrolysis releases energy. It is hydrolysed to a creatine molecule and a phosphate ion. This process releases energy which is used to induce or drive reactions to completion.

Muscle cells usually normally produce excess amount of ATP molecules which are used to generate creatine phosphate. For this purpose, an enzyme that is called creatine kinase usually phosphorylates a creatine molecule forming creatine phosphate. Creatine is a molecule which is synthesised in the various tissues of the body such as the liver and the kidney.

Oxygen (O^2) is abundant in muscle tissue that is bound there to the protein myoglobin. This is in contrast to blood hemoglobin that is the oxygen carrier in the other tissues of the body. Creatine molecule is converted in the body to the molecule creatinine. This molecule has clinical significance in which it functions as a marker for kidney function. Increased amount of creatinine in the blood signifies a kidney dysfunction or renal failure.

In other tissues in the body the glucose molecule is used as the source to generate energy rich molecules in addition to the process of oxidation of fatty acids which occurs in the liver and produce much more energy than the process of glucose oxidation. Fatty acids are obtained from triglycerides using the enzyme lipase that is usually found in the pancreatic secretions in the small intestine.

Glucose molecules are used by the various body tissues to generate ATP molecules which in turn are used to drive chemical reactions in the body to completion such as ions transport across the cellular membrane. Glucose is used in a process which does not use or require oxygen to proceed. This process is called glycolysis. Glycolysis is a general mechanism that is used by many cells that possess mitochondria. The end product of the glycolytic process is the molecule pyruvic acid. The net result of glycolysis is the conversion of glucose to pyruvic acid with the production of few ATP molecules. Glucose enter the muscle fibers through a process which is called cotransport in which its transport is coupled to the movement of sodium ions along its concentration gradient on the cellular membrane. In addition to this muscle fibers can obtain glucose from the degradation of the glycogen polymer.

Pyruvic acid then can undergo one of two processes which can utilise oxygen or not. The process which does not use or consume oxygen is called **anaerobic respiration**. In this process pyruvic acid is converted to lactic acid causing **metabolic acidosis** with increased pulmonary respiration rate. This process is inefficient at producing ATP molecules. This process occurs often in strenuous exercise.

Anaerobic respiration can provide energy for a short period of time only. In aerobic respiration pyruvic acid is consumed in a process which utilises oxygen and which is called **Krebs Cycle** and oxidative phosphorylation. In these processes many ATP molecules are produced than by the process of **anaerobic respiration or by glycolysis**. Oxidative phosphorylation in particular is liable to generate most of the ATP molecules in the cellular respiration process. Cytochromes are used in these processes, and which contain Fe-S clusters that can be oxidised and reduced in this process, thereby generating energy rich ATP molecules.

Negative charge is the natural resting state of all cells. It is related to a slight imbalance between potassium and sodium ions inside and outside the cell, and this imbalance sets the stage for your electrical capacity. The negative charge inside a cell is at its fullest potential at about -50mV and the membrane charge at about -75 to 90mV.

Your cell membranes practice a trick often referred to as the sodium-potassium gate. It is a very complex mechanism, however the simple explanation of these gates, and how they generate electrical charges, goes like this.

At rest, your cells have more potassium ions inside than sodium ions, and there are more sodium ions outside the cell. **Potassium ions are negative**, so the inside of a cell has a negative charge. **Sodium ions are positive**, so the area immediately outside the cell membrane is

positive. There isn't a strong enough charge difference to generate electricity, though, in this resting state.

When the body needs to send a message from one point to another, it opens the gate. When the membrane gate opens, sodium and potassium ions move freely into and out of the cell. Negatively charged potassium ions leave the cell, attracted to the positivity outside the membrane, and positively charged sodium ions enter it, moving toward the negative charge. The result is a switch in the concentrations of the two types of ions -- and rapid switch in charge. It's kind of like switching between a 1 and 0 -- this flip between positive and negative generates an electrical impulse. This impulse triggers the gate on the next cell to open, creating another charge, and so on. In this way, an electrical impulse moves in a split second from a nerve in your stubbed toe to the part of your brain that senses pain.

It's also how the SA node tells your heart muscles to contract, how your eyes tell your brain that what they just saw is the word "brain," and how you are comprehending this article at all.



Since everything relies on these electrical signals, any breakdown in your body's electrical system is a real problem. When you get an electrical shock, it interrupts the normal operation of the system, sort of like a power surge. A shock at the **lightning level** can cause your body to stop. The electrical process does not work anymore, ie. it's fried. There are also less dramatic problems, like an SA node misfire that causes a heart palpitation (an extra heartbeat), or a lack of blood flow to the heart that upsets the pacemaker and causes other parts of the heart to start sending out impulses. This is sometimes what causes someone to die from coronary artery disease or narrowing of the arteries. If the heart is constantly being told to contract, it never gets in a full contraction, and it can't get enough blood to the rest of body, leading to oxygen deprivation and a possible heart attack or stroke.

With so much electricity jumping around, it may seem like the body is a really great power source. But could human beings really power the Matrix? Probably not. A human body can only generate between 10 and 100 millivolts. A cathode ray tube requires about 25,000 volts to create a picture on a TV the machines could gather millions of electric eels, on the other hand, they'd be well juiced up. A single eel can produce in the area of 600 volts.

