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ENGINEERED WATER TREATMENT SOLUTIONS

Water Tests & Analysis, Systems Design, Equipment & Supplies

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IMPORTANT QUESTIONS

To consider

Before you buy

A WATER IONIZER

TABLE OF CONTENTS

INTRODUCTION

There is a passionate debate between people who are absolutely convinced that water ionizers are among the most important medical device to come along in decades, and people who see it as just another of the "snake-oil" rostrums periodically advanced by the alternative health care industry. Advocates of each position are completely at odds with one another, and that leaves people who would like some honest guidance completely confused.

The purpose of this article is to help bring some clarity to those who are investigating. On the one hand, I admit to being a passionate advocate for the alternative health-care industry. As a biochemist I understand the mechanism of action of many herbs and nutraceutical, and the value of restoring balance through the use of breathing, water, air, sunshine, diet, exercise, and the kind of counseling that shows people how to relieve stress and overcome fear.

On the other hand, I have considerable medical training, including advanced training in biochemistry. This knowledge has been invaluable in helping me see how things work. Without it I couldn't have compounded the many medicines I've developed for heart and circulatory system disease, arthritis, digestive dysfunctions, and more.

While this education is a great blessing, what influences me the most are my core values. These have evolved from over a half-century of studying the principles that underlie the most advanced system of wisdom I have ever encountered – a system for lack of a better name I call Ho'ala Huna.

Ho'ala and Huna are Hawai'ian words that can be translated as "that which causes an awakening to the true nature of Reality." It is rooted in the common sense and self-evident idea that there is such a thing as an ultimate Reality. This Reality is different than your reality or my reality because our perspective is limited. This Reality is completely self-existent and perfect. It is also completely impersonal in the sense that it doesn't care how many people accept it for what it is. It simply IS. In other words, Ho'ala Huna is centered in discovering the nature of the "is-ness of things."

Think of Reality as a "connect the dots" puzzle. Each dot is a Principle. Connect the dots correctly and a world view emerges that "works" to unlock power. Connect the dots incorrectly, and what we get is a distorted view that doesn't work. When things work, life energy (we call mana) flows. When things don't work, life energy doesn't flow. The result is pain.

In the old Hawai'ian way, these dots or Principles (capital letters means that we are talking about Reality with the big "R") are captured by certain other Hawai'ian words.

For example:

> *"Huna"* refers to *"the secret or sacred awareness of Reality" that remains a secret to most people most of the time;*
>
> *"Ho'ala"* refers to *"that which causes one to Awaken to Reality";*
>
> *"Pono"* means *"life energy flows where things are in Harmony with Reality";*
>
> *"Makia"* means *"that to which we pay attention comes alive";*
>
> *"Aloha"* means *"Love is the marriage of Life and Light";*

There are many more.

What gets in the way of our ability to see Reality is our beliefs. In our way we say, ***"Belief is necessary only for that which is not Real. That which is Real can be Recognized, and it works – reliably and flawlessly."***

Beliefs are **substitutes** for Reality. Beliefs allow us to construct a story that seems to make sense of our world, when we don't know better. As such, beliefs are extremely important – even sacred – to people who need them.

People who "need to believe" can never be persuaded to let go of their beliefs – even if those beliefs are creating a great deal of pain not only to the believer, but to the people who are connected to the believer in some way. It doesn't matter whether the arena is that of religion, politics, sexuality, or ideas about health care. People who "need to believe" aren't ready to enter the Light *of* Reality because at some level they are very afraid, and their beliefs make them feel safer as long they remain "faithful" to the belief. Another word for this kind of belief is dogma.

Dogma is the staple of religion. Dogma is the collection of beliefs upon which a religion stands and becomes relevant to people. At their core all religions are societal organizations that provide a safe and reliable networking and support structure for its members. To take advantage of that support structure, a member is required to subscribe, adhere, and be loyal to the dogma as presented by that religion. It doesn't matter whether the "religion" is about God, politics, medicine, cultural perspectives, or ideas cloaked under the name of "science."

This is where confusion sets in. Many medical practitioners subscribe to a "religion" that forces them to see a person as an assemblage of parts. When one of these "parts" becomes broken, they advocate surgery and prescription medications as the primary treatments for disease. However, **people aren't an assemblage of parts. People are a complex milieu of physical processes interwoven with and directed by emotions, which in turn are products of one's spiritual perspectives and attitudes.**

Ungrounded fear is an example of an emotion that is rooted in a dysfunctional spiritual attitude. This kind of fear has an undeniable physical affect on the human body and can override all physical methods of treatment. There are many others. In its purest form, Hawai'ian and other traditional forms of medicine take this Reality into account and attempt to deal with the kinds of shortsighted spiritual perspectives that create ungrounded fear along with any physical symptoms it creates.

On the other hand, there are many alternative medical practices that are extremely ungrounded — some to the point of being dangerous. They are no more in alignment with Reality than the many shortsighted medical attitudes they are attempting to replace. At best, they are misguided attempts to apply ungrounded spiritual beliefs to the arena of healing. At worst they are nostrums designed to extract money from naive people who have not been able to find a solution to their problems elsewhere.

Promoters of the latter can be extremely clever. They know that people who are uneducated about health issues have no recourse but to place belief in testimonials from people who are supposed to know more than they do about the subject. That is why irresponsible doctors, dentists, chiropractors, naturopaths and other health care professionals are usually at the core of such deceptions. Some of the statements they make in defense of their ideas reveal either a profound personal ignorance of the subject, or willful malfeasance. Either way, they do a great disservice to the practice of medicine, and the many beautiful people who dedicate their lives to their practice, whether that medicine be conventional or traditional/alternative in its approach.

