

Two types of water (preface)

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I have concluded that there are two kinds of water: water that produces disease and water that prevents and cures disease. I must also make the following almost unbelievable point. From the dawn of the human race up to the present day, I think human beings have been acquainted with water that produces disease.

This is because 99.99 percent of the water that actually exist on the earth is or was , in fact, nothing but this type of water. Thus, up until now, the human race has had to depend on "water that produces disease." As a result, since the birth of humankind, human beings have suffered from disease.

Conversely, we may look at this situation in the following way.

What will happen, if up until now, we had depended on the other type of water, the "water that prevents and cures disease?"

Since 1985, I have been searching for the water that prevents and cures disease. During that time there were many detours, but I believe that very recently I have finally discovered what this is. In a nutshell, it is water that contains a large amount of hydrogen gas, which I have termed "Hydrogen-rich Water."

Why can I say this?

A detailed explanation will be provided in this guidebook, but in short, Hydrogen Rich Water gets rid of active oxygen, which is considered to be the cause of all kinds of diseases. And that is not all. The water I am proposing has another big advantage:

Anyone can produce Hydrogen Rich Water easily, reliably and cheaply.

I would like you, too, to check out delicious taste and wonderful qualities of Hydrogen Rich Water, "the water that prevents and cures disease."

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The Genesis of Water (part 1)

The birth of the earth is supposed to have come about by means of a "big bang" that occurred between 10 and 20 billion years ago. It is also believed that the first living organisms came out into existence in the water of this planet some four billion years ago. In other words, if water had not been present on the earth some four billion years ago, living organisms would not have emerged and survived on the earth.

Therefore the presence of water on the earth was the great prerequisite for the genesis and survival of all living organisms. Everyone knows that water is a compound of hydrogen and oxygen. The bonding of hydrogen and oxygen in a 2 to 1 ratio produces water, which is expressed with the chemical formula H_2O .

The fact that water is a compound of hydrogen and oxygen signifies that hydrogen and oxygen attract one another. In other words, if hydrogen and oxygen did not have this attraction, water would never have come into existence. Moreover, without the genesis of water, living organisms would not have come into existence either. There is an energy that works to draw these atoms to each other (covalent bond energy), and it is thanks to this energy that water was able to come into existence.

Because water is what is generated by means of this covalent bond energy, the hydrogen in the water can not exist alone and independently in a form that is separate from the oxygen. Not only that, when water is infused with hydrogen gas taken from something like a compressed gas cylinder, or when hydrogen gas is generated by

electrolysis to produce water with increased hydrogen(electrolyzed cathodic water), the hydrogen simply escapes into the air immediately because it is the lightest gas in the universe. This is why, as we learned in high school chemistry, there is hardly any hydrogen in water.

As such the water we are familiar with is all water that contains hardly any Hydrogen gas. In short, the water that exists in nature, the tap water produced by processing it, bottled water and so forth all have one big common characteristic: they are all "water that contains hardly any hydrogen."

Recognizing and understanding this fact from the beginning is of the utmost importance for the actualization of your good health and longevity.

The Genesis of Living Organisms (part 2)

As mentioned in the previous chapter, living organisms first came into existence in water some four billion years ago. This tells us that the necessary condition for the genesis and survival of living organisms must lie in water. In other words, if this condition were not found in water, living organisms would not have been able to come into existence and survive in water.

In other words, we must conclude that the key to the genesis and survival of them or good health and longevity of living organisms is undoubtedly to be found in water. In reality, what is the conventional wisdom concerning this topic?

It would probably be, "The key to good health and longevity couldn't be found in water!..." All I can say, however, is that this sort of thinking is in fact sheer nonsense. It is nothing but an irrational opinion that ignores the truth about the health and longevity of living organisms.

In my view, we cannot help but conclude that the key to the genesis and survival of living organisms, namely our own health and longevity, is to be found in water. No other way of thinking could explain the fact that the genesis and survival of living organisms in water has been repeating itself for some four billion years on a continuous basis.

Taking it back a step, this is not even a question of health and illness, because if water had not existed on the earth, and the key to health and longevity were not to be found in water, all living organisms would not have come into being to start with. Therefore, what we have to think about now are the following questions, which are the only relevant issues.