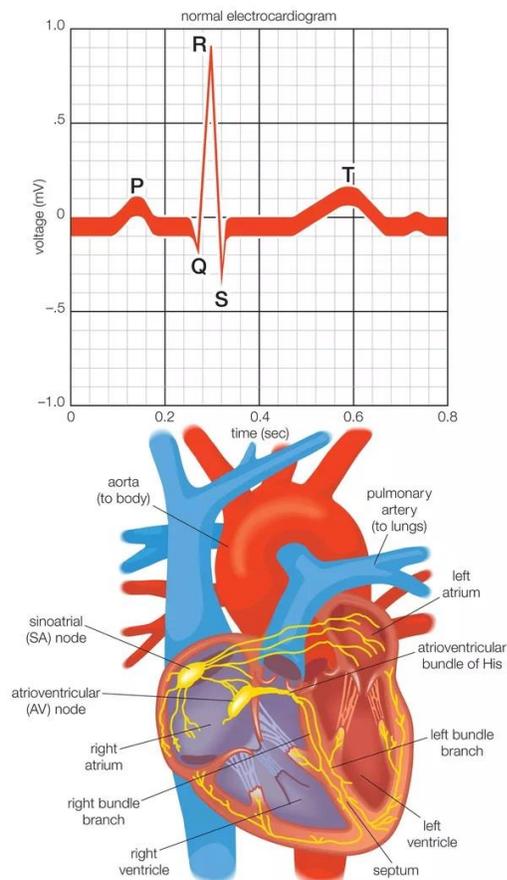
The electrical system of the heart is critical to how it functions. It determines heart rate (how fast the heart is beating) and also coordinates and organises the beating of the heart muscles, so that the heart works efficiently with each heartbeat.

Abnormalities in the heart's electrical system can cause heart rate to be too fast or too slow or entirely disrupt the normal functioning of the heart, even if the heart's muscles and valves

themselves are entirely normal. When doctors talk about heart disease, many people think of blocked coronary arteries can result in a heart attack or the need for bypass surgery. However, problems with the electrical system may occur even if your heart muscle is normal.

It's helpful to picture your heart as a house and the cardiac electrical system as the wiring that provides power throughout the structure. It's possible to have problems related to faulty wiring even if the building itself is completely normal. Likewise, your heart could be normal however an electrical issue may occur causing an abnormal heart rhythm. Heart disease can lead to abnormalities in your heart's electrical system, much as a house damaged in a tornado or flood might have problems with the electrical system. In fact, damage to the electrical system of the heart is often the cause of sudden death with a heart attack, even if the damage to the heart caused by the heart attack is only mild or moderate. This is one of the reasons behind performing CPR and having access to defibrillators. If the heart rhythm can be restored, some of these heart attacks (and other causes of arrhythmias) are survivable. Let's take a look at how the cardiac electrical system works to make your heartbeat, as well as medical conditions which can affect your pulse.

Introduction to the Cardiac Electrical Signal



The heart generates its own electrical signal (also called an electrical impulse), which can be recorded by placing electrodes on the chest. This is called an electrocardiogram (ECG, or EKG). The cardiac electrical signal controls the heartbeat in two ways. Firstly, since each electrical impulse generates one heartbeat, the number of electrical impulses determines the *heart rate*. Secondly, as the electrical signal *spreads* across the heart, it triggers the heart muscle to contract in the correct sequence, thus coordinating each heartbeat and assuring that the heart works as efficiently as possible.

The heart's electrical signal is produced by a tiny structure known as the *sinus node*, which is located in the upper portion of the right atrium. (The anatomy of the heart's chambers and valves includes two atria at the top of the heart with two ventricles at the bottom.)

From the sinus node, the electrical signal spreads across the right atrium and the left atrium (the top two chambers of the heart), causing both atria to contract, and to push their load of blood into the right and left ventricles (the bottom two chambers of the heart).¹ The electrical signal then passes through the *AV node* to the ventricles, where it causes the ventricles to contract in turn.

In summary, the initiation of a heartbeat in the SA node, through contraction of the ventricles and the **cardiac electrical system** causes the heart to contract in a coordinated manner, maximising the efficiency of the beating heart.

[Pollack view on cell function](#)

Professor Gerald Pollack (University of Washington) challenges the current view of the cell, the cell membrane, and the role of water in the cell. In his book ***Cells, Gels, and the Engines of Life*** he describes experiments showing that the cell can survive and function with a portion of its membrane removed, or with holes punched in the membrane. *Pollack notes that the cell is really a gel, made up of cross-linked structures. For example, jello (gelatin or jelly) can hold almost one hundred times its weight in water, the water does not fall out of jello, so the cell holds on to its internal water by the same mechanism.*

That mechanism is the structuring of water molecules along the hydrophilic surfaces of the gel matrix. Water lines up against the cell's inner structures of hydrogen-end-to-oxygen-end, not several molecules thick but dozens of molecules thick, creating a zone that excludes larger ions like sodium (Na) but not smaller ones like potassium (K). This selective exclusion makes the current model of complicated pumps and channels for specific compounds across the cell membrane obsolete. The cell's inner structure naturally excludes large ions like sodium and holds onto smaller ones like potassium.

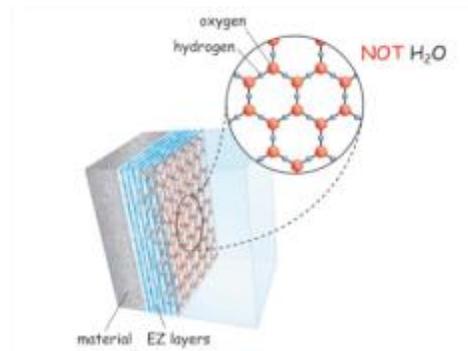
Gels are characterised by phase transition, in which physical properties undergo abrupt transformation. Thus, with changes in pH, temperature, presence of solvents or chemical compounds, gels will suddenly expand or contract. The real mechanism is the alternating structuring and de-structuring of water inside the gels. Phase transitions of gels can explain many of the cell actions and functions such as secretion, transport, movement, muscle contraction and even cell division.