For my part, I am only interested in that which I can know to be Real. If something is Real, I know I can Recognize it, and it will work – reliably and flawlessly. I have over 30 years of experience with water, conventional medicine, biochemistry, and a variety of alternative healing modalities. I understand water and water treatment methods at a level few other people can claim.

What I know for sure is that I can't convince *believers* one way or another of anything. No matter what I say, they are not capable of moving into a perspective that will allow them to see what I see. That is OK. Such is their choice, and as an undeniable part of the ALL THAT IS that is Reality, they have the inalienable right to make that choice. However, all choices have a consequence, and choices that reflect an allegiance to a belief instead of an awareness grounded in Reality inevitably bring pain . That makes pain a perfect part of Reality because pain is the tool used by the impersonal ALL THAT IS to wake each of us up to Reality which exists in a state of perfect Love. That is the meaning of "Aloha" the marriage of Life and Light.

Se even pain, as a part of the ALL THAT IS, is perfect. Pain is the medicine for belief. No matter how ingrained the belief, when people get enough pain, they become willing to look at life from a higher perspective. That is when the healing begins.

When it comes to the subject of this discourse there is one other thing I can know for sure. Ungrounded ideas bring pain – sooner or later. Water ionizers are promoted using a lot of information that is simply not Real. As a result, they bring pain.

Many believers would deny that this is true. They can deny all they want but I see evidence of that pain all around this subject.

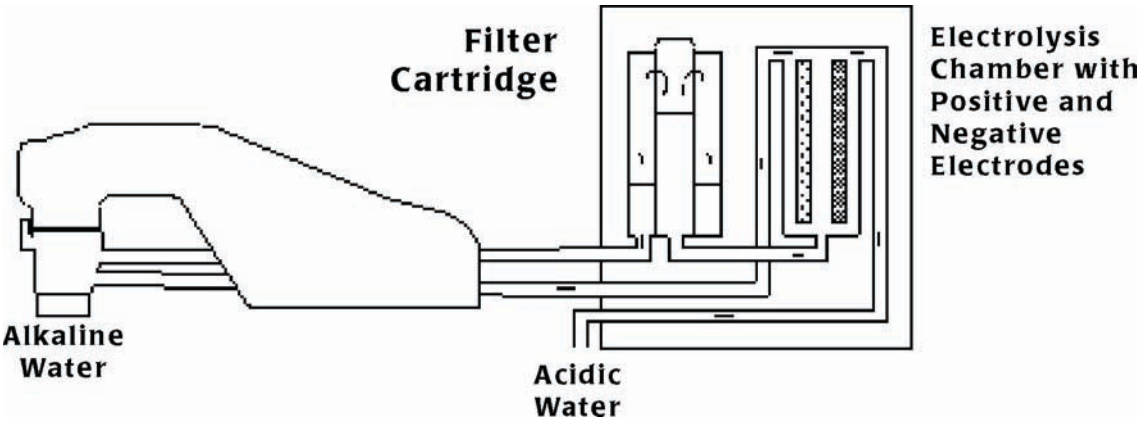
I see the pain in the eyes of people of very modest means whose loved ones have been diagnosed with cancer and who are being told that if only they can come up with the $4,000 it takes to buy one of these things their loved one can be cured. I see the pain in a father's eyes when children don't have clothes of shoes for school, or enough food to eat because "Mom needs a water ionizer so she can be healthy." I see the pain in those same eyes when Mom gets sicker instead of better. And finally, I see the pain in those same eyes when Dad realizes that the reason Mom died is because the water ionizer concentrated toxic arsenic in the water that was supposed to cure her.

This is no joke and it is not an over-dramatization. I personally know more than one family who has gone through this or something similar. It is a scenario that is playing itself out in homes all over this country on a daily basis.

Water ionizers are over-hyped water treatment appliances that produce water that is unbalanced, and therefore not life-giving. They are a very expensive way to concentrate dangerous ions like lead, cadmium, mercury, and arsenic in treated water to levels that are extremely toxic.

Believe otherwise to your own peril.

WATER IONIZER BASICS



THE NAMES

THE CLAIMS FOR IONIZERS

The claim is that an alkaline stream of water is particularly healthy for the body for at the following three reasons:

1. Alkaline water helps neutralize excessive acidic wastes produced by modern diets that are too high in foods that create an acid pH in the body.
2. Water that undergoes the process of electrolysis hydrates the body more efficiently because "clusters of water molecules are smaller" than water not treated by such systems.
3. Water produced by the process of electrolysis has an improved redox potential that turns water into a beneficial antioxidant and electrolysis with one of these machines is the only way to achieve this benefit.

In the next section, we will proceed to show why these three claims are not Real. However, what is most unsettling to real water scientists is how these false ideas are used to justify more dangerous claims - like how drinking water processed through an ionizer can cure serious diseases like cancer, heart disease, and diabetes.

In fact, **ionizers can actually concentrate dangerous ions in the water that are known to cause cancer and diabetes.** Yet many cancer victims are lured into paying the $1,000 to $4,500 required to purchase one of these things, when in fact they don't help, and actually may do great harm to a recovering cancer patient.