1. What kind of water would be water that maintains good health and cures disease?

And conversely,

2. What kind of water would be water that is detrimental to health and produces disease?

These are the questions that are most for us to consider, rather than repeating the generally held conventional wisdom "The key to good health and longevity couldn't be found in water".

Water that Produces Disease (part 3)

As mentioned in the preface, I have concluded that water can be divided into two kinds: water that produces disease and water that prevents and cures disease. First, I shall explain about water that produces disease. "Water that produces disease" refers to the water we drink everyday without much thought. This includes tap water, well water, rain water, water from lakes and mountain streams, underground water and spring water. In short, it is the water we usually call natural water or spring water.

Even tap water is really natural water if you consider where it comes from. It is simply natural water that has undergone processing at a water purification plant, where it is infused with chlorine or ozone gas to disinfect. The various kinds of bottled water sold in convenience stores and supermarkets, such as natural water, spring

water, mineral water, famous waters from various regions all over Japan, famous name-brand water and so forth also fall into the same category. In other words, 99.9 percent of the water we drink on a daily basis is in fact nothing more than this water that produces disease. Why am I able to make this statement? And what on earth are the characteristics of "water that produces disease?"

Put simply, the most important characteristic is the fact that such water hardly contains any hydrogen; in the water found in nature, there is almost no hydrogen gas. The reason for this, as mentioned earlier, is that although water is composed of two hydrogens and one oxygen, the action of covalent energy operating between the hydrogen and oxygen makes it extremely difficult for hydrogen to exist on its in a form that is separate from oxygen and independent of the oxygen. Furthermore, water containing abundant hydrogen does not exist in nature because even water that starts out containing abundant hydrogen loses it immediately. This means that up to 99.9 percent of the water in nature is nothing but "hydrogen poor water."

This hydrogen poor water is none other than the "water that produces disease. The reason is that hydrogen(active hydrogen) is necessary to getting rid of active oxygen, which is the cause of all kinds of diseases, and hydrogen poor water is water that is deprived of this crucial hydrogen that is essential for removing active oxygen. In other words, it is extremely ineffective in getting rid of active oxygen, and it follows that hydrogen poor water is none other than water that produces disease.

Water that Cures Disease (part 4)

We have seen that water that produces disease refers to hydrogen poor water. On the other hand, water that prevents and cures disease refers to water that contains a lot of hydrogen, namely, Hydrogen Enriched Water. (Please note that "hydrogen poor and hydrogen enriched water are terms I have coined.)

The basis for this, in brief, is that the abundant hydrogen found in Hydrogen Enriched Water becomes active hydrogen in the body and removes the active oxygen that is considered to be the cause of all kinds of diseases. In recent times practically everyone has seen or heard, on television, radio, newspapers and health magazines, the expression "active oxygen is the cause of all kinds of diseases." Active oxygen is exactly what the words include: oxygen that is active.

The action of oxygen is oxidation, which means that it burns things up or produces rust on metals such as iron and copper. Active oxygen thus means oxygen with a particularly strong oxidizing action. Expressed metaphorically, if we compare the oxygen we normally breathe to kerosene, active oxygen would correspond to gasoline. A simple explanation of the expression "active oxygen is the cause of all kinds of diseases" is that because active oxygen has a particularly strong oxidizing action (oxidative damage) on genes(DNA), it damages the genes and causes diseases.

Life is maintained in our body by the metabolism in which the oxygen we breathe in through our lungs burns up the food we take in through our mouths and the byproduct of this process is active oxygen, which is emitted as a kind of combustion gas. Let us describe this reaction, in which the air we take in through our lungs "oxidizes" our food, from the viewpoint of the food. What happens is that the food "reduces" the oxygen. The ordinary oxygen that is reduced by the food becomes active oxygen.

We maintain our lives by breathing oxygen; however, since it is believed that around two percent of the oxygen we breathe in is transformed into active oxygen, we cannot avoid producing active oxygen as long as we are alive. Therefore to preserve our health it is necessary to suppress the active oxygen that we are constantly producing and trump card doing this is hydrogen enriched water.

What is Active Oxygen? (part 5)

Active oxygen is something like the exhaust fumes produced by automobile engines. If we liken gasoline to food and air to oxygen, active oxygen would correspond to the exhaust fumes produced after the gasoline has combusted.