When cell division goes awry, the result is cancer. Pollack notes research showing that a difference of water structure underlies organ pathologies. In fact, the technology called magnetic resonance imaging (MRI) distinguishes tumor cells from non-tumor cells by sensing a difference in cell water structure. Cancer cells are characterised by mutant proteins and Pollack presents the theory that these mutant proteins might not be able to structure water as predictably and effectively as normal proteins.

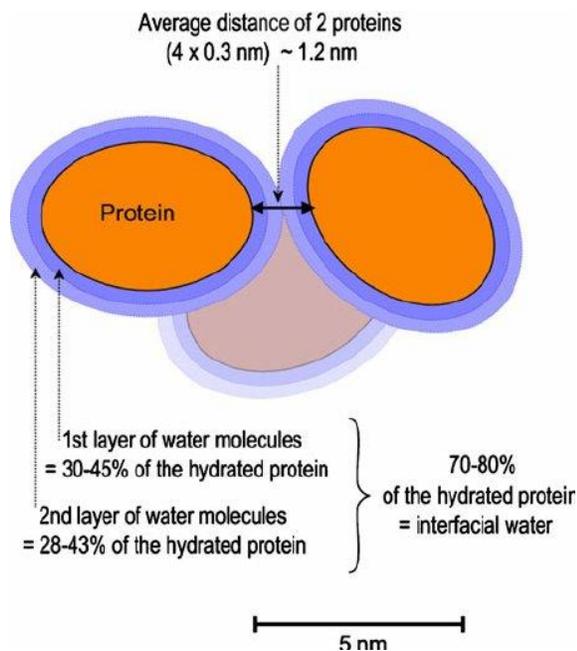
Pollack's research included the muscle proteins that are in the fiber. This led him to take an interest in muscle cell water and the involvement of water in muscle contractions at the

molecular scale. It turned out that water is absolutely essential for everything that muscles do. It also became clear that if water plays a significant role in what happens in the muscles, it probably also plays a significant role in what happens in the nerves, kidneys, liver and in the whole being.

In Polack's book, *The Fourth Phase of Water: Beyond Solid, Liquid and Vapor*, he discusses that the role of water, not only in muscles, but in everything, evolves from a different type of water. We know that we are two-thirds water, however that water is not the same as water in a drinking glass. It's a different kind of water that builds or gets structured next to solids at interphases.



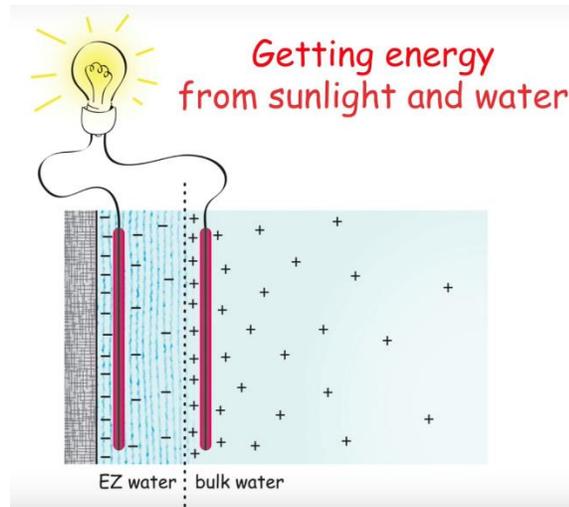
Its crystalline structure is formed by millions of molecular layers. The culmination of his experiments was the discovery that water doesn't have just three phases, like liquid, solid, and gas; it has a fourth one. The fourth one is what he names *EZ water*, or fourth phase water. EZ, stands for *exclusion zone*, due to its most obvious property that it tended to exclude everything, including little particles, microspheres, and molecules. He found that it was a different kind of water with a different chemical formula of H₃O₂. That is, the gel water that fills our cells is H₃O₂



The whole cell water (70–80% of the total mass), statistically, is distributed into only two to three hydration layers around macromolecules. The size of a water molecule being 0.3 nm, the film of interfacial water between cell macromolecules is probably not very different from 1.2 nm ($2 \times 0.3 + 2 \times 0.3 \text{ nm}$)

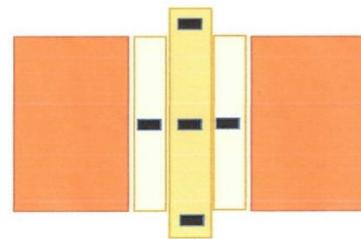
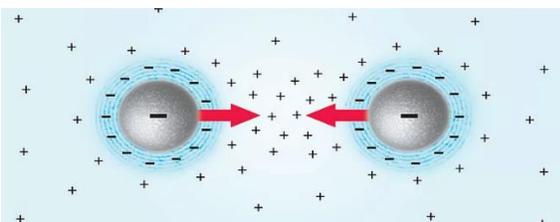
This is the kind of water that occurs at interphases with most types of solids. Cells are filled with many solids, including large macromolecules and ions. Next to all of these entities grows

this special interfacial H_3O_2 gel water. While H_3O_2 is not free in same way as H_2O , it has more viscosity and forms the basis for creating a cellular life. Your cells are so packed with these H_3O_2 molecules that practically every water molecule is close enough to one of those surfaces that it qualifies as interfacial water. While H_2O is neutral, H_3O_2 water is not neutral as it has a negative (-mV) charge



For example, a surface of some material sitting next to many layers of water molecules, the surface undergo a transformation to this H_3O_2 water, which has negative charge. That is, ordinary water molecules split to form negative and positive components. The negative components all line up to produce this zone called EZ with a negative charge. Beyond this EZ zone you have ordinary H_2O , that's filled with a complementary positive charge. You have the EZ water (negative), and the ordinary water (positive), it's a battery source for energy.

