



X₂O STUDIES REPORT

STUDY I - INVESTIGATION INTO THE PHYSIOLOGICAL EFFECTS OF NANOMETER LIGHT ENERGIZED

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Introduction

This was a discovery study to determine the base physiological effects on individuals consuming water energized by light. The LifeWave Water Device I was used, which energizes water using focused light of specific wavelengths.

Materials

LifeWave Water Device I, distilled water, plastic cups. VarioCAM® HD head 880 / 30 mm near infrared imaging camera and software, laptop and associated cables and stands. Thought Technology BioGraph Infinity Physiology Suite including HRV analysis modules, leads, pads, and gel. Data Logging multi-meter, AP-Meter (air pressure meter), barometric pressure gage, ambient temperature gage, blood pressure cuff, iHealth non-contact thermometer, pulse-oxygen meter, Omron Body Composition Monitor and Scale (2021). OMAX darkfield/brightfield microscope with video system software, lancets, band aids, cotton balls, alcohol wipes, lens paper, lens wipes, slides, cover-slips. Urine samples for amino acid testing, test tubes, urine cups, -20C freezer, racking. Questionnaires, computers, printer, pens, clipboards and paper. Shipping supplies including Uline triple walled freezer boxes, deluxe liners, medical grade styrofoam freezer containers, dry ice and shipping tape.

Method

A randomized controlled sample of 20 individuals, men and women age 21-81 were recruited, consented and baseline information taken prior to study scheduled date. On scheduled date, participants were on-site for approximately 2 hours. Defined measures were taken and then while attached to HRV system participants drank 8 oz of one of two versions of water treated by the LifeWave Water Device Version I. Base water product used was commercial distilled water lightly chilled prior to device treatment. Water was treated for approximately 45 minutes.

Group one had no additives to the water and group two added a magnesium based commercial detoxification product. Duplicate measures were then taken. Questionnaires were given at baseline and post physiological testing.

Results

There was significance in participant response from this product across several different areas of interest. These areas included amino acid panel, HRV, bioelectric measures and changes in red blood cell response.

Conclusion

The changes produced by the energized water support further exploration and potential further development of this device.

Keywords

Water, light, energy, amino acid, physiology suite, HRV, near infrared, data-logging multimeter, darkfield microscopy, body composition.

WATER ENERGIZER DEVICE STUDY 2

Connor, CA, Connor, MH, Eickhoff, J and Perry, M

Purpose

This study seeks to explore the physiologic results and resulting implications of drinking energizing water.

Materials

LifeWave water energizing device, beakers, beaker stands, and bottled water. Acupuncture measures include AcuGraph, Excell II and Electro point testing using a data logging multimeter, barometric pressure sensor, and air pressure sensor. Thought Technology Infinity Physiology Suite including HRV, EEG, EMG, TEMP, Galvanic Skin Response and Blood Volume Pulse. Vitals included Temp, pulse, respiration, blood pressure and O2saturation. Interstitial testing included weight, kCal, BMI, % muscle, % fat, visceral fat and body age. The Biowell provided the Bioelectric-magnetic measures and the Sit-Stand test was done to test physicality. And near infrared images were taken before, during and after drinking the water. Two computer questionnaires: Living to 100 and Mental Age.

Methods

A two-arm randomized study single blind study was conducted to evaluate the effect of drinking energizing water when compared to bottled water. Measures were taken before and after drinking the water within the same 24-hour period. Two groups which are a randomized sample of 10 subjects each were made up of both men and women aged 21-90 with the goal of 10 subjects in each group completing the study. Once all 20 subjects had completed the study recruiting and consenting was stopped. Since this study focused on the impact of energized water, 10 subjects drank bottled water in group 1 and 10 subjects drank the energized version of the water. Subjects were consented, Mental Age and Living to 100 questionnaires were taken online and demographic measures were taken. Then the following measures were taken before and after drinking the energized water in the listed order:

- Weight with interstitial age
- Sit/Stand test
- Base temp, blood pressure, O2 sat
- Point measures (AcuGraph, Excel II, Repeat Electro point)
- Bioelectro-magnetic measures (Biowell)
- (Physio suite HRV)
- Drink The Water - concurrent Near Infrared images were taken while drinking

- (Physio suite HRV)
- Bioelectro-magnetic measures
- Base temp, blood pressure, O2 sat
- Point measures (AcuGraph, Excel II, Repeat Electro point)
- Sit/Stand test
- Weight with interstitial age
- Mental Age questionnaire and Living to 100 questionnaire were again taken online once the other measures were completed.