As already mentioned, it is believed that in burning up our food, around two percent of the oxygen we breathe in through our lungs becomes active oxygen. We breathe about twenty times per minute, and active oxygen is being produced in our bodies each time we breathe. Since the volume of air we breathe in with each breath is 500 cc, we are breathing in about 10,000 cc of air per minute.

As twenty percent of this air, or 2,000 cc, consists of oxygen, two percent of this amount, or 40 cc, becomes active oxygen. Thus, each minute about 40 cc of active oxygen is being produced in our bodies. This amounts to 24,000 cc per hour and 57,600 cc per day of active oxygen. Considering this moment-by-moment production of large amounts of active oxygen in our bodies, it is no wonder that we tend to fall prey to disease. We, on the other hand, have in our bodies several enzymes, such as SOD (superoxide dismutase), catalase and glutathione peroxidase, which remove this active oxygen.

As we get older, however, the function of these enzymes alone becomes insufficient to dispose of the active oxygen effectively. As a result, we fall to prey to various diseases. This means that if we could dispose of the "active oxygen" effectively, we would be able to achieve good health and longevity. The functional mechanism of active oxygen is oxidation. In order to suppress the (particularly strong) oxidizing function of active oxygen, it follows that we require a substance that has the opposite function to oxidation. The opposite function to oxidation is reduction, and reduction originally refers to the function of hydrogen.

Consequently, we can say that the originator of reduction is none other than hydrogen.

What is Active Hydrogen? (part 6)

It turns out that the true form of reduction is the function of hydrogen. Incidentally, various substances have been proposed as substances capable of removing active oxygen; that is, substances with reduction effect (anti-oxidants).

Among these, the most effective one is undoubtedly active hydrogen. The other so-called anti-oxidant substances cannot compare to it. As mentioned previously, active oxygen is oxygen with a particularly strong oxidizing function. What we normally call "hydrogen" refers to molecular hydrogen or H_2 . In contrast, atomic hydrogen or H is specially called "active hydrogen" because it has a particularly strong reducing function. Let us look at Table 1 in the last section of this booklet.

The water around us (such as tap water) is hydrogen poor water, but if you infuse this water with hydrogen gas taken from a hydrogen gas cylinder, it can reach up to a value of 1.49 ppm (hydrogen saturated water). Meanwhile, by inserting the hydrogen producing mineral stick into the same water, you can obtain water that is abundant in hydrogen, which I call Hydrogen Enriched Water.

Now, what happens when we incorporate Hydrogen Rich Water into our everyday lives? In a nutshell, there will be a huge decrease in our probability of getting sick.

Why is it possible to make this statement? Because the thinking goes as follows: When Hydrogen Rich Water, (water rich in molecular hydrogen), enters our body, this molecular hydrogen is broken down into atomic (atomic hydrogen) in the body. The active hydrogen bonds with active oxygen, though to cause all kinds of diseases to produce safe, non-toxic water that leaves the body in the form of urine and sweat.

In short, we may consider that when Hydrogen Rich Water enters our body, it gets rid of the active oxygen that is produced in the body from moment to moment. Therefore there is a significant decrease in our probability of getting sick.

What are Hydrogenases? (part 7)

Hydrogenases are enzymes that can reversibly split molecular hydrogen to produce atomic hydrogen.

It is believed that **we apparently have such hydrogenases in our bodies**. Incidentally, all living organisms on this earth, both plant and animal, are termed "DNA organisms." This means that all living organisms on the earth share common ancestor. I will now write about our ancestor born 3.8 billion years ago.

In 1997, an article called "Biological Activation of Hydrogen " by R.P.Happe of Amsterdam University was submitted in the English Journal "Nature", Vol. 385, pp 126, '97. The main thrust of this article is as follows. **Hydrogenases are enzymes that can reversibly split molecular hydrogen**. the crystal structure of a Ni/Fe hydrogenase (from the bacterium *Desulfovibrio gigas*) was reported. Ni/Fe hydrogenases are among the oldest enzymes (3.8 billion years old), demonstrating that early life forms had developed an effective way to activate molecular hydrogen at ambient temperature and pH.

My own explanation of this article is as follows.

