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"One Cell One Light" TM

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Human Vitamin Efficacy Study

Response Needed? ☐ Yes ☒ No

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WILLARD WATER® VITAMIN EFFICACY STUDY REPORT

INTRODUCTION

A study was developed to illustrate the efficacy of the Willard Water® products branded as XXX Dark and Clear. The sample size consisted of various groups of individuals ranging from n=4 to n=6. The study originally was to consist of n=10; this could not be completed due to the sample population dropping out of the study. The dilution factor for the Willard Water® in this study was 1 capful (pint, size approximately 2 teaspoons) per gallon of distilled water or 6 drops per 12 ounces of water.

Specific vitamins were selected to be biologically monitored for initial date of testing (not taking Willard Water®) and then approximately 30 days later retesting of individuals taking the Willard Water®. This study would assist in determining the following efficacy comparative analysis results while the individual drank Willard Water ® during the 30 day study:

- Vitamin ((s) would be absorbed into the body better.
- Vitamin(s) would increase in the presence of a toxin.
- Vitamin(s) would decrease and/or be within reference range as toxin is removed.
- Vitamin(s) would be more viable to other vitamins within milieu of the testing individual.
- Vitamin(s) that are identified as fat soluble would have a higher absorption factor in the presence of Willard Water®, while water soluble vitamins would react but not as reactive in result values as identified.

Criteria for individual participants in the study were consisted of the following:

- Individual tested positive for carbon monoxide (1 % or higher) and strontium in blood samples.
- Individual tested positive for mumps, measles and/or rubella virus.
- Individual exposed to advanced nano materials made from waterborne polyurethane.

- Individuals were composed of Caucasian males and females ages 50 to 67.
- Individual would have an IHS Detox Patch Test to confirm bio-electric potential gradients of cell matrix permeability within the body.

RESULTS

The results of this study are compiled in the Tables listed as an attachment to this report with the appropriate result of the individual tested. A cover list to these tables will identify the characteristics (male, female, age, caucasian, etc.) per the number given to the individual in the study. A matching number will be stated on the table, which assisted in tabling the results. The biological monitoring for the specific vitamins was performed by Quest Diagnostics Laboratory, Inc. in multiple locations throughout the United States of America. The laboratory is a CLEA approved laboratory. It must be noted that every laboratory in the USA develops their reference ranges, based upon the n=100 specimens and the average of these values are what makes the reference range. The reference range is not necessarily based upon the fact that a specific amount of vitamin is needed to carry out a nutritional daily recommended value.

The vitamin parameters tested in this study were the following:

- Vitamin D, 25-OH Total (Ref: 30-100 ng/ml)
- Vitamin D 25-OH, D3
- Vitamin D 25-OH, D2
- Vitamin D 1,25 (OH)₂ Total (Ref: 18-72 pg/ml)
- Vitamin D 3, 1,25 (OH)₂
- Vitamin B12 Binding Capacity, UNSAT (Transcobalamin) Ref: 650-1340 pg/ml
- Vitamin B 6 (Ref: 2.1 – 21.7 ng/ml)
- Vitamin C (Ref: 0.20-190 mg/l)
- Vitamin E (Tocopherol) Alpha-Tocopherol H (Ref: 5.6-22.0 mg/l)
- Beta-Gamma-Tocopherol (Ref: 4.3 or Less mg/l)
- Vitamin K (Ref: 80-1160 pg/ml)
- Vitamin B1, PLASMA (Ref: 9-44 nmol/l)
- Vitamin B12/Folate, Serum Panel Vit (B12 Ref: 200-1100 pg/ml)
Folate, Serum (Ref: Range Low: <3.4 Borderline: 3.4-5.4 Normal: >5.4)
- Vitamin B1 (Thiamine), Blood (Ref: 87-280 nmol/l)

DISCUSSION OF VITAMIN FUNCTION PER PARAMETER REFERENCED

Vitamin D

Vitamin D increases calcium absorption from the gastrointestinal tract and also helps to control calcium deposition in the bone. The mechanism by which vitamin D increases calcium absorption is to promote active transport of calcium through the epithelium of the ileum (gastro intestinal tract area). It increases the formation of a calcium binding protein in the epithelial cells that aids in calcium absorption. The specific functions of vitamin D in relation to the overall body calcium metabolism and in bone formation are highlighted in this report.