Results

Over 100 statistically significant changes at ($p < 0.05$ or better) were found in this study.

Most of the measures had at least one change in significance. It is interesting to note that only the on-line questionnaires designed to predict body age failed to produce significance yet still showed a positive change with a reduction in age in the active group.

Conclusion

When the amino acid data from the first study and the physiologic, acupuncture and bioelectric data from the second study are combined, it is clear that there is at minimum an improvement in wellness measures with a documented trend toward improved body function. Over 100 statistically significant changes at $p < 0.05$ or better were found in this study. Most of the test measures had at least one change in significance. Positive changes in organ function are clearly demonstrated in every major body system including brain, heart, kidneys, liver, gallbladder, pancreas, stomach, intestinal track and bladder/pelvic area. It is interesting to note that the sit-stand physical test and the on-line questionnaires designed to predict body age failed to produce significance yet still showed a positive change with a reduction in age in the active group. Double-blind testing of the device is a logical next step in device development to confirm the current test results.

Keywords

AcuGraph, BioWell, Data Logging Multimeter, Thought Technology Physiological test Suite, HRV, Water.

WATER ENERGIZER DEVICE STUDY 3

Connor, CA, Connor, MH, Eickhoff, J and Perry, M, and Shipione, H

Purpose

This study seeks to explore the physiologic results and resulting implications of drinking energizing water with or without Citrulline and Sulforaphane.

Materials

LifeWave water energizing device, beakers, beaker stands, and bottled water. Thought Technology Infinity Physiology Suite including HRV, EEG, EMG, TEMP, Galvanic Skin Response and Blood Volume Pulse. Vitals included Temp, pulse, respiration, blood pressure and O2 saturation. CO2 measures and blood glucose were also taken. Interstitial testing included weight, kCal, BMI, % muscle, % fat, visceral fat and body age. The Biowell and BioPulsar provided the Bioelectric-magnetic measures. Doppler Perfusion Imaging was also done. And near infrared images were taken before, during and after drinking the water. Citrulline and Sulforaphane were given to the supplement group, while a placebo was given to the water only group.

Methods

Measures were taken before and after drinking the water within the same 24-hour period. A single blind study with two groups which were a randomized sample of 10 subjects each were made up of both men and women aged 40-90 with the goal of 10 subjects in each group completing the study. Once all 20 subjects had completed the study recruiting and consenting was stopped. Since this study focused on the impact of energized water with and without supplements, 10 subjects were given a placebo at the beginning of testing and drank energized water alone in group 1 and 10 subjects were given Sulforaphane at the beginning of testing and drank the energized water with Citrulline.

Subjects were consented and demographic measures were taken. Then the following measures were taken before and after drinking the energized water in the listed order:

- Weight with interstitial age
- Base temp, blood pressure, O2 sat, glucose and CO2
- Biowell/GDV
- BioPulsar
- Doppler Perfusion Imaging
- (Physio suite HRV)
- Drink The Water - concurrent Near Infrared images taken before, while drinking, after

- (Physio suite HRV - concurrent and after)
- Doppler Perfusion Imaging
- BioPulsar
- Biowell/GDV
- Base temp, blood pressure, O2 sat, glucose and CO2
- Weight with interstitial age

Results

There were over 100 statistically significant changes at $p < 0.05$ across the various measures. Most important were the comparisons of changes for some of the key outcome parameters between arms which demonstrates the “true intervention effect”. However the within group especially within control arm significant differences are not as relevant in demonstrating the intervention effects found in this study. All of the test measures, except the Doppler Laser Perfusion Imager, had at least one change in significance. Positive changes in organ function are clearly demonstrated in every major body system including brain, heart, kidneys, liver, gallbladder, pancreas, stomach, intestinal track and bladder/pelvic area.