At this stage of the discussion, I need to introduce my (Robert Gourlay) research experiences with magnets in the development of structured water with a permanent negative charge. I found that the negative charge side (N) of two magnets could be joined with an interfacial spacer that was magnetic (eg. steel) Interestingly, the spacer took on a massive negative charge potential, greater that the combined negative charge potential of the two magnets. Consequently, this observation got me thinking about interfacial, H_3O_2 water with a net negative charge. It is possible with the interfacial water is like the *spacer* mentioned above and takes on a magnet force that concentrates oxygen in this space, along with hydrogen, and hence producing the net negative charge for the H_3O_2 . Also, we need to consider that a cell is not an isolated entity from the whole of the body as it is affected by the magnet energy of the Earth, light photon frequencies from the sun that penetrate the skin, and a range of other subtle energies that could influence cell charge potential. In the images below, a Pollack concept is on the left and the Gourlay concept on the right.



The *Gourlay concept* is that negative charge sources facing each other create a more powerful negative force field source between the opposing sources, that holds the negative charges

together. This interlocking field force may be occupied with a dense array of oxygen (O^-), negative charge, light photons or other negatively charged magnetic forces.

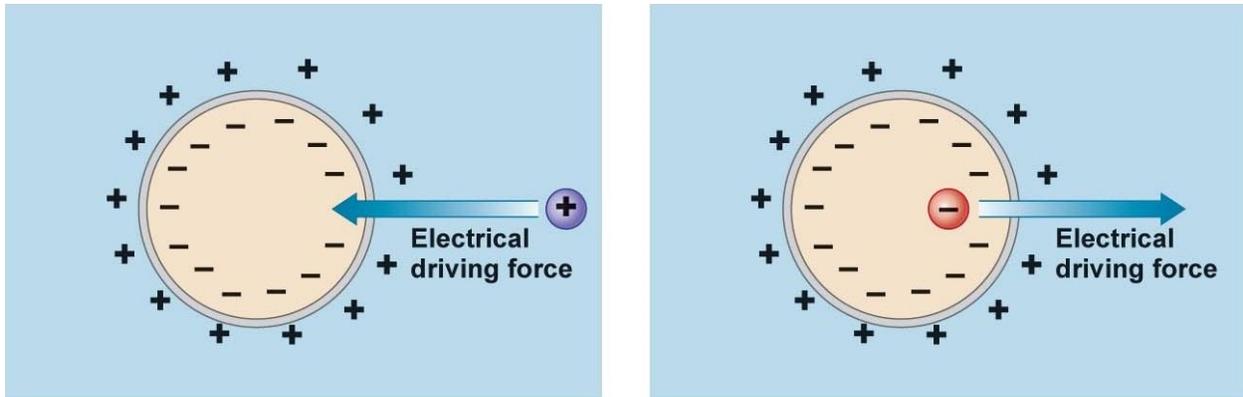
The one thing that comes out of Pollacks research is that we are full of fourth-phase, H_3O_2 water and it is an **ordered phase of water**. The building of order and separating charge all require energy. The source of this energy is sunlight, and it builds interfacial water. However, when we speak of light, most people think of visible light, however our cells not only entrain the visible part of the spectrum but also infrared, ultraviolet, and frequencies beyond those two. It turns out that the most powerful wavelength to build this kind of water is not visible light but infrared light, and it is **free energy**. This is why sunbathing is very good for health and wellbeing outcomes.

The earth has net negative charge and when you contact the earth with your bare feet, all those negative charges ions seep into your body. You need those negative charges to build EZ water. The ocean is negatively charged and along with drinking structured, negative charge. This process is called *earthing*. Our bodies must have negative charge. In fact, it isn't widely known, but if we were to measure your electrical potential of you, relative to the earth, you are negatively charged because all your cells are negatively charged. That negative charge is critical for life and defines healthy life. If you lose your negative charge, you're dead. With regard to antioxidants, first understand that oxidants (eg. processed sugars, fried foods, etc.) remove negative charge. You need that negative charge in order to flourish and thrive, so antioxidants (eg. berries, most fresh organic vegetables, Vitamins A, D, E and K,) are good for you because they prevent a loss of that negative charge. You can consider earthing to be an antioxidant because it is adding negative ion charge.

Plants, for example, are in the sun for photosynthesis and receiving negative charge all the time by absorbing light. The light supplies the energy for photosynthesis, and photosynthesis is chemical energy. The light is transformed into chemical energy, which is responsible for plant metabolism, growth, bending and basically all of its functions. In effect, this generic form of the first step of photosynthesis, is what both plants and humans do as energy transformation. That is, we exploit energy from the environment.

However, if we go back to the issue of the interface of two negative charges. Its outcome has actually been known for hundreds of years. Some of the great scientists in physical chemistry are the ones who first saw this phenomenon and were puzzled about how it was that the magnets did not repel each other under certain conditions. This question was taken up by physicist Richard Feynman, considered to be the Einstein of the second half of the twentieth century. Feynman, a Nobel laureate, called the phenomenon *like likes like* because the two like charges come together and obviously must like each other if they come together. However, the question is: under what circumstances do they come together. Pollacks view is that two negative charges located close to one another is where positive charges gather, and those in-between positive charges attract the two negatives, and the negatives come together. We do not anticipate this because every scientist knows, reflexively, that if you put two like charges

next to each other, they repel and they attract. This has been such an impediment in the progress of physics because of the natural presumption that two like charges go apart, when in actuality they come together. Below is a Pollack description of the differences in electrical driving forces.