Vitamin D, a fat-soluble vitamin that has properties of both a vitamin and a hormone, is required for the absorption and utilization of calcium and phosphorous. It is necessary for growth, and is especially important for the normal growth and development of bones and teeth in children. It protects against muscle weakness and is involved in regulation of the heartbeat. It is also important in the prevention and treatment of breast and colon cancer, osteoarthritis, osteoporosis, and hypocalcaemia; enhances immunity; and is necessary for thyroid function and normal blood clotting.

There are several forms of vitamin D, including vitamin D2 (ergocalciferol), which comes from food sources; vitamin D3 (cholecalciferol), which is synthesized in the skin in response to exposure to the sun's ultraviolet rays and a synthetic form identified as vitamin D5. Of the three vitamin D3 is considered the natural form of vitamin D and is the most active.

The form of vitamin D that we get from food or supplements is not fully active. It requires conversion by the liver, and then by the kidneys, before it becomes fully active. This is why people with liver or kidney disorders are at a higher risk for osteoporosis. When the skin is exposed to the sun's ultraviolet rays, a cholesterol compound in the skin is transformed into a precursor of vitamin D. Exposing the face and arms to the sun for fifteen minutes three times a week is an effective way to ensure adequate amounts of vitamin D in the body. However, researchers have learned that very dark-skinned people in particular (because the skin pigment blocks the sunlight) and people living in the upper third of the continental United States cannot produce adequate amounts of vitamin D from exposure to the limited available sunlight during the winter months. Adolescents often are also deficient in vitamin D. For many, lack of outdoor exercise and an aversion to drinking milk seem to go hand-in-hand with deficiency.

The Individuals in this study tested positive for strontium levels in blood split specimens. Strontium was evaluated because it will inhibit the metabolites of vitamin D, 25-OH and 1,25-OH, i.e., the study would illustrate as strontium levels diminish with use of Willard Water® then these particular vitamin D metabolites would show a result of increasing, decreasing or remaining the same with possible variations to each other.

Findings Discussion as Illustrated by Results

The following results for vitamin D and its metabolites will be addressed below.

<u>Parameter</u>	<u>Sample No.</u>	<u>Initial and Final Means</u>
Vitamin D 25-OH	n=5	Initial mean: 46.83 Final mean: 31.6
Vitamin D 25-OH, D3	n=5	Initial mean: 41.00 Final mean: 31.6
Vitamin D 25-OH, D2	n=5	Initial mean: 2.8 Final mean: 31.8
Vitamin D 1-25 (OH)2 Total	n=5	Initial mean: 43.33 Final mean: < 4
Vitamin D 3, 1, 25 (OH)2	n=5	Initial mean: 13.00 Final mean: < 8

Discussion: The results of the fat-soluble vitamin D and its various metabolites as illustrated above show that there was more permeability of the vitamin with the use of Willard Water ® after 30 or more days from initial sampling. The vitamin D metabolite 25-OH, D2 initial mean value was 2.8 with a final mean of 31.8. This can be interpreted that as

the strontium levels within the cell migrated out of the cell this particular metabolite was bound to the strontium. The overall values showed that vitamin D, vitamin D3 and vitamin D3, 1,25 (OH)₂ had improved absorption of the fat-soluble vitamins with Willard Water® after 30 or more days from initial use of the product.

Vitamin B12 (Methylcobalamin) and Binding Capacity Unsaturated Transcobalamin

Vitamin B12 (Methylcobalamin)

There are several different *cobalamin* compounds exhibit so-called vitamin B12 activity. Vitamin B12 performs many metabolic functions, acting as a hydrogen acceptor coenzyme. For instance, it performs this function in the conversion of amino acids and similar compounds into other substances. It's most important function is to act as a coenzyme for reducing ribonucleotides to deoxyribonucleotides, a step that is important in the formation of genes that could explain the two major functions of vitamin B12: (1) promotion of growth and (2) red blood cell maturation.

A particular effect of vitamin B12 deficiency, pernicious anemia, is often demyelination of the large nerve fibers of the spinal cord, especially of the posterior columns and occasionally of the lateral columns. As a result; persons with pernicious anemia (caused by failure of the red cell maturation) frequently have much simultaneous loss of peripheral sensation and in severe cases, even become paralyzed.

Vitamin B12 is the most chemically complex of all the vitamins and is the general name for a group of essential biological compounds known as *cobalamins*. The cobalamins are similar to hemoglobin in the blood except that instead of iron they contain cobalt. Vitamin B12 comes in several forms. Not all forms are equally effective. The most effective form is methylcobalamin. However, the most common form is cyanocobalamin, because it is easier to manufacture and is therefore less expensive.