Another completely false claim is that ionizers produce water that is microbiologically safe. ***IN FACT, IONIZERS DO NOTHING TO KILL PATHOGENS IN WATER!***

Most of these products are sold through multi-level marketing programs. As with most scams that use this method of distribution the parent company keeps a low profile and makes few claims that would attract the scrutiny of regulators such as the U.S. FTC. Instead, they recruit thousands of "independent agents" who are provided with sales literature containing false and misleading claims supported by books written by very questionable authors like "Doctor" Theodore Baroody or the now deceased Dr. Mona Harrison. The agents then transmit these completely false and erroneous claims to their customers or put them up on their own web sites, which over the last few years have proliferated into the thousands. These agents, few of whom are well-enough educated to evaluate these claims or to realize that they violate the FTC rules on deceptive advertising, are as much victims as are their consumer customers. There are now so many, that the illusion has been created that the material they promulgate is some form of "leading-edge" science. No matter how many people repeat these claims, it is not.

Consider, for example, this outright lie that can be found at some Kangen Water sales sites:

"It is well known in the medical community that an overly acidic body is the root of many common diseases, such as obesity, osteoporosis, diabetes, high blood-pressure and more..." [link1, link2]

To further mislead science-naïve readers, another Kangen page employs the common ruse of misrepresenting the 1931 Nobel Prize work of a famous pioneer of biochemistry Dr. Otto Heinrich Warburg. This page mixes enough fact with fiction to lead the unsuspecting reader to believe that Dr. Warburg's work supports the many spurious claims made for water ionizers. In fact, it doesn't, nor is there any credible scientific research that would. Those who believe otherwise are totally misguided.

It is important to note that **NO INDEPENDENT VERIFICATION FROM ANY REPUTABLE ORGANIZATION** of any of the claims for these products is available. The only "verification" comes from articles written by individuals who profit from the sale of these products.

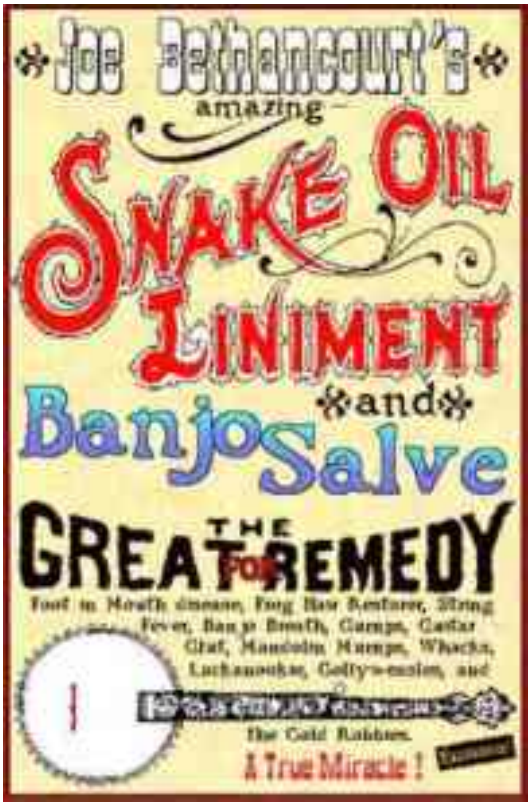
An example is the often-quoted Dr. Hidemitsu Hayashi and Dr. Yoshiaki Matsuo, Director and Vice Director of the Water Institute of Japan. Dr. Hayashi is said to be a heart surgeon. Perhaps this is true. We are unable to verify this. Neither can our research any evidence that the "Water Institute of Japan" has any serious professional standing. It appears to exist solely for the benefit of the purveyors of a brand of water ionizers called the "Jupiter" series of products.

Unfortunately, because of the immense profits associated with the sale of these things (typically $1,000 or more commission per unit sold) many irresponsible doctors, chiropractors, doctors and dentists sell ionizers by repeating the many false claims listed above.

Highly regarded health institutes, retreat, and healing centers also recommend them as a matter of course to the patients who come for alternative health treatments for cancer and other serious diseases. Some of the people recommending them come with some very impressive-sounding credentials. To me this is a very sad reflection on the quality of primary health care in this country whether the source is conventional or alternative. I would hope that people who have attained a doctorate degree would be able to remember their high school chemistry. Unfortunately, many don't.

There is barely a week that goes by that I don't have an extensive conversation with some doctor, naturopath, chiropractor or dentist who becomes concerned that their recommendation has been challenged by me so they decide to give me a call.

Most of these calls end well, but a few don't. Usually, once the doctor or dentist realizes they are talking to an accomplished biochemist and expert at water chemistry, they begin to ask questions and listen. When they do their high school chemistry starts to kick in and they realize that what I am saying here is absolutely true. They leave the conversation realizing how dangerous it can be to fall prey to the abundance of hype that can surround these products, and they commit to do what they can to educate their patients to the truth about water ionizers.



Unfortunately, some doctors and/or dentists are not so professional. They may have a degree, but they have gotten so ungrounded and off the path of true science that they are walking health-care accidents looking for a place to happen. These include many people like Dr. Theodore Baroody and Dr. Mona Harrison who write books and promote practices based on ideas that are truly bizarre.

An open mind is the key to true professionalism. It is true that great advancements in science are often temporarily blocked because an unconventional theory stands to overturn conventionally accepted ideas and the institutions that have grown up around them. Nevertheless, such work eventually prevails because it builds on what is already known to be Real. Remember our "connect-the-dots" analogy? New dots that are Real always make the picture clearer. No so for the claims made for water ionizers.