It is active oxygen that threatens the survival of living organisms. **For living organisms to survive, it was necessary to develop a mechanism for scavenging active oxygen. The best way to scavenge active oxygen is by means of atomic (active) hydrogen. To produce atomic (active) hydrogen, it is necessary to split molecular hydrogen.** The hydrogenase developed by bacteria 3.8 billion years ago, an enzyme that split molecular to produce atomic hydrogen.

We have seen, then, that **to ensure their own survival, it was necessary for living organisms to achieve the ability to produce active hydrogen in order to scavenge active oxygen**; hydrogenase developed by the oldest bacteria 3.8 billion years old was one of these enzymes. Moreover, we may consider that this hydrogenase was the ancestor found in the bodies of higher creatures including ourselves.

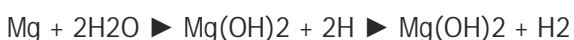
Making Hydrogen Rich Water (part 8)

Now we will talk about the actual method of making Hydrogen Rich Water . The well known method in Japan is the electrolysis of water (the principle of electrolysis of water is to split water, a compound of hydrogen and oxygen, back into original hydrogen and oxygen.).

The two kinds of water obtained by this process have been called ionized alkaline water (water with increased hydrogen) and ionized acidic water (water with increased oxygen), which you have probably heard of. **I studied electrolyzed water for many years, and it is true that this cathodic water contains a large amount of hydrogen immediately after it is produced.**

However, since hydrogen is the lightest element in the universe, this water loses its hydrogen rapidly, and in 2001 it was revealed that it reverts to ordinary water only several minutes after it is produced. Therefore I decided to call this cathodic water, "Temporarily Hydrogen Rich Water" (hydrogen rich only after electrolysis).

In contrast, the water I have named "Constantly Hydrogen Rich Water ", and which I am now presenting as a new proposal, is water obtained according to chemical formula written below. It is a reaction in which magnesium metal reacts with water to produce magnesium hydroxide, while producing at the same time atomic hydrogen which then makes molecular hydrogen.



Mg = Magnesium Metal H₂O = Water

Mg(OH)₂ = Magnesium Hydroxide H = Atomic Hydrogen (Active Hydrogen)

H₂ = Molecular Hydrogen (Hydrogen Gas)

Incidentally, general textbooks say that magnesium does not react with cold water or room-temperature water. Actually, however, we have verified experimentally that magnesium reacts well even with cold water to produce hydrogen gas.

Please see the home page of the Ishikawa Prefectural Komatsu Technical High School (<http://www.kth.ed.jp/pub/staff/gie/index.html>) for the following:

"...magnesium powder is not soluble in water. It reacts gradually with cold water and intensely with hot water, producing hydrogen. It dissolves in dilute acids and alkalines, producing hydrogen...."

Our new proposal concerns the Hydrogen Producing Mineral Stick made of a magnesium base mixed with natural pebbles. Simply by inserting this stick into water, you can make Hydrogen Rich Water easily, reliably and inexpensively.

Feces Lose Their Unpleasant Odor (part 9)

A week or two after people begin to use Hydrogen Rich Water, they notice that their feces have literally changed in comparison to when they were using tap water (hydrogen poor water).

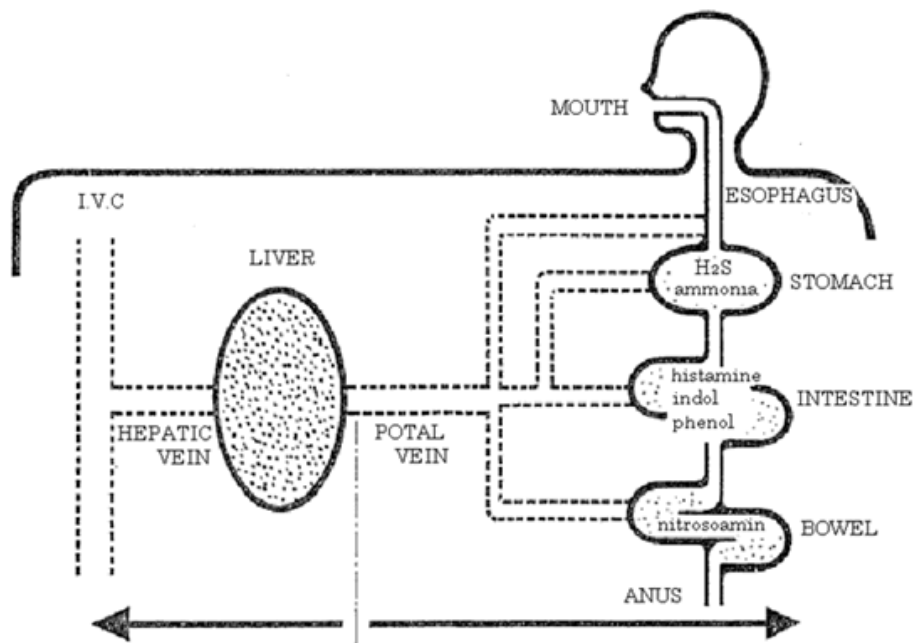
That is, the "blackish brown, bad-smelling, hard, heavy feces" of the tap water days changed to "light brown, soft, light feces without a strong bad odor", similar to the bowel movements that appear in the diapers of a breastfed baby. We adults tend to think that it is natural for adults feces to have a bad smell, but this is actually a great misconception.