Unfortunately, the very common and inexpensive cyanocobalamin form is difficult for the body to absorb, and the small amount that is absorbed usually fails to find its way into the cells, where it can perform its intended tasks. The liver does, however, convert a small amount of cyanocobalamin into methylcobalamin, but much larger amounts than can be converted are needed to carry out the normal functions of vitamin B12. As a result, many people who take large doses of cyanocobalamin continue to be deficient in the vitamin. They often find themselves resorting to vitamin B12 injections, which are available from a doctor by prescription only. Vitamin B12 deficiency caused by malabsorption is most common in elderly people. A simple alternative is to take the methylcobalamin form in the first place, either swallowed in tablet form or sublingually. Those with severe digestive disorders may have no choice but to resort to vitamin B12 injections.

Methylcobalamin is active in the growth and protection of the nervous system. Larger quantities are especially necessary to protect against neurological deterioration as we age. The vitamin has been shown to reverse the symptoms of such rare neurological diseases as Bell's palsy and shows promise in the treatment of multiple sclerosis and other neurological diseases. The binding capacity for vitamin B12 (methylcobalamin) to be effective in the

body is through its ability to bind itself to transcobalamin, which in-turn allows it to be absorbed into the body.

Folate

Also, known as folacin, folic acid, or pteroylglutamic acid (PGA), folate is considered a brain food, and is needed for energy production and the formation of red blood cells. It also strengthens immunity by aiding in the proper formation and functioning of white blood cells. Because its functions as a coenzyme in DNA and RNA synthesis, it is important for healthy cell division and replication. It is involved in protein metabolism and has been used in the Prevention and treatment of folic acid anemia. This nutrient may also help depression and anxiety, and may be effective in the treatment of uterine cervical dysplasia.

Folic acid functions as a carrier of hydroxymethyl and formyl groups. Perhaps its most important use in the body is the synthesis of purines and thymine, which are required for formation of deoxyribonucleic acid. Therefore, folic acid is required for reproduction of the cellular genes. This perhaps explains one of the most important functions of folic acid – that is, to promote growth.

Folic acid is an even more potent growth promoter than vitamin B12, and, like vitamin B12, is also important for the maturation of red blood cells, that perform a specific and different functions in promoting growth and maturation of red blood cells.

<u>Parameter</u>	<u>Sample No.</u>	<u>Initial and Final Means</u>	
Vitamin B12 Binding Cap.			
Unsat., Transcobalamin	n=4	Initial Mean: 714.5	Final Mean: 749
Vitamin B 12	n=5	Initial Mean: 1437.4	Final Mean: 995
Folate	n=5	Initial Mean: 1.24	Final Mean: 15.15

Discussion: Vitamin B 12 binding capacity unsaturated, transcobalamin increased after 30 days or more drinking Willard Water®. The value of vitamin B 12 decreased, which appears to show that the vitamin was able to be absorbed within the membrane, while on Willard Water®. Folate values increased tremendously in their value of Initial mean 1.24 to 15.15. This appears to be the result of vitamin B 12 absorbing into the nuclear matter of the cell as it had better presence of transcobalamin, which would result in higher values of folate, since the body would produce more growth factor as folate through this cellular mechanism.

Vitamin C

Absorbic acid is essential for activating the enzyme prolyl hydroxylase that promotes the hydroxylation step in the formation of hydroxyproline, the integral constituent of collagen. Without absorbic acid the collagen that is formed is defective and weak. Therefore, the vitamin is essential for growth of subcutaneous tissue, cartilage, bone and teeth.

Deficiency of absorbic acids for 20 to 30 weeks, as occurred frequently during long sailing voyages in olden days, causes scurvy, some effects of which are the following:

One of the most important effects of scurvy is failure of wounds to heal. This is caused by failure of the cells to deposit collagen fibrils and intracellular cement substances. As a result, healing of a wound may require several months instead of the several days ordinarily necessary.

Lack of ascorbic acid causes cessation of bone growth. The cells of the growing epiphyses continue to proliferate, but no new matrix is laid down between the cells, and the bones fracture easily at the point of growth because of failure to ossify. Also, when an already ossified bone fractures in a person with ascorbic acid deficiency, the osteoblasts cannot secrete a new matrix for the deposition of new bone. Consequently, the fractured bone does not heal.