The hype used to sell these products contain many statements that are factually incorrect but clothed in so much pseudoscientific babble that people can be persuaded to believe things like ***"ionizers make water clusters smaller and more bioavailable"*** or ***"ionizers produce water that carries more oxygen to the cells thereby causing cells to revert from being cancerous to healthy again."***

Because their patients trust them, health care professionals have a duty to be as informed as possible. **It is not hard to verify the truth of what I bring up here.** Those who truly want to become informed about this issue and who have the chemistry background required of a true health care professional can easily do so just by using this material as a starting point. Unfortunately, some professionals refuse to become informed - perhaps because of money. Those who fit in this category are dangerous.

EXAMINING THE CLAIMS

Let's examine the major claims for ionizers one by one.

Claim #1: Electrolysis units create an alkaline stream of water that can improve the body's overall pH by neutralizing accumulated toxic wastes that are acidic.

Here is what the real science says: It is true that electrolysis units can create alkaline and acidic streams of water. What they call the alkaline or "reduced" water is really water that contains a high proportion of the alkaline minerals naturally found in water, primarily calcium and magnesium. However, **it is completely untrue that drinking any amount of such water is capable of altering your body's tissue pH to any appreciable degree.**

To live, your blood and fluids that surround your body's cells must be kept at a very controlled pH. Your normal pH, the measure of acidity vs. alkalinity, is carefully monitored by various body systems to stay between 7.35 and 7.45. This is slightly on the alkaline side of neutral (7 on a scale of 1-14).

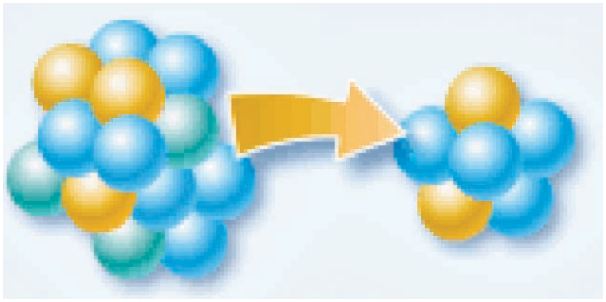
Eating different foods or consuming acid or alkaline water can impact the pH in the gut, saliva, and urine, but the body makes sure that the pH does not change in the body's tissues. Excess acid is released from the body through your breath and urine.

What this means is that a diet high in alkaline foods or water cannot slow down the aging process and/or inhibit the growth of cancer cells by turning intracellular fluids more alkaline. While certain alkaline foods and even water may contain nutrients that are anti-carcinogenic, **neither a diet high in such foods, nor drinking copious amounts of alkaline water can change the pH of the environment in which your cells live. This is a scientific fact that has been demonstrated beyond question!**

The important kinds of chemical reactions such as those involved in cellular metabolism can only take place within the normal 7.35 - 7.45 range. That is why the body so carefully moderates its own acid/alkaline balance.

Therefore, even consuming large quantities of acidic or alkaline foods or water, or taking antacid tablets, or holding your breath for 5 minutes will not change the overall pH of the intracellular regions your body, nor would one want it to. That is why the majority of health claims made for water ionizers are not possible.

Check out what Dr. Andrew Weil, M. D. has to say about these claims here:
http://www.drweil.com/drw/u/id/QAA98873



Claim #3: Water that undergoes the process of electrolysis has an improved redox potential that turns water into a beneficial antioxidant. Electrolysis with one of these machines is the only way to achieve this benefit.

Here is what the real science says: Of all the claims made for water ionizers, this one does have *some* truth to it. Water treated by electrolysis does exhibit an improved redox potential because changes in its ionic content can cause a water solution to become an electron donor.

It is also true that any substance that can act as an electron donor in the body can be classified as an anti-oxidant. Anti-oxidant's are beneficial to health to the extent they can donate electrons and neutralize free radicals. Free radicals are dangerous to the extent they steal electrons from (oxidize) vital structures in the body like strands of DNA and cell membranes. When free radicals do this they can create damage that contributes to aging, cancer, and other health care problems.

What is not true is that the value of water as an anti-oxidant is proven to offer a significant health benefit, or if so, that electrolysis is the only way to achieve this goal for drinking water. In fact, the best way to lower the redox potential of water is to add KDF®55 redox media to a filter system. This technique has several advantages over ionization.

- KDF®55 can improve the redox potential of water ***better than electrolysis***.
- KDF®55 ***doesn't require electricity to work***.
- KDF®55 removes dangerous heavy metals like lead, cadmium, mercury. ***Ionizers actually concentrate these dangerous substances in the treated water.***
- KDF®55 ***kills many pathogenic organisms like bacteria and viruses, and renders the treated water less able to sustain their growth (bacteriostatic effects.) Ionizers cannot kill pathogenic organisms or keep them from growing in the treated water.***

Interestingly, while many websites for ionizers tout this benefit for their products, the explanations of why this happens makes their lack of scientific understanding very evident. For example, many confuse the process of oxidation (the removal of an electron from an atom) in the reduction/oxidation (redox) process with an overabundance of "oxygen" in the tissues. "Oxidation" is a word used to describe a unique type of chemical process and this has nothing to do with the degree to which tissues are concentrated with oxygen. They are not related.

THE DANGEROUS REALITY

If these false claims were the only problem with these overpriced water treatment appliances, it wouldn't be so urgent. But while **these units DO NOT make water that is healthier, they may produce water that is actually DANGEROUS TO CONSUME!**

As a point of fact, water ionizers do not ionize water to any appreciable degree. As we said earlier, what they actually do is use positive and negative electrodes to segregate substances called ions that are positively or negatively charged as a result of being dissolved in water.