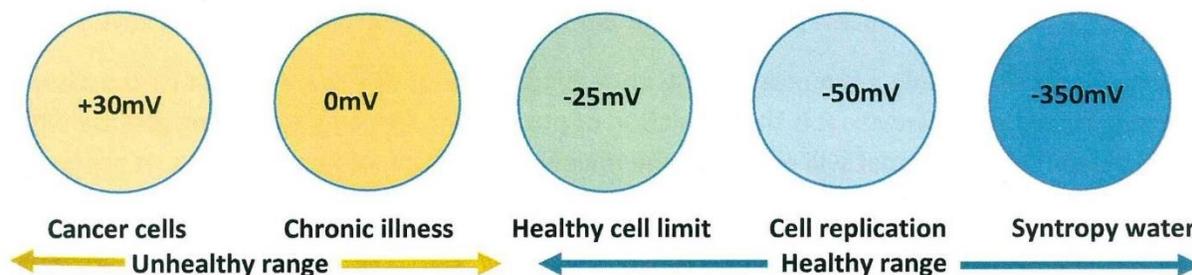


We are all negatively charged. While every chemist and medical doctor will tell you it is impossible that anything can carry net negative charge, there is a lot of evidence to the contrary. People have measured electrical potential of humans, and the same with fresh fruits, vegetables, and plants. They are all negatively charged while fresh (up to 60 hours after harvest). Charge is really critical and is correlated with health. If you measure individual cells, a healthy, robust cell will have plenty of negative charge. If you measure the electrical potential, it might be close to 100 millivolts (mV), one tenth of a volt. However, it has been found that cancer cells, for example, instead of being -100 or -80 mV, are -15 mV. Pollack did experiments by sticking electrodes into cells, and typically, they might have been -80 or -90 mV. He found that when the charge was declining from -80 to -70, -60, -40, and so on, the cell was about to die. The more negative charge the cell has, the more negative charge a body has, and the healthier it is.

The cell is full of negative charge water, and therefore the cell carries a net negative charge, and this high negative charge (ie. -50mV to -90mV) is sustained by consuming or entraining negative charge to cells (eg. through structured water, sunlight, fresh organic foods, negative ions from nature, etc. However, if health is in decline, you find that the cell is not sufficiently negatively charged, and therefore you have to consume, or entrain negative charge. This includes the syntropy emotions of love, joy and hope and music with beneficial or life affirming frequencies (eg. 432Hz)

Ideally, we would like to have a health and wellbeing program taught to children and to understand that the human body is an energy system that needs to be recharged to be healthy. Unfortunately, this is not the case and in the case of water, public science say that *water is just water*. The research on the health benefits of structured or negative charge water is not interesting to public science and health agencies. We can hypothesise that the higher the negative charge in structured water the better it is for your health because you are replacing

the interfacial gel water that is missing from your cells. That is, the high negative charge water (ie. -350mV to 1,500mV) restores the negative charge of cells. Also, oxygen in the form of DMSO (Dimethyl Sulfoxide), a natural compound extracted from plants and recharged with an MEA device to at least -500mV, will be helpful because of the negative charge of oxygen and carrier water will saturate blood oxygen, relieve pain, increase circulation, and support healing of degenerative diseases like cancer.



Overall, Pollack's books raise many intriguing questions. For example, does the fact **that water gets structured with a negative charge inside a gel account for some of the health benefits** of gelatinous broth made in structured water? Does raw milk function as a gel? Is the water in raw milk structured? Certainly, one of the reasons pasteurisation and homogenization are so harmful is that these processes' de-structure the carefully organised water in raw milk's protein organelles and lipid structures. Consequently, it would be worth considering the role of the fat-soluble vitamins A, D and K, along with collagen that surrounds all cells, in preventing the production of mutant proteins, and perhaps even directly controlling the structuring and de-structuring (loss of negative charge) of gel inside cells. However, it is known that when raw milk is processed through a MEA water device the output milk is naturally pasteurised and homogenised (ie. the cream **does not separate** from the oils as two layers). Certainly, gelatinous foods, eg. chia and flax seeds, Aloe plant gel, egg white, etc. will increase cell hydration.

Conclusion

This section started with the question about how the body acquires or entrains negative charge to cells, and how to sustain negative charge to cells to slow down the aging or decay processes (ie. entropy). General discussion points are:

- The conventional view that cell charge is driven by a slight imbalance between potassium and sodium ions inside and outside the cell and this imbalance sets the stage for your electrical capacity, is a condition that is challenged by other evidence (eg. Pollack)
- The Pollack thesis is that cells create interfacial water that is H_3O_2 with a net negative charge and this causes the exclusion or control mechanism of materials that enter cells. However, Pollack does acknowledge the role of light photons in cell energy generation.

- A high negative cell charge potential (including the cell membrane) is critical to cell regeneration, regulation, and healing.
- Considerably more research will be required to explain the negative charge configuration within and between interfacial water molecules, and particularly the role of **syntropy forces** such as light, the earth's magnetic field effects, exposure to nature's frequencies, collagen pathways around cells, etc. This consideration may also have to challenge classic concepts in magnetism, and whether intracellular (negative) charge is a function of the presence of both + and – forces.
- The consciousness (awareness) and memory of water (ie. ability to receive, store and transmit information) are other factors that govern the role of H₃O₂ water gel in cells and the body's electrical energy system of communication.
- While the heart can be described as an energy generator, it is the heart cells that are the foundation of heart energy, however the heart design is unique as a vortexer.

Natural magnetism and human made electromagnetic frequency (EMF) effects on cell health

There are three important force fields associated with Earth, a *gravitational field*, an *electric field*, and a *magnetic field*. *The gravitational field* attracts us to the Earth, preventing us from flying off into space as the earth rotates. The Earth's *electric field* is very unstable, producing electric storms from place to place and at unpredictable times. The Earth's *magnetic field* is due to a huge electric current, billions of amperes, circulating in the core of the earth. However, the main complication lies in the fact that there are a multitude of extraneous sources which produce distortions in the magnetic field. This instability sometimes shows up as tremendous magnetic storms, blocking out transoceanic radio transmissions.