The blood vessel walls become extremely fragile in scurvy because of failure of the endothelial cells to cement together properly and to form the collagen fibrils normally present in vessel walls. The capillaries especially are likely to rupture, and as a result, many small petechial hemorrhages occur throughout the body. The hemorrhages beneath the skin cause purpuric blotches, sometimes over the entire body.

In extreme scurvy the muscles cells sometimes fragment; lesions of the gums with loosening of the teeth occur; infections of the mouth develop; vomiting of blood; bloody stools, and cerebral hemorrhage all may result; and, finally, high fever often develops before death.

Vitamin C also may reduce levels of low-density lipoproteins (LDL, the so-called "bad cholesterol"), which increasing levels of high-density lipoproteins (HDL, or "good cholesterol"), as well as lowering high blood pressure and helping to prevent atherosclerosis. Essential in the formation of collagen, vitamin C protects against abnormal blood clotting and bruising, may reduce the risk of cataracts, and promotes the healing of wounds and burns. It may even boost your love life by causing more of the hormone oxytocin to be released.

This vitamin works synergistically with both vitamin E and beta-carotene- in the presence of alpha lipoic acid – that is, when these vitamins work together, they have an effect even greater than the sum of their individual effects, and taking them together may counter potential adverse effects of taking these vitamins alone. Vitamin C is water soluble and Vitamin E is fat-soluble, but when bound to alpha lipoic acid they work together instead of opposing each other at their various amounts of concentration. Vitamin E scavenges for dangerous free radicals in cell membranes, while vitamin C attacks free radicals in biologic fluids. These vitamins reinforce and extend each other's antioxidant activity.

Vitamin E

Several related compounds exhibit so-called vitamin E activity. Only rare instances of vitamin E deficiency occur in human beings. In lower animals, lack of vitamin E can cause degeneration of the germinal epithelium in the testis and therefore can cause male sterility. Lack of vitamin E can also cause re-absorption of a fetus after conception in the female,

which may be the cause of spontaneous abortions with humans vs. a frog. Because of these deficiency effects, vitamin E is sometimes called the antisterility vitamin.

Vitamin E deficiency in animals can also cause paralysis of the hindquarters, and pathological changes occur in the muscles similar to those found in muscular dystrophy patients. However, administration of vitamin E to these patients has not proved to be of any benefit. Finally, as is true of almost all the vitamins, deficiency of vitamin E prevents normal growth.

The most common dietary form of vitamin E is the gamma-tocopherol form. However, this form is not taken up by the body in any quantity because the liver selectively incorporates alpha-tocopherol into blood lipoproteins for the delivery to the tissues. About ten times more alpha-tocopherol than gamma-tocopherol is found in the blood. However the gamma form may have some unique benefits in suppression colon cancer, according to recent animal studies making a sufficient amount of dietary vitamin E even more important to good health.

Vitamin E deficiency may result in damage to red blood cells and destruction of nerves. Signs of deficiency can include infertility (in both men and women), menstrual problems, neuromuscular impairment, shortened red blood cell lifespan, spontaneous abortions (miscarriage) and uterine degeneration. People with impaired balance and coordination and/or damage to the retina (pigmented retinopathy) may also be deficient. Individuals with severe malnutrition, genetic defects affecting a liver protein known as alpha-tocopherol transfer protein (alpha-TTP), or fat malabsorption problems such as those caused by cystic fibrosis, cholestatic liver disease, or Crohn's disease may have a vitamin E deficiency. True vitamin E deficiency is rare, but low intake (lower than required) is relatively common

<u>Parameter</u>	<u>Sample No.</u>	<u>Initial and Final Means</u>	
Vitamin C	n=5	Initial Mean: 0.94	Final Mean: 0.72
Vitamin E	n=4	Initial Mean: 16.02	Final Mean: 15.85
Beta Gamma Tocopherol	n=4	Initial Mean: 0.8	Final Mean: 1.2

Discussion: Vitamin C had a lower value at the end of 30 days of drinking Willard Water® which is a direct result of the individuals' exposure to carbon monoxide (value 1 % or more). The individuals tested had 1% or more of carbon monoxide. As Willard Water® increased the absorption of fat soluble vitamins, i.e., vitamin E the level of vitamin C would be less. The correlation of vitamin C to E is at equal levels and the one, which is present at a higher level, will show more activity in the cellular matrix of its membrane. No level of alpha lipoic acid was determined, because that parameter test is not commercially available by Quest Diagnostic Laboratory, Inc.