Positive ions are called cations, and negative ions are called anions. The stream of water containing the positive ions is dispensed as "alkaline" water, and the stream containing the negative ions is dispensed as the "acid" water stream.

Because pure water cannot be ionized to any appreciable degree, how alkaline the water made by one of these machines is limited by the degree to which these cations (positively charged ions) already exist in the water being treated. These machines can and do concentrated these cations in their alkaline water stream – sometimes to a level that is several times that of the raw water. That is why the nature of these cations – not alkalinity - is the most important factor in the quality of the water.

Therein lies the problem. With the exception of ammonium, these cations are mostly the metals from the periodic chart, and can include not only the harmless cations of sodium, calcium, magnesium, potassium and phosphorus, but also dangerous substances like lead, mercury, arsenic, aluminum, barium and more.

In municipal water some of these cations like arsenic and lead exist at or near levels that are known to be dangerous, but the EPA does not lower their enforceable maximum contaminant levels (MCL's) for them either because they are too difficult and expensive for cities to remove or because the substance comes from the water mains or the plumbing in the home.

Well water can be far more dangerous than municipal water, containing levels of arsenic, cadmium, mercury, barium, selenium, uranium and lead that are already way above the limits known to cause health problems. To put this water through an ionizer that concentrates the presence of these dangerous substances in your drinking water by several times is a very dangerous thing to do.

The process of water electrolysis is a process that unbalances water, the result of which is a concentration of certain cations to levels that can be very dangerous. These include arsenic, lead, cadmium, mercury, aluminum, barium, and others.

The danger of lead ingestion is greatest to infants and children whose brains, organs and central nervous systems are still developing. Mothers who use this water to make baby formula can cause their babies to suffer a permanent REDUCTION IN IQ and other nervous system problems when ionizers boost levels of lead.

Boosting arsenic content of water is like pouring gasoline on a fire for people who are fighting diseases like cancer and AIDS! Arsenic lowers immune system function and is a powerful carcinogen that not only causes a variety of dangerous cancers, but also accelerates the growth of cancers that are the result of some other problem. New research reveals that even the low levels of arsenic (<10 parts per billion) that are permitted by the EPA to be in municipal tap water can depress the immune system enough to make the H1N1 flu virus fatal. Arsenic at these levels is now implicated in type 2 diabetes. Boosting arsenic levels several-fold is a very unwise thing to do, and **contrary to what the manufacturers may claim, the carbon pre-filters used by these units are NOT CAPABLE of removing these contaminants.**

Another serious problem is that many of the people who get involved with selling water ionizers are led to make false representations about the ability of these appliances to destroy pathogens in water. I am personally aware of several people who were marketing ionizers as disinfection devices in some older communities where wells were contaminated with dangerous bacteria because the wells were located too close to a septic system. I know of others who were selling them to people whose water supply was derived from a nearby river contaminated with giardia and cryptosporidium cysts.

In each case, the people making the claims were well meaning but completely misinformed by the multi-level marketing hype that is commonly used to promote these products.

These people became very angry when customers who had bought an ionizer for this purpose found out that what I was saying was absolutely true and demanded their money back because of the misrepresentations that were made about this issue. Not only did they find themselves having to refund a $3,000 - $4,000 sale (which was extremely difficult if not impossible for some of them) but they also found their whole business destroyed when it became evident that the product couldn't make water in those instances safe to drink.

While I understand the anger, these people should be grateful I stopped the problem before people got ill or died from drinking the unsafe water produced by these things.

MULTILEVEL MARKETING PROBLEMS

Multi-level marketing schemes seldom deliver what they promise to everyone but the people at the top. That is because they are a very expensive way to market any product. The commission structure has to be extreme in order to compensate all the levels of the "down line." In order to justify the high prices, the products – even those that have some economic merit – tend to be overhyped, not only to the people who buy them, but also to the people who are being coaxed into joining the downlink to promote them.

A good example is Amway. About 20 years ago Amway decided to profit from the first wave of concern about water quality by selling a countertop water filter designed to remove chlorine and the disinfection by-products of chlorine from water. This product was nothing more than a short piece of PVC pipe with PVC caps glued to both ends. The filter was filled with the cheapest grade of carbon it was possible to buy. At the bottom a hole was drilled into the pipe and a diverter valve was attached to supply water to the filter. At the top another hole was drilled and a short tap was screwed into that hole to dispense the water. Even today the filter could be made in anybody's home garage for less than $10.00 in parts.

The product retailed for something like $139.00. To sell the product lots of claims were made by Amway reps that at best – were hype, and at worst – complete fabrications. The idea was to create an argument so compelling people would be willing to fork over that kind of money for a piece of PVC pipe filled with carbon.

What bothered me most is that there was an interesting disconnect between what I was being told orally, and what was published in the company's literature. When I pointed out that a lot of the claims being made for the product were not in the company literature – at least in the way they were being presented to me in person, I was told that the claims were presented at "sales-meetings" where some "expert" had presented the benefits being touted.

Since then I have found that this is a common tactic of many multi-level marketing schemes. As I said earlier, such companies are very careful to make sure that no literature they produce has anything in it that will leave them liable to a serious lawsuit, then people in the "up-line" give sales meetings and produce "experts" who make all kinds of unsubstantiated claims. These claims are then buttressed with legions of testimonials from people who appear to be absolutely credible. It is a sad way of doing business that makes victims out of not only the end buyers of these products, but also those who are convinced they will become wealthy by joining the program and convincing others to sell them.