A relatively recent NASA satellite preliminary report shows a **rapid decay in the Earth's magnetic field**. No knowledgeable scientist debates the fact of the rapid decrease in the earth's magnetic field, nor does he question that the associated electric current in the core of the earth is using up energy. The present rate of loss is seven billion kilowatt hours per year. The earth is running out of that original energy it had in its original magnetic field. The evaluations of the rate of change have been made about every 10 or 15 years since 1835. Each evaluation required accurate worldwide readings over an epoch (a year or so) and special mathematical reduction to *wash out the noise*. These reliable data clearly show this relatively rapid decay. The report stated that on a straight line basis the earth's magnetic field would be gone in the year 3991 A.D. However, rate of decay is exponential and, in this case, has a half-life of 1400 years.

There is some insight in the human cell effects from the loss of magnetism and certainly micro-gravity through space travel, and this evidence could point to the way that life on Earth has utilised magnetism and gravity forces to evolve and adapt to any changes of these forces. For example, in 1961, Russian Astronaut Yuri Gagarin, in a flight that **only lasted one hour and**

forty-eight minutes, it was subsequently reported that without the magnetic energy of the earth, his body started to suffer from this deprivation. He suffered **decreased metabolism, mental depression, muscle weakness, bone loss, fatigue, weakened immune system, and impaired sense perception**. These effects could have been a result of a significant degradation of cell electrical potential due to the loss of Earth's magnetism and gravity. Also, there is evidence of DNA damage from radiation.

One of the most enduring mysteries about the dinosaurs is their massive size. The largest dinosaurs were several times the mass of the largest Elephant. It wasn't just dinosaurs that were massive on the ancient Earth, there were giant insects and plants that were all much larger than we would expect. In this world of giants all life was shifted towards a larger size. Calculations indicate that the dinosaurs' bones, muscles, and ligaments were too weak to support such massive animals, unless something dramatic had changed.

Increased knowledge of scale effects on structures revealed a startling answer to this mystery of the dinosaurs' massive size: an ancient, reduced gravity. A reduced gravity would make life lighter, so all land-based life could increase in scale with seemingly weak bones, muscles, and ligaments. A reduced gravity explains life's large size during the dinosaurs' time. The theory is that dinosaurs' gravity would need to be about half the present force of gravity to explain their large size. Also, among a number of possible reasons for this reduced gravity was the prospect that the ancient Earth was much smaller in diameter and mass to enable a reduced gravity Earth. Since this time and with an expanding Earth, gravity has increased and it reached a point about 66 million years ago, that changed the life for dinosaurs. That is, the level of gravity pull was too much for these massive animals to support bones, muscles, and ligaments, and therefore their mobility was weakened to that point that the design failed. An increased gravity was the primary reason for the dinosaur's demise.

There are many conflicting views about **magnetism**, and its link to our health and wellbeing. This includes views that human health has no link to magnetism and gravity. However, human beings are in fact magnetic beings, and we are surrounded by electromagnetic fields that can influence our health, both positively and negatively. A well-researched book based on extensive experimental work is ***Magnetism and its Effects on the Living System***, by Albert Davis and Water Rawls (1974). A key *take-home* message from this research work is that the negative (N pole) of a magnet is beneficial for relieving nerve pain, shrinking tumours, blood clot retraction, and reversing cancer growth. This book also details how earth worms', along with rats and mice sense different magnetic fields, eg. positive South pole v. negative North pole. For example, the negative charge of the North pole had a positive impact on their behaviours, sex life and aging. In this context, we need to understand that the Earth is negatively charged and the water in microbes, living plants, animals and humans has a negative charge at a cellular level. Therefore, we could assume that living species are attuned to the negative charge of the Earth's magnetism is imbedded into the function of living systems.

There are only two sources of natural magnetism available to us, ie. the magnetic resonance of cells and the magnetic resonance of the earth. Our cells have the capability to generate electricity (charged current) and produce a pulsed, electromagnetic field. The cell pulsed magnetic frequency of various tissues and organs, works together with the Earth's magnetic resonance to create cell coherence or order. When cell magnetic resonance is coherent, this allows the body to repair damaged cells, make enzymes and enhance immunity. Consequently, this electrical process provides the ability to cells to regenerate, regulate (eg. detox) and heal. For example, drinking structured water increases cell coherence to transform toxic electromagnetic frequencies in food (eg. chemicals in plastics and sprays, irradiation, etc.) back to a non-toxic state. These chemicals in water, plastics, and foods, along with air pollution are significantly impacting on sperm counts that is reducing at 1% per year due to toxicity in foods and radiation for microwave ovens and mobile phone technologies (electromagnetic frequencies: EMF), including 5G. Men today have ½ of the sperm count of their grandfathers. Within the next two generations sperm count will be at a dangerously low level.

Also, there has been a decline in the strength of the Earth's magnetic field over the past 165 years. Today the magnetic field of the Earth is about 0.5 Gauss. It is estimated that 4000 years ago, the strength of the Earth's field was 5.0 Gauss. This is a significant decline. Since the Earth's magnetic field is depleting, our bodies are not always able to achieve the magnetic resonance necessary to restore and rejuvenate our organs and tissues. This leaves us at risk for illness due to cells not been able to reach full potential to sustain charge. An electromagnetic field is a combination of an electric field and a magnetic field that is produced by an electrically charged object. EMF's can have a much higher and harmful frequency than natural sources of magnetism and they can also pollute our air, water, and food. The technological age that we live in has us exposed to the positive charge of EMF's every day, and at higher and stronger levels than ever. When cells are overexposed to EMF's there are harmful effects on your health and well-being. This includes the risk for developing chronic ailments as the magnetic resonance in your body can be overridden by electric frequencies, thus impeding the ability of your organs and tissues to repair themselves

The vortex in structured water

The natural water vortex in nature (ie. flowing water) is the inspiration for all implosion technologies. The toroidal vortex in particular is considered to be the main mechanism responsible for imbuing water with its critical functions of renewal, and life support (consciousness). Water has a consciousness to vortex and does not need mechanical assistance in a water restructuring device to start vortexing. However, the heart has to entrain a vortex into blood (82% water) through heart muscle contraction and expansion, and through four heart chambers to enable blood to travel around the body's 100,000 Km of cardiovascular system, 36 times a day. This would not be possible if the heart was a pump.