Vitamin B6

Pyridoxin exists in the form of peridoxal phosphate in the cells and functions as a coenzyme for many different chemical reactions relating to amino acids and protein metabolism. Its most important role is that of coenzyme in transamination for the synthesis of amino acids. Also, it is believed to act in the transport of some amino acids across cell membranes.

In the human being, pyridoxine deficiency has been known to cause convulsions, dermatitis, and gastro intestinal disturbances such as nausea and vomiting in children. However, this deficiency is rare.

The vitamin (B6) is involved in more bodily functions than almost any other single nutrient. It affects both physical and mental health. It is beneficial if you suffer from water retention, and is necessary for the production of hydrochloric acid and the absorption of fats and protein. It also aids in the maintaining sodium and potassium balance, and promotes red blood cell formation.

Pyridoxine is required by the nervous system and is needed for normal brain function and for the synthesis of the nucleic acids (RNA and DNA, which contain the genetic instructions for the reproduction of all cells and for normal cellular growth. It activates many enzymes and aids in the absorption of vitamin B12, in immune system function and in antibody production.

Vitamin B6 plays a role in cancer immunity and aids in the prevention of arteriosclerosis. It inhibits the formation of toxic chemical called homocysteine, which attacks the heart muscle and allows the deposition of cholesterol around the heart muscle. Pyridoxin acts as a mild diuretic, reducing the symptoms of premenstrual syndrome, and it may be useful in preventing calcium oxalate kidney stones as well. It is helpful in the treatment of allergies, arthritis and asthma.

<u>Parameter</u>	<u>Sample No.</u>	<u>Initial and Final Means</u>
Vitamin B6	n=4	Initial Mean: 124.6 n= 3 Final Mean: 19.3

Discussion: Initial testing for vitamin B6 had in this set of testing an individual value of 456.6, which may have skewed the study to show a higher initial mean value of 124.6. It must be noted that the individual did respond to Willard Water® by having an initial level of 456.6 go to 12. It was determined that this individual had a 1:320 antinuclear membrane antibody (ANA) with a titer of 1:128 *Legionella pneumonophila*. After the 30 days of taking Willard Water® these other biological monitoring tests not within this study were 1:80 ANA and 1:64 *Legionella pneumonophila*. This shows the importance of vitamin B6 in the prevention of allowing foreign bodies (microorganisms, chemicals, etc.) into the nuclear membrane, which then would lead to exposure to the DNA molecules of the genes. The other individuals had an increase in vitamin B6 permeability, when comparing them individually. The values of the ANA and *Legionella pneumonophila* changes are significant in how the Willard Water® truly functions as a micelle responsive molecule, just like little scrub bubbles used to cleanse a bath tub ring. Willard Water® made the antibody titers reduce by aiding in the break down or release of the original antigens/chemical toxins within the nuclear antibody and reducing the levels within the cell itself.

Vitamin B1 (Thiamine)

Thiamine operates in the metabolic systems of the body principally as thiamine pyrophosphate: this compound functions as a cocarboxylase, operating mainly for decarboxylation of pyruvic acid.

Thiamine deficiency causes decreased utilization of pyruvic acids and some amino acids by the tissues but increased utilization of fats. Thus, thiamine is specifically needed for final metabolism of carbohydrates and many amino acids. Probably the decreased utilization of these nutrients is responsible for the debilities associated with thiamine deficiency.

Thiamine Deficiency and the Nervous System. The central nervous system depends almost entirely on the metabolism of carbohydrates for its energy. In thiamine deficiency the utilization of glucose by nervous tissue may be decreased as much as 50 to 60 percent. Therefore, it is readily understandable that thiamine deficiency can greatly impair function of the central nervous system. The neuronal cells of the central nervous system frequently show chromatolysis and swelling during thiamine deficiency, changes that are characteristic of neuronal cells with pure nutrition.

Also, thiamine deficiency can cause degeneration of myelin sheaths of nerve fibers both in the peripheral nerves and in the central nervous system. The lesions in the peripheral nerves frequently cause these nerves to become extremely irritable, resulting in polyneuritis characterized by pain radiating along the course of one or more peripheral nerves. Also, in severe thiamine deficiency, the peripheral nerve fibers and fiber tracts in the cord can degenerate to such an extent that paralysis occasionally results.

