Human Clinical Trial

Evaluating the Safety and Efficacy of

The "Stirwand"

A Randomized,
Placebo Controlled Study

FINAL REPORT
SUBMITTED TO:
Quantum Age Water
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1.01 STUDY PURPOSE

The purpose of this two-group randomized placebo-controlled 90-day study was to evaluate an all natural water product in a **Phase I Trial.**

1.02 STUDY OVERVIEW

The Stirwand is a simple to use device. The use of this product for this Phase I trial: this product was used to stir in an 8-10 ounce glass of standard purified water for 20-seconds. The water was then consumed.

This was a 90-day, 100-subject study using patients drawn from a large population of people in general good health but suffering from dehydration. The patients were randomized into two groups and took either placebo or active treatment.

The direct objective of this investigation is the performance of the test product compared to placebo in improving/increasing hydration levels at the cellular level

This study was performed by FENESTRA RESEARCH LABS clinical study personnel in Las Vegas, Nevada. The *OPTIMAL WELLNESS TEST* portion of this research was done using proprietary devices and methodologies developed by FENESTRA RESEARCH LABS.

Twelve subjects from this study had blood draws to evaluate oxygen levels at baseline, first week, second week, third week, and fourth week mark of this study. All subjects are tolerating this product well and there were no noted negative side effective at this time.

1.03 PROTOCOL

.1 SCREENING and FOLLOW-UP

Following an initial screening at Visit 1 (week 0), subjects entered a 1-week baseline period (subjects were told to refrain from taking any unnecessary OTC's, prescription drugs, or natural products for the remainder of the study). Subjects who met all inclusion criteria and none of the exclusion criteria during the intake at Visit 2 (week 1) were then provided either the placebo or **their own Stirwand** along with a protocol describing daily dosing amounts and kinds of water to be consumed exclusively. Both the active product group and the placebo group consumed the same purified water exclusively for the duration of this trial. The second evaluation on Visit 3 (week 3) was performed following standard procedures and the study's protocol was again gone over with each subject on an individual basis. Evaluations of test subjects were completed on visit 4 (week 5), on visit 5 (week 9), and the final testing was done on visit 6 (week 13) of the trial.

Twelve randomized subjects had arterial blood drawn for the purpose of measuring Oxygen Saturation through standard laboratory practices. Each draw was done from the lower part of either the right or left arm. Each draw was collected in three separate red top vials on each draw occasion. The single reported measurement of each office visit is an average of the three blood draws and their data. Blood draws were done exclusively on the twelve subjects each time they were seen for this study.

NOTE: Compliance was monitored and maintained through biweekly phone calls.

.1 INCLUSION CRITERIA

- A written informed consent consistent with required guidelines and meeting prior to participation in the trial.
- Male/female subjects 18 years of age or older.

- Subjects who's *Optimal Wellness Test* (OWT) measurements indicated they were at least 35% out of balance for standard Wellness with respect to all of the hydration indicators and toxicity, indicators (the red zone).
- Subjects who were able to follow the protocol as designed by Quantum Age Water and Fenestra Research labs.
- Generally good health.

.1 EXCLUSION CRITERIA

- History of head trauma.
- History of serious diseases or illness.
- Moderate to severe renal insufficiency.
- Recent history (<6 months prior to Visit 1) of myocardial infarction.
- Regular use oxygen therapy.
- Active tuberculosis, a history of cancer within the last 5 years (treated basal cell carcinoma allowed), thoracotomy with pulmonary resection within 1 year prior to the trial, currently in a pulmonary rehabilitation program or who have completed a pulmonary rehabilitation program in the 6 weeks prior to the screening visit (Visit 1).
- Current prescriptions for diuretic medications, cardiac stimulants, or any other medication that may, in the opinion of the Fenestra research staff, alter testing results.
- Use of opiate analgesics, prescribed or otherwise, obtained for recreation or for any treatment reason including migraine.
- History of drug addiction.
- Females who are pregnant, lactating, or nursing or who may become pregnant during the course of the study.