The real target market of most of these products is not the end-user, but people who can be convinced that selling such products is the path toward untold riches. I have personally been on the receiving end of dozens of attempts to get me to join someone's down-line in selling not only water treatment products but other magical elixirs as well. Recently some lady called who said she met me at the Water Quality Association tradeshow in Chicago in April and wanted to show me why I should be selling Jupiter water ionizers. In fact, I didn't go to that show nor would I waste my time with her.

I have repeatedly been shown projections that demonstrate how "easy" it would be for a person with my reputation in the water industry to develop an income of $50,000 - $100,000 per month and even more from selling water ionizers! Best of all, a person in my position really didn't need to do anything except endorse the product and its benefits on a website. What a deal - get rich doing almost nothing!

After listening to these pitches several times a year it is easy to see how some doctors and other health-care professionals are induced to "take the bait." I'm sorry to say that some of these credentialed people actually do. But what is particularly sad is to watch people who are struggling to find a way to take care of their family be talked into investing money and time they can't afford into promoting products based on hype and outright misrepresentations.

It is typical for multilevel marketing schemes to sell products of dubious value through testimonials and unofficial marketing materials made by management or other people in the up-line of the multi-level distribution pyramid, or who otherwise have a lucrative financial interest in making such over-hyped claims**. They do this because their products will not stand up in the light of objective testing.**

In the case of water ionizers, no matter the hype to the contrary, all are made of nothing more than a cheap carbon filter combined with a common electrolysis unit. Over-stated claims about the cost of platinum used in the product are combined with shiny cases, fancy looking knobs and controls, electronic displays, and packaging specifically designed to make such products look more expensive than they really are. The cost to manufacture these things cannot exceed $150 yet some are sold for as much as $4,000 or more. Most are sold for at least $2,500. **This is not new technology.** The capacities of both technologies have been well understood for decades. There is nothing new that could account for the uniquely valuable benefits promoters of these products claim they can deliver, nor is there any reason such machines should cost thousands of dollars – the price of platinum not withstanding. The only reason these things cost so much is that the commission structure is enormous.

DANGEROUS HEALTH CLAIMS

The following fantastic claims are reproduced exactly as they appear on distributor's websites and/or the literature provided to prospects that are being sold the product. They are typical of most of these websites. The vast majority are either **true of any good quality water,** or **pure baloney**.

HEALTH BENEFITS OF DRINKING IONIZED MICROWATER - For the Prevention/Reversal of:

1. **High blood pressure**
2. **Morning Sickness**
3. **Diabetes**
4. **Osteoporosis**
5. **Poor blood circulation**
6. **Hyper-acidity**
7. **Constipation**
8. **Diarrhea**
9. **Chronic Fatigue**
10. **Common colds**
11. **Migraines**
12. **Muscle aches**
13. **Hangovers**
14. **Urea Stones**
15. **Water retention**
16. **Body odor**
17. **Induces faster healing**
18. **Obesity**

*INDICATED BENEFITS OF APPLYING ACIDIC MICROWATER TOPICALLY**

19. **Wounds heal faster**
20. **Blisters heal faster**
21. Reduces acne
22. **Good hair rinse**
23. **Relieves chronic eye dryness**
24. **Disinfects foods**
25. **Garden use (as insecticide)**
26. **Moisturizes dry skin**
27. **Relieves eczema**
28. **Heals throat and mouth sores**

THE FOLLOWING CHARACTERISTICS OF MICROWATER ARE:

29. **It's mild and smooth tasting**
30. **It's highly permeable**
31. **It can dissolve matter**
32. **It supplies beneficial alkaline minerals**
33. **It reduces germ count from 0.8 PPM to 0.2 PPM**
35. **It maintains a balance of oxygen and carbon dioxide**
36. **It can help to scavenge free radicals**

THE TESTIMONIALS

Besides the Japanese doctors previously mentioned, two American doctors often quoted as endorsing water ionizers are Dr. Mona Harrison M.D., and Dr. Theodore Baroody, a fellow who is licensed as a chiropractor and naturopath who operates out of Waynesville Indiana.

Dr. Harrison received her medical training at the University of Maryland, Harvard University, and Boston University Medical Centers. She specialized in pediatrics and general medicine. She listed herself as the director of "International Water Council", an organization she created and ran. Certainly Dr. Harrison is one M.D. whose credentials appear to be impeccable. The problem is that during the later years of her life Dr. Harrison took a turn into some very erroneous ideas promoted by the most ungrounded fringe elements of the "New-Age" movement. Once that happened, she started promoting things like water ionizers and Noni juice as a cure for most anything that ails you. She is now deceased.

Dr. Baroody is the author of "Alkalize or Die." This is a work that has also become a "bible" for the more ungrounded elements of the alternative medicine movement.

THE FOLLOWING STATEMENTS ARE QUOTES FROM THE DR. MONA HARRISON REFERENCED ABOVE. I CANNOT HOW ANY TRULY KNOWLEDGABLE AND UNBIASED HEALTH-CARE PROVIDER COULD MAKE SUCH CLAIMS — EVEN IF THEY ARE PASSIONATELY INTO NATURAL MEDICINE.

Statement: Cancer tumors cannot live in alkaline water. All cancer patients should be on alkaline water, and you and I should be drinking alkaline water so our bodies won't provide an environment for cancer tumors to live.

The implication of this statement is that water ionizers produce water that is a significant aid to the prevention or cure for cancer because tumors cannot live in alkaline water. However, no tumor lives in water. Tumors live in tissues of the body. Therefore, exactly what is the reason alkaline water is so beneficial?