However, vortices are the energy transformers and energy accumulators in nature. A vortex can increase the vibrational state of any **electromagnetic frequency** and it can restore the natural energy patterns to something that has been corrupted. For example, when water is vortexing through a MEA water device (www.meawater.com) it entrains a unique magnetic signature into

the water that results in a permanent negative charge (-mV) into the water, and therefore the water (along with any other liquid like wine) does not oxidise (lose oxygen). When water flows in a toroidal vortex pattern through a MEA water device the following benefits occur:

- The de-structured, malformed, and corrupted water molecules are brought back to a natural structured state
- Ordered molecular patterns are created in hexagonal crystalline form from the incoherent or chaotic state of de-structured water
- Malformation in water structure is toxic, and is therefore when it is reassembled back to an elemental state it becomes beneficial to cell function
- Corrupted electromagnetic frequencies from radiation, chemicals, drugs, etc. are neutralised or tuned out by the natural waveform or frequency of structured water. Beneficial electromagnetic frequencies from nature are then accumulated into the water.
- Chemicals and other toxic compounds in destructured water are neutralised and returned to their elemental forms. For example, fluoridation as Na_2SiF_6 is a toxic compound, however it transformed in structured water back to Na, Si and F^- . These natural elements in water are non-toxic or harmless.

Structured water has energetic memory

Dr. Jacques Benveniste, a French medical researcher, discovered certain scientific properties of water which defy explanation by the tenets of mainstream physics. The science he developed, *Digital Biology*, is based upon two breakthrough observations he proved in experiments that have since been duplicated by other scientists, ie:

1. If a substance is placed in water, the water will carry the memory of that substance even when no measurable molecules of the original substance remain. The water absorbs the electromagnetic frequencies of the substance and will retain this energetic memory even if the original substance is subsequently removed from the water; and
2. The molecules of any given substance have a spectrum of electromagnetic frequencies that can be digitally recorded with a computer, then played back into untreated water (using an electronic transducer), causing the exposed water to behave as if the actual substance were physically present.

Dr. Benveniste's work proved that it is not enough to simply remove toxins and contaminants from water via filtration, distillation, reverse osmosis, or chemical treatment. To restore water to its healthy, life-giving state, the electromagnetic frequencies of any harmful substances must be removed or ameliorated, and this can be accomplished using **nature's optimal syntropy form, ie. structured water**. The negative charge energy in structured water has the same qualities as lightning bolts. Lightning cleanses the atmosphere and recharges the earth. In the same way, water energies cleanse and recharge water in any form or any aqueous solution such as inter or extra cellular fluids. This is why filtering the minerals from water and using reverse osmosis technology will de-structure the water and render it lifeless or entropy force.

Crystalline substances, whether liquid or solid, will absorb electromagnetic frequencies within their field of influence. As water passes through an MEA water device its characteristics are transformed by the energy it absorbs from a unique magnetic array. However, crystals or other mineral gems will only be beneficial water if the water is in a permanent structured (negative charge) form. That is, if these crystals are immersed in structured water that water will permanently entrain the potency of the life-giving frequencies of the elements and minerals it is in contact with. This includes sunlight energy, and other beneficial energies from nature. Toxic energies are excluded from water with a permanent negative charge.

Ultimately, it's the structure of water (ie. negative charge) and not its composition that determines its capabilities and properties. For instance, this can be observed with carbon, which according to its structure will form into a diamond, the world's hardest material or into graphite, one of nature's softest materials. The difference between a diamond and coal (as forms of carbon) is the angle of the molecular structure. The conclusion to be drawn from this example is that it is not the properties that changes the characteristics of a material, it is the crystalline structure of the material that gives it a unique form of matter and energy. The degree to which water structuring and energising takes place is a direct result of the following:

- The quality of the water input to the water restructuring device (eg. nature spring water from nature or bottled water that has been denuded of minerals and life energies through processing).
- The form of the magnetic energy that is entrained into the water to enable a perfect crystalline structure in the water, and creation of a permanent negative charge
- The beneficial energies influences in the vicinity of the water once it has been converted to structured water
- All MEA water restructuring products enable water to return to its natural crystalline form.

A specific **life code** that appears in all lifeforms after death is the period that the cell retains negative charge or life-energy. See image below

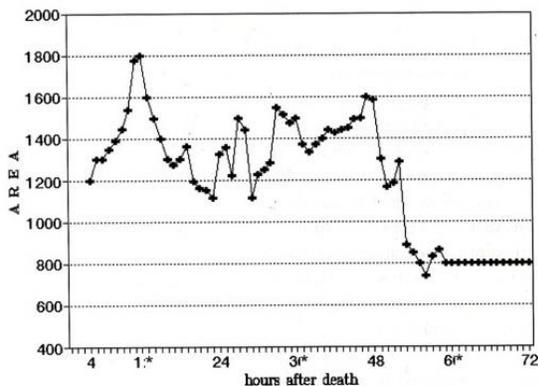


Fig. 2.6 Time dependence of Kirlian glow area of a finger for experiment N1. Vertical axis represents the area of the picture; horizontal axis represents time in hours after death. Ring finger.