- Diagnosis as HIV-positive, diagnosis of AIDS, or with any neuromuscular condition including CP, MS, ALS, or Huntington's Chorea
- Uncontrolled hypertension (*e.g.* BP>150/100).
- Patients with any condition not previously named that, in the opinion of the investigators or intake staff, would jeopardize the safety of the patient or affect the validity of the data collected in this study.

.1 Subjects

- 100-subjects
- 51-women
- 49-men
- 8-subjects had allergy problems
- 49-subjects had constipation issues
- 39-subjects were athletes, participating in a minimum of 1 hour exercise 3-times a week

4.0 RESULTS AND DATA ANALYSIS

Hydration

There are four ***Optimal Wellness Test*** parameters used to determine overall hydration:

Conductance
Resistivity
Surface Tension
Specific Gravity

This involves a proprietary mathematical formula based on the four parameters (Conductivity, Resistivity, Surface Tension, and Specific Gravity) to determine whether or not a person is moving towards or is

within the wellness range. The more a person is outside the range for hydration Wellness the more dehydrated they are considered to be.

To measure the four components for cellular hydration computation it is vital to analyze saliva, and urine samples from the body.

The foundation of evaluating the electrical properties in the ***Optimal Wellness Test*** technology is the basic formula C = R/V, which is Ohm's Law. Through the interplay of voltage with both Conductivity and Resistivity some basic knowledge about intra and extra cellular hydration can be accessed. Conductivity is related to intracellular hydration and Resistivity is related to extracellular hydration. With the fluid samples obtained from each person in the Quantum Age Water Study these parameters can be measured and evaluated.
Specific Gravity and Surface Tension pertain more to chemical content but still relate to electrical properties of the body. Surface tension is directly related to inward molecular attraction, with the obvious implication that if solids are suspended properly via molecular combinations with H20 then the fluids of the body will have lower surface tension. Specific gravity of any given bodily fluid reveals the content of solids in solution, with higher and higher concentrations of solids –both intra and extra cellular – raising the specific gravity number as a possible indicator of dehydration.

4.1 Conductivity

Conductivity is a measurement of the amount and quality of electrical current in the body. Salts are electrolytes and they are responsible for the electrical conduction of information in the body. Conductivity is the measurement of the quantity of current flow within the biological specimen and is an indicator of osmotic pressure, heat loss, and fluid balance. If the current in the body is too high or too low there will be symptoms of degeneration of the body. Osmotic pressure comes in to play also here.

4.2 Resistivity

Resistivity reflects the flow of ions across cellular membranes.

The resistivity is the measurement of the relative concentrations of minerals contained within the tested sample. The slight difference in the concentration of minerals found in the plasma vs. the amount found inside the cells creates a voltage gradient called the membrane potential. Therefore, resistivity is a direct reflection of the body's ability to conduct electrical currents.

4.3 Surface Tension

The surface tension of fluids in the body can be compared through technological analysis with that of pure water. Higher surface tension implies a decreased capacity for cellular permeability for any given fluid.

Surface tension of a fluid can be defined as inward molecular attraction forces, which must be overcome to increase the surface area. Surface tension is the energy required to increase the surface area of a liquid by a unit amount.
In water the intermolecular hydrogen bonds are involved in the inward attraction forces. The surface tension of water at 20 degrees centigrade is 7.29×10^{-2} J/$m^{2.}$

4.4 Specific Gravity

Mathematically specific gravity is similar to density. Specific gravity is defined as density of a substance divided by the density of water. Since the units will cancel out in any computation it simply means that the only difference between specific gravity and density is that the there are no units associated with specific gravity, as is the case with density.

With bodily fluids density is a function of the types and amounts of solids found in solution. The more there is of substances in solution that are heavier than water the higher the density will be. With dehydration, whether it is intra or extra cellular, the density of fluids will be higher because the water content goes down as the solids go up. The converse is true for increased hydration.