Many people throughout the United States normally drink water that is quite alkaline, including people who live throughout most of the southwestern United States. Yet, people who have consumed this alkaline water throughout their lives contract cancers at the same rate as people who drink water that is neutral (pH of 7) or even acidic. Given those observations, what objective research indicates that tumors in human tissue are sensitive to the alkalinity of drinking water consumed? What evidence can back up this statement other than testimonials from people who have a financial interest in the sale of water ionizers?

Statement: "The hydrogen ion is positively charged. Micro water changes the hydrogen ion into a negative charge. The liver loves negative hydrogen ions. That is why kidney and liver problems can be helped with micro water."

This statement is one that makes me wonder if Dr. Harrison was suffering from senile dementia when she made it. As the modern world understands chemistry, the hydrogen atom consists of one proton, one neutron, and one electron. While the hydrogen atom can lose its one electron and become an H^+ ion, no one in science has ever observed, nor is there any theory that would support the possibility of a hydrogen atom taking on an extra electron to become an H^- ion. There is no mechanism known to modern science that can add an extra electron to a hydrogen atom to cause it to exist as a negative ion in water. Further, what mechanism of action can explain how these never observed negative hydrogen ions could occur in the water produced by water ionizers or be beneficial to the liver?

Statement: "Cysts are the beginning of tumors which lead to cancer because minerals are deficient from that part of the body."

What evidence can explain the statement that "cysts are the beginning of tumors which lead to cancer"? What is true is that the vast majorities of cysts have nothing to do with cancer, and are simply benign growths that often occur throughout the body from a variety of causes. Once again the implication is that the water produced by her product is capable of either preventing cancer or curing it but she does not cite any objective research has been done to back up such a claim nor can we find any elsewhere.

Statement: "Micro water is great for Attention Deficit Disorder (ADD) as this condition is too much rhodium and iridium in the brain. Micro water calms these types of children."

This is another remarkable statement attributed to a trained medical doctor! There is no research to back up her statement that too much rhodium and iridium is the cause of ADD. Neither is there any evidence that these substances occur in tap water sources or frequently enough in the diet to be associated with the cause of ADD. After more than 25 years of working with water and water tests from all over the nation I have never seen that to be the case. Neither can I find any study, no matter how obscure, that ionized water calms these types of children. Are we to understand that water ionizers are capable of removing these elements? What is the mechanism by which ionized water either removes these contaminants or can calm the nervous systems of those who drink it? There is none.

Statement: "Alkaline water allows greater penetration than any other water and thus wrinkles disappear because the skin is getting the water it needs."

There is no mechanism that can account for "greater penetration" of one kind of water over another into the epidermal layer of the skin. In fact, what science does reveal is that skin wrinkles are not caused by a lack of water, but by the decreased production of collagen in the subcutaneous layers of the skin due to a decrease in the production of hyaluronic acid as the body ages. It is hyaluronic acid that holds about 300 times its weight in water so if the hyaluronic acid is not there, it doesn't matter how much water is or is not available. This is not conjecture. The proof is that when a patient is given supplemental hyaluronic acid, in a short while skin wrinkles are noticeably reduced no matter what kind of water the person drinks. Therefore, what mechanism can support the contention that ionized water can penetrate more deeply than any other kind of water? What mechanism is capable of your water affecting the process of hyaluronic acid production and consequent collagen formation more than any other water?

Statement: "When alkaline water was used with Alzheimer's patients, just by drinking a gallon a day, their senility problem subsided"

This is a fantastic claim to make without citing any evidence! What study confirms or even suggests the possibility of this benefit or any sort of mechanism whereby drinking alkaline water as opposed to any other kind of water might provide such a benefit?

Statement: "Alkaline water is the frequency of the pineal gland and thus affects all other glands below the pineal gland. That is why the water can lower blood pressure and blood sugar, shrink an enlarged prostate, stimulate sex drive, improve vision, improve M.S. and Parkinson's Disease, just to name a few."

More fantastic claims made without proof of any kind! What is meant by "Alkaline water is the frequency of the pineal gland"? What is this frequency and how is it measured? What is the frequency of alkaline water and how is it measured? If this is true, how does this relate to the benefits claimed? What study suggests that these benefits might actually exist?

Statement: "Alkaline water neutralizes fluoride while the filter removes the chlorine. Nothing can remove fluoride from the water, but with alkaline water the damage of fluoride is eliminated for the fluoride is neutralized."

The only thing about this statement that is true is that the carbon filter can remove chlorine. In fact, any inexpensive carbon filter does that. The claim that "Nothing can remove fluoride from the water" is completely false.

There are media that do an effective job of removing fluoride from water that have been tested and certified by the NSF to do exactly that. They have been used effectively for this exact purpose for decades. More to the point, how does alkaline water "neutralize" fluoride or mitigate the danger of fluoride in water? What never before observed chemical process can account for such a thing?

Statement: "Alkaline water electrolysis converts the inorganic minerals present in the water to organic minerals, just like plant juice."

By definition, an organic molecule is a molecule containing a carbon atom. Inorganic minerals are molecules that do not contain a carbon atom. What mechanism of electrolysis can add a carbon atom to an inorganic mineral? Further, if the inorganic minerals naturally present in water supplies are somehow converted into a form more like the mineral chelates found in plant juice, what benefit is this supposed to convey given the fact that ionic minerals are known to be far more bioavailable than mineral chelates? What independent evidence supports this claim? Absolutely none!