Thiamine Deficiency and the Cardiovascular System. Thiamine deficiency also weakens the heart muscle, so that a person with severe thiamine deficiency sometimes develops cardiac failure. Peripheral edema and ascites also occur to a major extent in some persons with thiamine deficiency, partly because of the cardiac failure but also because thiamine deficiency causes arteriolar dilation.

Thiamine Deficiency and the Gastrointestinal Tract. Among the gastrointestinal symptoms caused by thiamine deficiency are indigestion, severe constipation, anorexia, gastric atony, and hypochlorhydria. All these effects possibly result from failure of the smooth muscle and glands of the gastrointestinal tract to derive sufficient energy from carbohydrate metabolism. The overall picture of thiamine deficiency, including polyneuritis, cardiovascular symptoms, and gastrointestinal "disorders", is frequently referred to as **beriberi** - especially when the cardiovascular symptoms predominate.

<u>Parameter</u>	<u>Sample No.</u>	<u>Initial and Final Means</u>
Vitamin B1 (Thiamine) Blood	n=5	Initial Mean: 140.75 Final Mean: 115.4
Vitamin B1 (Thiamine) Plasma	n=5	Initial Mean: 12.95 Final Mean: 12.2

Discussion: The absorption of vitamin B1 (thiamine) blood was more effective with Willard Water ® than with plasma. A slight change from an initial mean of 12.95 to 12.2 occurred. The value of vitamin B1 (Thiamine) in blood was significant and must have a direct

relationship the hemoglobin, cobalamines and other nutrients that are effective in protecting red blood cells.

Vitamin K

Vitamin K is necessary for the formation by the liver of prothrombin, factor VII (proconvertin), factor IX, and factor X, all of which are important in blood coagulation. Therefore, when vitamin K deficiency occurs, blood clotting is retarded. Several different compounds, both natural and synthetic, exhibit vitamin K activity. Because vitamin K is synthesized by bacteria in the colon, a dietary source of this vitamin is not usually necessary; but when the bacteria of the colon are destroyed by administration of large quantities of antibiotic drugs, vitamin K deficiency occurs rapidly because of the paucity of this compound in the normal diet.

Vitamin K is needed for the production of prothrombin, which is necessary for blood clotting. It is also essential for bone formation and repair; it is necessary for the synthesis of osteocalcin, the protein in bone tissue on which calcium crystallizes. Consequently, it may help prevent osteoporosis.

Vitamin K plays an important role in the intestines and aids in converting glucose into glycogen for storage in the liver, promoting healthy liver function. It may increase resistance to infection in children and help prevent cancers that target the inner linings of the organs. It aids in promoting longevity. A deficiency of this vitamin can cause abnormal and/or internal bleeding.

There are three forms of vitamin K. The first is vitamin K1 (phylloquinone or phytonadione), which comes from plants and makes up your dietary vitamin K. The second is vitamin K2, a family of substances called menaquinones, which are made by intestinal bacterial and also found in butter, cow liver, chicken, egg yolks, fermented soybean products, and some cheeses. Third, there is vitamin K3 (menadione), which is a synthetic, man-made substance.

Parameter

Sample No.

Initial and Final Means

Vitamin K

n=4

Initial Mean: 411.47 Final Mean: 499.66

Discussion: Vitamin K did increase in value after taking Willard Water® for 30 or more days. It must be noted that vitamin K plays an additional role in the sub-metabolization of vitamin D and its metabolites through the absorption of calcium. When levels are low of vitamin K there will be more calcium crystals formed and lower levels of vitamin D metabolites. In the presence of radiation and high Vitamin D (40K IU/Kg) there is a direct correlation with elevation of plasma calcium. Low levels of vitamin D (20%) can cause an increase in parathyroid adenoma. Vitamin D3 has active metabolism by being produced in the kidney, which is dependent upon vitamin K.

CONCLUSION

Individuals who participated in this study showed significant improvements in the absorption of various vitamins over a 30 day or more drinking/ingestion of Willard Water® at the

dilution factor described at the beginning of this report. The test individuals have had specific exposure to carbon monoxide as a result of carbohydrate metabolism and chemical break downs interactive compounds from previous exposure to toxic substances, pathogens and waterborne polyurethane.

After 30 days on Willard Water® one could observe that the vitamin levels of all of the vitamin parameters tested improved. The interaction of B12, B6 and B12 binding capacity unsaturated transcobalamin were dependent upon the presence of the other vitamins needed to allow the single vitamin to function within the cellular matrix and its re-activeness to the single vitamin.