4.5 Toxicity

Toxicity is an assessment of what the body is containing too much of causing a toxic relationship between the substance and the cellular body. Here we have several different mathematical representations of ammoniums, nitrates, salts, oxygen, urea's and other toxic materials that may be present in the body. Significant changes in toxicity have not been observed in studies less then three months in duration.

Both nitrates and ammoniums numbers influence the electromagnetic picture of the body fluids. Together they determine the amount of energy being lost from the system. Nitrate and ammonium are related to digestion, and they provide a look at the amount of usable energy being produced by digestion. The chemical reaction that takes place between food and digestive enzymes is vital to Wellness. The correct balance of water, calcium, and oxygen in the body is necessary for usable energy to be the result.

The nitrate and ammonium particles are the result of poor digestion. For the liver to make energy the liver incites the urea cycle to occur. The body cannot use amino acids that have not been digested properly. Another cause of ammonium production is bacterial metabolism in the intestinal lumen. This released ammonium is absorbed and transported to the liver. The liver treats the nitrates and ammoniums as toxins because the poor digestion has rendered the byproduct unusable. This unusable material is converted into urea and stored in the body. Urea can only be stored for 72 hours before it becomes toxic, at that time the urea is broken down to urea salts of Nitrate and Ammonium Nitrogen. The numbers for perfect digestion are 3 nitrate and 3 for ammonium.

4.6 Theory's

At this point I feel it is necessary to address some theories about water. The structure of the simple H20 molecule is a theory in and of itself! This is because no one has ever seen an H20 molecule, where as some molecules can be viewed with an electron microscope.

In general H20 is presented as a specific structure based on a combination of indirect technological analysis and mathematics. From this basic, indirect understanding of H20, the over-all structure of water in a liquid form has been presented from a theoretical point of view by mainstream chemists and physicists.

Dr. Masaru Emoto has taken water crystallization photos that many of you, I am sure, have seen or heard about. The pictures show a 'before' dirty, cloudy or otherwise not pleasant to look at crystal, then in the 'after 'picture show a clear, bright, pleasant looking molecule. I have nothing to say about what is happening to the H2O molecules that he is taking pictures of as I have never been asked to study the 'before' and 'after' water to see if there is any scientific evidence that his process improves the H2O molecule or makes it better for the body.

My question for all of you is where did the ugly stuff go from the 'before' samples and is the end product really better for human consumption?

Another theory of water is that it can be clustered in either small or large molecules. As previously stated no one has ever seen a H20 molecule so no scientific statement can be made to the validity of this statement.

One other thought is that the H2O molecule can have more 02 (oxygen) added to it. If you will simply take a look at any Periodic Table you will see that if any ion, cation, or other element from the Periodic Table is added you have changes the molecule into something else. For example if you take the H2O molecule and add 1-O molecule you now have a molecule know to all of us ad Hydrogen Peroxide and I do not believe any of you are interested in drinking that!

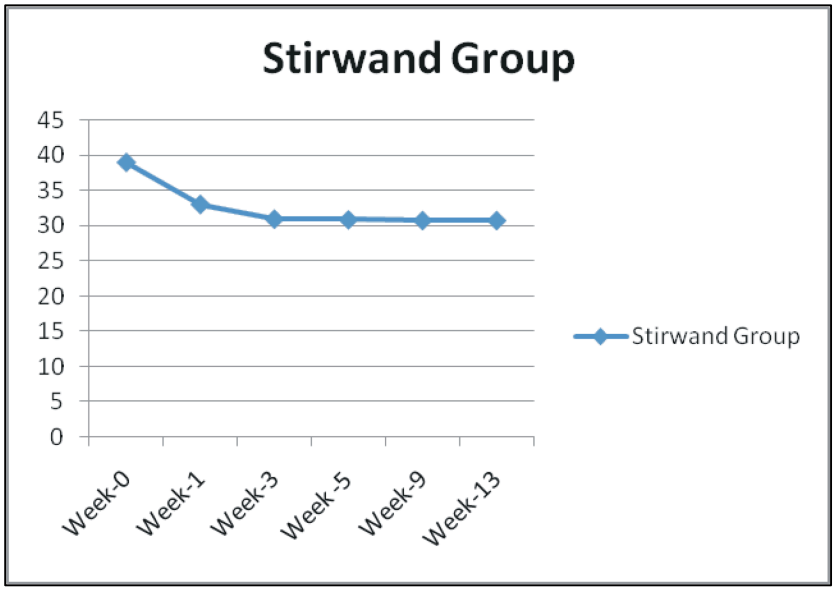
There are other theories out there today about water and what kind is best for you. In my experience most of them have no basis in real science. They are simply trying to sell you their product or some secret technology. Clinical studies are factual presentations about the capacity of any given drinking water to increase cellular hydration.