In the image on the left, from a book (*Light after life, 1998*) by Konstantin Korotkov, he measured cell energy leaving a dead body, and did this on multiple dead bodies. He concluded that this cellular energy (he calls **soul**) takes about 60 hours to leave the body. Therefore, organ transplants need to occur within hours after death and while the organ cells still have a negative charge, and hence cell memory in the water of the cell.

Organ transplantation is incredible because the very idea that you can remove an organ from someone's body, and put it in or on someone else's, and that organ becomes part of the second person. Surgeons are doing this to allow the recipient to heal and survive whatever trauma or disease brought them to a position of need in the first place.

There are reports in books and articles of organ transplant receivers claiming that they seem to have inherited the memory, experiences, and emotions of their deceased donors, and which are causing quirky changes in their personality. This may be explained by cell memory that permeates consciousness. Also, consciousness pervades everything. For example, food contains the consciousness of the grower and the cook. Plants are conscious and can communicate information to humans and animals. That is, when humans swallow plants or animal foods, they take on the consciousness of that plant or animal.

This process of memory transfer can occur in a transplant organ because memory is nothing more than information stored in cell water, and this water (H_2O) is the major component of cells in organs. If a cell did not have **charge** than life would not exist, and if the cell did not have **memory** (stored information) than life would not have evolve and adapted.

Conclusion

The concept of how the human body or animal can spontaneously heal itself is still a mystery to most people, including the medical practitioners. There is also the concept of energy healing has been around for probably 1000's of years, whereby someone uses a range of techniques to entrain energy to the body to complement the body's own energy healing processes. These human practices of energy healing include: Pranic Healing, Reiki, Karmic Regression Therapy, Acupuncture, Qigong, Healing Touch, and Emotional Freedom Technique.

Your body is an incredible system of intricate components that keep it working around the clock. One of the most amazing aspects of the human body is how the body heals itself. With 30-40 trillion cells in the body, each is working nonstop to keep our systems in equilibrium. Whenever we experience injury, those cells get to work healing or replacing themselves to get us back to good health. The more we know about how the body works, the better we will be at making choices to enhance the quality of life or wellbeing.

This essay examines the body as an electrical system that receives, stores and transmit information required for all cell regeneration, regulation, and healing. While the human body does heal itself, eg. like a wound or recover from a disease; the cells do need intimate support from water, nutrition, sunlight, and occasional intervention by other humans or animals. However, fundamental to the entrainment of energy from other sources and the conduct of this electrical energy is the make-up the cell itself, and how these cells operate as an organ (eg. heart, lung, kidneys, etc.) or system (immune, nervous, hormone, etc.)

The speed and cohesion of communication between cells, at about 1 billion instructions per second) are critical to the rate of healing and aging. When cells become damaged or

destroyed, one of the ways how the body heals itself is by replacing or replicating those cells with healthy ones. For example, if you get a cut, the platelets in your blood stop the bleeding by clotting. White blood cells then remove the damaged or destroyed cells and new, healthy cells start to repair the tissue. However, our bodies are actually in a constant state of removing damaged cells and producing new ones to create healthy tissue.

While you might think of your immune system as healing so much as protecting, it's actually a major factor in how the body heals itself. Your immune system is more than a defence mechanism preventing you from getting sick. It is also the body's primary defence system against foreign viruses and bacteria. In this manner, it's important to learn how the body heals itself so that we can do things to help it heal more quickly, thereby preventing or reducing ailments or disease. This can come from enhancing the lymphatic system, part of the immune system that helps fight off and flush toxins from the body. Similarly, sustaining a balance of the gut's microbiome supports the immune system.

Overall, the body is an integrated regeneration, regulation, and healing system whereby **every cell is an energy generator**, that is striving every second of a day to sustain life. Energy flow in living species is a two-way flow of energy, from outside of the body (entrainment) and energy generated within the body that flows around the bodily cells and to the outside environment for other entities to entrain. While it can be said that the heart is an energy generator, every grounding of cells into organs and systems is an energy generator. However, when one component of the system suffers increased entropy (decay) a critical link in the chain energy communication flow is weakened, and this limits the overall potential of energy to support life. Aging and disease are processes of losing cell energy charge.

The paramount urge in life is survival and survival depends on a high cell energy potential, albeit that this cell potential can vary between organs. For example, the heart has a high cell charge potential than other organs. Aging can be slowed, and survival increased by **drinking structured water**, eating fresh/organic food, maximising sunlight exposure, increasing blood oxygen saturation, detoxing, increasing mobility, and maximising time in nature to **entrain the life-affirming frequencies** of the natural world.

Overall, all living species are functioning at full life potential on negative charge. Our ancestors were able to heal themselves and others without any special training because back then, humans were more regularly in touch with their higher selves and the unified energy field of the universe and nature. However, there is a significant and emerging threat to the potential of people to sustain a high cell coherence and this threat is EMF, junk food that is full of chemicals and irradiation, pollution in water, soils and air, and unwarranted vaccinations. This is why people need to take full responsibility for their health, grow their own food, return to nature, and utilise natural health practices.

If you want to know the secrets of the universe, think in terms of frequency and vibration.

Nikola Tesla

It is providential that the youth or man of inventive mind is not blessed with a million dollars. He would find it difficult to think. The mind is sharper and keener in seclusion and uninterrupted solitude. No big laboratory is needed in which to think. Originality thrives in seclusion free of outside influences beating upon us to cripple the creative mind. Be alone, that is the secret of invention; be alone, that is when ideas are born. That is why many of the earthly miracles have had their genesis in humble surroundings.

Nikola Tesla, Tesla Sees Evidence Radio and Light Are Sound. New York Times, April 8th, 1934.