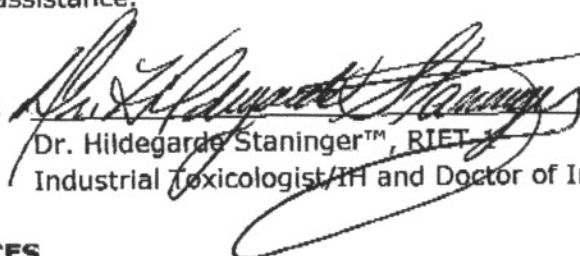
In summation, Willard Water® significantly improved the efficacy of multiple vitamin absorption within the human being. Each individual tested showed individually significant improvement by drinking Willard Water® over the 30 day period. In addition, the collective specimen pool of individuals showed significant improvement due to Willard Waters® micelle reactive properties, which allows molecules to become smaller and more effective in the reaction with other molecules of opposing charges. It was also observed that the vitamins that were "hydrogen" reactive, reacted significantly better with Willard Water®. These particular vitamins would be the water soluble vitamins.

Table 4 shows comparative values for bio-energetic potentials. In summation the results showed that as the individual used Willard Water® there was greater reactive response or bio-availability of the vitamin. This test was done through the utilization of IHS Detox Patch Test Analysis, which is a scientific test to show illustrate a direct correlation with exposure and systemic organ toxicity. This test was used to show that parameters of vitamins could also be addressed through IHS Detox Patch Test Analysis, which is ideal for when blood and urine specimens are not available or when testing infants and small children.

Attached to this document are specific Tables 1, 2, 3 and 4 that contain the information used to calculate the initial and final means of this study. The sample numbers varied due to individuals dropping out of the study, which is a major factor when conducting biological monitoring studies on humans when over a 30 day period of time.

If any additional information is requested, please contact Integrative Health Systems, LLC for further assistance.

Signature:



Date:

10/11/2011

Dr. Hildegard Staninger™, RIET-1
Industrial Toxicologist/TH and Doctor of Integrative Medicine

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TABLE 1: Number Assigned to Participating Individuals In the Willard Water® Vitamin Efficacy Study (All participants were Caucasian).

<u>IHS Assigned Number</u>	<u>Sex/Age</u>	<u>Corresponding Table Number</u>	
1) IHS-0642011-01	F/ 67	1	used XXX (Dark)
2) IHS-0642011-02	M/49	2	used XXX (Dark)
3) IHS-0642011-03	F/ 57	3	used Clear
4) IHS-0642011-06	F/60	4	used XXX (Dark)
5) IHS-069-0211-07	F/53	5	used XXX (Dark)
6) IHS-0614-0211-08	F/65	6	used XXX (Dark)
7) IHS- Control	F/55	7	No Willard Water®
8) HIS-0623-0211-11	F/29	8	Dropped out of study

Note: Two other participants dropped out of study, with multiple people not completing their testing after 30 days or more of using Willard Water®

TABLE 2: Initial Test Results of Participants in the Willard Water® Vitamin Efficacy Study.

Initial Results

Baseline Initial Test Results								
PARAMETERS WITH REFERENCE RANGE	1 - XXX 06/27/2011	2 - XXX 06/07/2011	3 - C 11/01/2010	4 - C n/a	5 - C 06/14/2011	6 - XXX 03/25/2011	7 - CONTROL 06/09/2011	8 - XXX n/a
Vit. D, 25-OH Total (Ref. 30-100 ng/mL)	53	36	less than 20		81	67	less than 26	
Vit. D 25-OH, D3	53	31	20		49	67	26	
Vit. D 25-OH, D2	<4	5	<4			<4	<4	
Vit. D, 1,25 (OH) ₂ Total (Ref. 18-72 pg/mL)	48	19	43		43	70	37	
Vit. D3, 1,25 (OH) ₂	48	19	43			70	37	
Vit. D2, 1,25 (OH) ₂	<8	<8	<8			<8	37	
Vit. B12 BINDING CAPACITY, UNSAT (TRANSCOBALAMIN) (Ref. 650-1340 pg/mL)	838				<400	Less than 617	1005	
Vit. B6 (Ref. 2.1 - 21.7 ng/mL)	21	13			456.6		8	
Vit. C (Ref. 0.20 - 1.90 mg/dL)	0.99	0.99			1.46		0.32	
Vit. E (TOCOPHEROL) ALPHA-TOCOPHEROL H (Ref. 5.5 - 22.0 mg/L)	less than 20.1	16.6			13.1		14.4	
BETA-GAMMA=TOCOPHEROL (Ref. 4.3 OR LESS mg/L)	1.5	0.4					0.5	
Vit. K (Ref. 80 - 1160 pg/mL)	567	172			0.36	520	798	
Vit. B1, PLASMA (Ref. 9 - 44 nmol/L)	less than <7L	less than <7				29	9	
Vit. B12/FOLATE, SERUM, PANEL VIT. B12 (Ref. 200 - 1100 pg/mL)	758	567			>4000	937	924	
FOLATE, SERUM (Ref. Range low: <3.4 Borderline: 3.4 - 5.4 Normal: >5.4)	17.1	20.3					10.2	
Vit. B1, THIAMINE, BLOOD (Ref. 87 - 280 nmol/L)		132			85	189	157	