IMPORTANT QUESTIONS TO ASK BEFORE BUYING ANY WATER TREATMENT PRODUCT

NOTE WELL! Don't be satisfied with oral answers that seem to satisfy these questions. Make sure you get the answer to these questions either from a website published by the manufacturer, on a piece of sales literature published by the manufacturer, or in writing from either the manufacturer or national distributor of the product. Then, if someone in your family gets sick or dies because you relied on product claims that are not true, you MAY have some means of recourse.

1. Can your product meet NSF standard 53 by removing 99.95% of dangerous cysts like giardia and cryptosporidium? (The answer for every product we could find is "no" because electrolysis cannot damage such cysts and the carbon pre-filters are not capable of removing them.)

2. Can your product meet NSF standard 42 by removing 99.9% of heavy metals like lead, mercury, and cadmium? (The answer for every ionizer we could find is "no" because the media in the pre-filter is not capable of doing so. We could find only one product that used a lead-adsorbent resin in its carbon pre-filter so it could remove lead.)

3. Can your product effectively remove all forms of arsenic, a well-known carcinogen from water? (The answer for every product we could find is "no" because arsenic removal is very difficult and requires a special media.)

4. Does the electrolysis process used in your product concentrate deadly forms of arsenic in product water? (The answer for every for every product we could find is "yes" because electrolysis concentrates any positively charged ion in the drinking water stream including cationic forms of arsenic, lead, aluminum, barium, mercury, cadmium, uranium and more.)

5. Can your product effectively remove fluoride from water? Fluoride causes fluoridosis (mottling of the teeth,) brittle bone syndrome, nervous system problems, depressed thyroid function, and increases the uptake of lead by creating permeable gut syndrome. (While the alkaline stream of water reduces the amount of fluoride delivered in the product water, there is no mechanism whereby ionizers can remove fluoride completely, so the answer for every product we could find is "no.")

6. Can your product effectively remove asbestos from water? Asbestos is a potent carcinogen that exists as particles too small to be removed by even the best carbon blocks. (The answer for every product we could find is "no.")

7. Can your product effectively remove chloramine (a known carcinogen that accumulates in human tissues that is added by most cities for disinfection purposes) from water? (The answer for every product we could find is "no.")

8. Can you guarantee that your product will render its product water completely safe from disease-causing bacteria, cysts, molds and spores? (The answer for every product we could find is "no.")

9. Will your product work in emergencies or at other times when there is no electricity? (Obviously because electrolysis relies upon electrical power, the answer for every product is "no."

10. Has your product's claims been tested or verified by any well-known independent lab or testing facility and if so, who and what were the results? (The answer for every product we could find is "no.")

11. Are either the manufacturer or national distributor of the product a member of the Water Quality Association? (This association has rules about making false and/or misleading statements about the effectiveness of water treatment devices and will revoke the membership of anyone found to be violating them.) The answer for every product we could find was "no."

IMPORTANT FACTS YOU SHOULD REALIZE ABOUT DRINKING WATER.

- Most of the verifiable claims made for water ionizers can be similarly made about drinking water from any potable source.
- Most drinking water in the country is already alkaline, and there is no demonstrable link between cancer rates for those who consume alkaline water versus those who drink acidic water.
- The advantage of drinking alkaline water is that it naturally contains the alkaline minerals of calcium, potassium, phosphorus, and magnesium. Distillation, and reverse-osmosis are common methods of treating water that remove these minerals. However, other systems are available that can retain these minerals while making water safe.
- Any system capable of imparting a significant redox potential to water is desirable. Any system that incorporates KDF®55 redox media will do the job at least as effectively as water ionizers for far less money.
- Increasing one's consumption of drinking water is one of the best things that anyone can do for their health. Making sure that your drinking water is free of unhealthy contaminants is smart.
- The main reason for buying a drinking water treatment device is to make water SAFE, not to make water alkaline. Buying a system that makes water more alkaline at the expense of safety is a very poor idea.
- **LIVINGWATERS™ SYSTEMS** manufactured by Conscious Living Systems, Inc. can guarantee water that is microbiologically safe without power, high water pressure, or water waste, in which alkaline minerals are preserved and dangerous heavy metals and fluoride are removed, while improving the redox potential of water as well as an ionizer. Not only are they better products, they are available at prices that are a small fraction of the cost of most water ionizers. The only thing missing is the multi-level commissions!

Any product that has true value has no need to market itself using false or misleading information. When this happens, it hurts not only the consumers who buy the product and later find they have been defrauded, but it hurts the whole industry. That's why, unless you have money to burn, we encourage you to carefully consider the above information and **demand answers to the above questions in writing** if this product is presented to you for your consideration.

ABOUT THE AUTHOR

Lono Ho'ala

Lono Ho'ala is a biochemist and internationally recognized expert on drinking water and the author of the nation's best selling book on water "Don't Drink the Water" endorsed by Dr. Andrew Weil, M. D.

Lono trains water treatment professionals around the nation and works as an engineering consultant to some of the nation's largest firms that supply products to the water industry.

He is the developer of **LIVINGWATERS™ WATER TREATMENT TECHNOLOGY**, the first water treatment products to use capillary membrane and ultra-filtration technology to guarantee water safe from bacteria and cysts without the need for power or water waste. He is also the chief engineer for **LIVINGWATERS™ ENGINEERED WATER TREATMENT PRODUCTS.**

You may find access to his many other informative articles at:

www.livingwatersway.com

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