1.05 Results

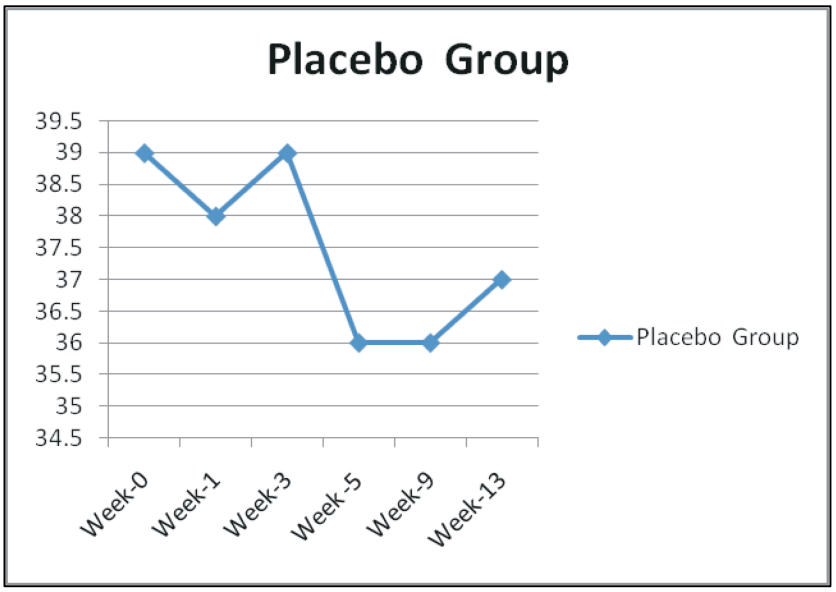
The below values are percentages of hydration. The perfect percentage for hydration for the human body is agreed upon at this time in the science community. It is agreed upon that that human body requires enough water present as to:

1. Allow for fluidity of the blood
2. To decrease the chance for blockages or stagnation to occur.
3. Correctly align the electrons around the cell for the optimal configuration to allow fluid in.
4. Correctly align the electrons around the cell for the optimal configuration to allow toxin removal from the cell.
5. Transport of nutrients to the cells.
6. Activate cellular energy

Stirwand Group VS Placebo
Hydration Indicators



Numbers on the left side of each graph are representations of hydration percentages. The perfect number is 19-29%.



5.1 HYDRATION AND OTHER RELEVANT ANALYSIS

Both groups of test subjects have an average hydration saturation number of thirty-nine percent at the baseline testing. This number thirty-nine is a representation. It appears through this laboratory's extensive hydration studies (46 to date) that perfect hydration occurs between 19%- 29%. There are several other factors that also must be optimal or within rage for this to make a significant change in cellular functions. These other factors are pH, ORP, and toxicity indicators.

Certain physiologic parameters indicative of various states of toxicity, oxidative stress and hydration were measured during this study using OWT technology and calculation algorithms. OWT technology and calculation algorithms are proprietary and were developed by Fenestra Research Labs. All measurements were taken at baseline and again at each office visit.