TABLE 3: Final results of participants in the Willard Water® Vitamin Efficacy Study.

Final Result

PARAMETERS WITH REFERENCE RANGE	1- XXX n/a	2- XXX 07/14/2011	3- C n/a	4- C 07/05/2011	5- C 09/14/2011	6- XXX n/a	7- Control 06-20-2011	8- XXX 06/29/2011
Vit. D 25-OH Total (Ref. 30-100 ng/mL)		32		37	25		Less than 22	43
Vit. D 25-OH, D3		32		37	25		22	43
Vit. D 25-OH, D2		<4		<4	<4		<4	<4
Vit. D 1,25 (OH) ₂ Total (Ref. 18-72 pg/mL)		32			32		53	33
Vit. D3, 1,25 (OH) ₂		32			32		53	33
Vit. D2, 1,25 (OH) ₂		<8			<8		<8	<8
Vit. B12 BINDING CAPACITY, UNSAT (TRANSCOBALAMIN) (Ref. 650-1340 pg/mL)		261		1706	657		Less than 372	
Vit. B6 (Ref. 2.1 - 21.7 ng/mL)		Less than 35			12		12	
Vit. C (Ref. 0.20 - 1.90 mg/dL)		1.16		0.94	0.45		0.49	0.57
Vit. E (TOCOPHEROL) ALPHA-TOCOPHEROL H (Ref. 5.6 - 22.0 mg/L)		17.5		21.5			15.4	9
BETA-GAMMA=TOCOPHEROL (Ref. 4.3 OR LESS mg/L)		0.4		1.3			1.3	1.8
Vit. K (Ref. 80 - 1160 pg/mL)		313			550		636	
Vit. B1, PLASMA (Ref. 9 - 44 nmol/L)		9		10	11		11	20
Vit. B12/FOLATE, SERUM PANEL VIT. B12 (Ref. 200 - 1100 pg/mL)		681		797	Less than 1212		Less than 1818	467
FOLATE, SERUM (- Ref. Range Low: <3.4 Borderline: 3.4 - 5.4 Normal: >5.4)		>24			13.9		9	12.7
Vit. B3 (THIAMINE), BLOOD (Ref. 87 - 280 nmol/L)		91		97	132		122	135

Table 4: Results of participants In the Willard Water® Vitamin Efficacy Study and its correlation with the use of IHS Detox Patch Test Analysis for bio-availability of vitamins.

			1	2	3	4	5	6	7	8
20377567	P	CAOTINE A				84.9				
2032344	P	CAOTINE A				84.9				
2032404	P	CAOTINE A								
+57-58	P	CAOTINE A								
+43-41	P	CAOTINE A	62.5							
+86-24.5	P	CAOTINE A	62.4							
+32-54	P	COMPLEX B'S	83.4							
203765511	P	THIAMINE B-1	82.1							
+61-03	P	THIAMINE B-1	77.9							
+56-03	P	THIAMINE B-1	78.3							
203773330	P	IBOFLAVIN B-2		91.8						88
+44.3-04.5	P	IBOFLAVIN B-2								88
20335043	P	NIACIN B-3								75.4
+59.5-39	P	NIACIN B-3								74.7
2039456	P	VITAMIN B-4			84					
+61-59.2	P	VITAMIN B-4								
2036743	P	VITAMIN B-5								
+35.5-39.5	P	VITAMIN B-5								
203447731	P	VITAMIN B-6								
+26-47	P	VITAMIN B-6								
203203446	P	VITAMIN B-12								
+78.5-58.5	P	VITAMIN B-12								

IHS Detox Patch Test - Bio activity / Sid availability
Results.

[illegible]