Every breastfeeding mother knows from her experience that when her baby has light-colored soft stool with very little bad odor, she can be sure that the baby is healthy, drinking plenty of breast milk, and growing well. On the other hand, when the baby has "blackish, bad-smelling, hard stool," the baby is cranky and feverish, and sometimes vomits up milk.

The condition of producing offensive feces is generally called abnormal fermentation of gastrointestinal tract, which indicates the opposite of normal fermentation, but simply put, it is "decay."

In other words, if the food we take in by mouth has a rotten smell (bad smell) when it is excreted from the anus, this means abnormal fermentation has taken place.

Let us look at a simple explanation concerning the substances that cause disgusting feces brought about by abnormal gastrointestinal fermentation



Some of the substances that cause disgusting feces are hydrogen sulfide, ammonia, histamine, indole, phenol or nitrosamine, all of which are toxic, pathogenic, substances.

- Hydrogen Sulfide : A strongly toxic substance with a distinctive rotten-egg odor.
- Ammonia : A strongly toxic substance with a distinctive irritating odor commonly found in public toilets.
- Histamine : A substance that triggers allergic conditions.
- Indole : A toxic, carcinogenic substances with a smell like rotten onions.
- Phenol : Recognized to be carcinogens due to carboic acid.
- Nitrosamine : Known as a first-class carcinogen.

In a sense, failing to deal with offensive feces is like having a time bomb in your body. You can, however, defuse this time bomb by drinking Hydrogen Rich Water.

Modern Medicine is nothing but "Downstream" Medicine (part 10)

I have concluded that modern medicine is nothing more than "medicine to alleviate downstream pollution while leaving upstream pollution alone."

Let me explain the basis of this argument.

When we digest the food we take in by mouth in our stomach and intestines, these digested nutrients are absorbed through the intestinal walls. The nutrients absorbed through the intestinal walls pass through the portal veins and are carried to the liver in that order. The nutrients that are carried to the liver undergo various metabolic processes, after which they pass through the hepatic vein into vena cava inferior and carried to the organs all over the body by general circulation.

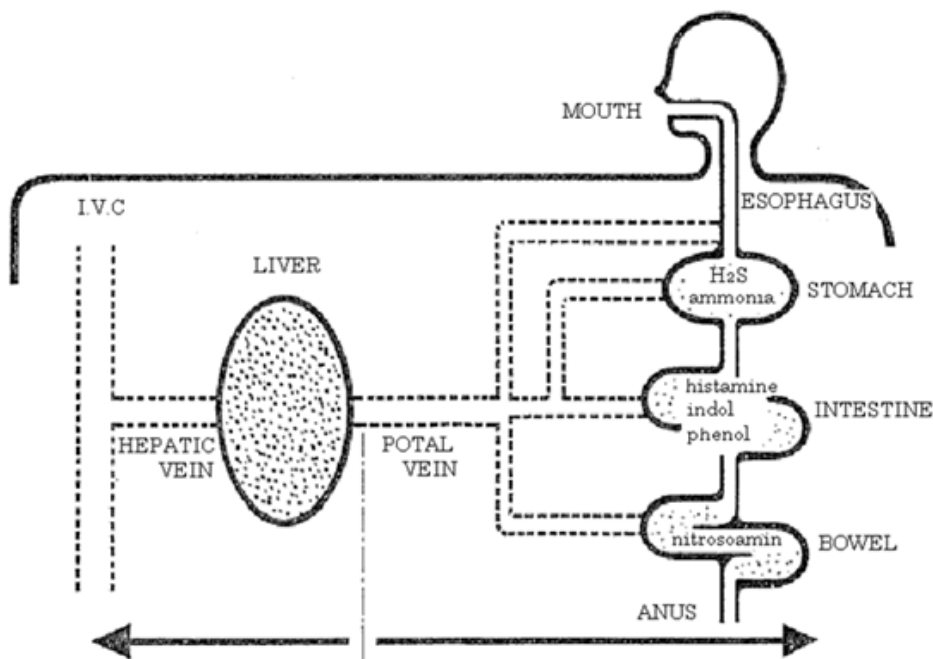
That is to say, they are transported in this order:

Liver ► Hepatic vein ► Vena cava inferior ► General circulation ► Organs all over the body.

As a whole, the order is:

Digestive system ► Portal vein ► Liver ► Organs all over the body.

If we think of the liver as a kind of "checkpoint station", the parts of the process that occur before reaching the liver can be referred to as "upstream", and the parts that take place after leaving the liver as "downstream."



As shown in Illustration , the portion from the mouth to the liver can be called as "upstream" (Lake Ontario : checkpoint before liver) while the organs that come after the liver can be as called as "downstream" (River Saint Lawrence : checkpoint after liver).

Looking at metabolism this way, we see that when the "upstream" is polluted, the "downstream" will become polluted as well. Thus, the disease-causing substances of upstream will cause diseases of downstream.

Now I think you understand my statement that "Modern Medicine is medicine to alleviate downstream pollution while leaving upstream pollution alone."

What, then, does "upstream pollution " mean ?

It means "production of offensive feces" by "abnormal gastrointestinal fermentation." Because the substances that cause offensive feces are substances that result from the putrefaction of protein (eggs, fish or meat), they are called "putrefied metabolites." In short, it is as if people who always excrete offensive feces were eating rotten eggs, fish and meat everyday. The difference is that if they were eating rotten food, they would get sick immediately, while in this case the food rots after they eat it, so it takes more time for them to get sick.

Therefore, it is important to lead a lifestyle which does not produce offensive feces. But now we have what can change offensive feces into clean feces as if by magic, that is Hydrogen Rich Water.

Afterword

It is believed that in the near future hydrogen will change our lives from their very foundation.

Something that is attracting a great deal of attention at the moment is the fuel cell automobile. The fuel cell vehicle is based on the principle of running on the energy generated by the chemical reaction between hydrogen and oxygen. This would be the ultimate eco-car because the only byproduct of this reaction is water.

Another reported idea is the use of this same principle for an electrical power generator to be installed in homes as a power source for lighting, heating as well as mechanical application. When this happens, the world would literally change because each household would have its own power station and there would be no more need for thermal, hydro and atomic power plants, as well as power lines and steel towers.

What interests me in particular is that this time comes; it will be extremely simple for every household to produce its own Hydrogen Rich Water.

When Hydrogen Rich Water can be obtained simply, reliably and cheaply, I think the world will change dramatically in a different sense from that mentioned above.

That is, maintaining good health and preventing disease will no longer be considered topics worth discussing, and people will not constantly be making a fuss of diseases ("It's cancer!" "It's diabetes!" "It's hay fever!") as is presently the case.

Also, if you have drunk a little too much alcohol or smoked a little too much, or don't feel well, or seem to be catching a cold, or have caught influenza, it would be easy to get rid of the symptoms simply by consciously increasing your intake of Hydrogen Rich Water.

I would like to end with the philosophy I have learned from Hydrogen Rich Water during these past eighteen years. I think hydrogen should be called "the source." That is to say, hydrogen, the element with the atomic number One, is the "source" of all the other elements, and the sun, which nurtures all things with its solar energy, is actually a big ball of hydrogen.

At the same time it is hydrogen atom, or active hydrogen, that protects us living organisms from disease. My conclusion follows. I propose that the Creator of the universe, and the Creator of all living things, created hydrogen as the first element in order to protect all its living creatures from disease.