Parameters measured in both urine and saliva included:

pH, rH_2 (a derived index of oxidative stress), ORP (redox potential), r (resistivity), conductivity, surface tension, specific gravity, nitrates, nitrites, ammonias', and urea's

There are 39 measurements taken with the OWT. The above named parameters are discussed in the document as they had relevant changes in there numbers.

Generally speaking, these parameters were chosen because they relate to ionic content, Zeta potential, the cells, extracellular fluids, hydration indicators, the presence of reduced or oxidized biomolecules, and the first, in some cases even pre-symptomatic, stages of degeneration. Measuring parameters in saliva and urine can be indicative of the state of hydration in tissues and the body's ability to absorb nutrient and palliative chemicals and to get rid of toxins, metabolites, and tissue degradation residues, many of which stimulate further inflammation and pain.

There was no statistically significant change in any parameter measured for the placebo group.

A simple non-paired t-test comparing the differences between baseline and final parameter values for placebo and live product groups showed small but statistically significant changes in salivary and urinary pH, rH_2 (a derived index of oxidative stress), ORP (redox potential), r (resistivity), conductivity, surface tension, specific gravity, nitrates, nitrites, ammonias', and urea's

5.2 Toxicity

Nitrate numbers of the ***Optimal Wellness Test*** indicate a positive move in the wellness numbers of those in the live product study group of up to 18.2%. All subjects in the live product group showed an improvement in their nitrate numbers with the most significant improvements seen in subjects with their baseline first test numbers the farthest from wellness range. This shows an improvement in the bodies' ability to remove urea stores before they can become nitrates

and toxins. Extrapolation of data pertaining to nitrates indicates an increase in fluidity of substances in the cellular body resulting in decreased nitrate production and storage in subjects consuming the live product at about the 2nd month of consumption. I will presume the reason for the length of time of consumption being necessary for nitrate production to decrease corresponds to the increase of intracellular hydration numbers and the bodies' ability to create homeostasis.

This study also indicates a change in the amount of toxins being stored in the intracellular body being decreased in all subjects on the live product. A scientific measurement of toxins in the body is a new science and this is a significant improvement for these subjects. The mechanism for the removal of the toxins is the movement of fluids throughout the body as they become less viscous and have a more anionic field in nature. This anionic field allows for the cationic substances to be attracted and moved out as waste products. No change in toxic levels were seen in the placebo group.

The pH indicators provided within the ***Optimal Wellness Test*** indicate a positive move toward neutral pH in regards to the wellness parameter of those in the live product group. This shift in pH toward a more neutral cellular chemistry may be due to the aforementioned chemical changes occurring in the reduction of nitrates and toxins. Many studies have shown the importance of maintaining neutral cellular chemistry for increasing ones ability to experience wellness.

1.05 **CONCLUSIONS**

Statistical analyses of these data show a consistent picture between treatment groups over time. The Placebo group showed a 6% increase in hydration levels. This can be attributed in part to the fact that some people were consuming more water on a daily basis than was normally the case. The Treatment group had a uniformly and dramatically more favorable response, a 28.5% increase in hydration, and achieved that response in a relatively short time. The increase in hydration level was both sex and age independent. No adverse events whatsoever were reported during the study.

The twelve arterial blood draws showed a 7% increase in one week, and a 10.25% increase after 2 weeks, taking the average baseline blood oxygen level from 88% to over 98%. The entire treatment group showed a 10.33% increase in blood oxygen levels within thirty days as measured with hospital grade oximeters.

Toxicity Indicators in the live product group showed an average overall decrease of 18.2% into a more healthy range at the end of the 90 day study. No measurable change was seen in the Placebo Group.

Based on these clinical comparisons and the complete lack of known adverse side effects, interactions, or contra-indications from the water technology know as Stirwand, use of the Stirwand was shown to be a safe and highly effective means of increasing cellular hydration and blood oxygen levels and decreasing cellular toxins.