Conclusion

This study reinforces the previous two studies findings of broad wellness effects with a documented trend toward improved body function. Once again over 100 statistically significant changes at $p < 0.05$ across measures were found in this study. All of the test measures, except the Doppler Laser Perfusion Imager, had at least one change in significance. Positive changes in organ function are clearly demonstrated in every major body system including brain, heart, kidneys, liver, gallbladder, pancreas, stomach, intestinal track and bladder/pelvic area. A longer test period is a logical next step to see how these effects either stabilize or change over time.

Keywords

BioPulsar, BioWell, BioGraph Infinity Thought Technology Physiological Test Suite, HRV, Water, Doppler Perfusion Imager, Interstitial Resistance

LIFEWAVE WATER DEVICE STUDY 4

Connor, CA., Connor MH., Eickhoff, J., Perry, M, and Shipione, H

Introduction

LifeWave has a stated commitment to developing wellness products that support health, well-being and longevity. The LifeWave Water Device X₂O technology is focused on infusing water using light of specific wavelengths. This study was a double-blind crossover with 50 completing participants to see if the prior study results were maintained.

Device Purpose

To support over-all total wellness through using light of specific wavelengths to infuse water.

Keywords

Water, light, energy, amino acid, physiology suite, HRV, near infrared, data-logging multimeter, darkfield microscopy, body composition.

Materials

LifeWave X₂O technology, distilled water, plastic cups, beakers, beaker stands, and bottled water. Thought Technology Infinity Physiology Suite™ including HRV, EEG, EMG, TEMP, Galvanic Skin Response and Blood Volume Pulse. Vitals included Temp, pulse, respiration, blood pressure and O₂saturation. CO₂ measures and blood glucose were also taken. Interstitial testing included weight, kCal, BMI, % muscle, % fat, visceral fat and body age. The Biowell™ and BioPulsar™ provided the Bioelectric-magnetic measures. Doppler Perfusion Imaging™ was also done. And near infrared images were taken before, during and after drinking the water. OMAX™ darkfield/ brightfield and phase contrast microscope with video system software, lancets, band aids, cotton balls, alcohol wipes, lens paper, lens wipes, slides, cover-slips. Urine samples for amino acid testing, test tubes, urine cups, -20C freezer, racking.

Method

A randomized controlled sample of 50 individuals, men and women age 40-90 were recruited, and consented at scheduled date. Both visits were scheduled at the same time to ensure participants were available within the interval required. On scheduled date, participants were on-site for approximately 2 hours. Defined measures were taken and then while attached to the Biograph Infinity physiology system participants drank 8 oz of. either untreated or treated water depending on visit and randomized order. Base water product used was commercial distilled water. Water

was treated for approximately 45 minutes and used two panels set to 550nm – 632nm – 710nm and 370nm – 675nm – 855nm respectively. Participant group one had infused water for their first visit and untreated water for their second while participant group two was the reverse. Duplicate measures were taken immediately following water consumption.

Protocol sequence:

- Amino Acid Urine test
- Weight with interstitial age
- Doppler Perfusion Imaging
- Base temp, blood pressure, O2 sat, and CO2
- Glucose
- Darkfield Microscopy
- Biowell/GDV
- BioPulsar
- Physio suite including HRV - concurrent and after
- **Drink The Water**
- Physio suite
- Biowell/GDV
- BioPulsar
- Base temp, blood pressure, O2 sat, and CO2
- Doppler Perfusion Imaging
- Darkfield Microscopy
- Glucose
- Weight with interstitial age
- Amino Acid Urine test

Physiological Measures

Vitals:

Vitals were checked using a number of standard measures to both identify potential catastrophic issues, such as a significant drop in O2 saturation, and measure changes in body functioning.

The following vitals measures were taken including Pulse Oximeter, Blood Pressure, temperature, and CO2.

OMAX Darkfield Microscope with video system software:

The microscope was used to check for changes in blood shape and size, to see if there were any improvements or potential catastrophic issues.

The OMAX 40X-2500X 14MP USB3 Darkfield and Brighfield Trinocular Compound Microscope for Live Blood Analysis model M837Z-A191BOIL-C140U3 with Touptek Photonics ToupView c-mount USB 2.0 CCD camera with Sony ExView HAS .3M-1.4M CCD sensor with ultra-fine color engine video system software with images produced through File Viewer Plus 4.

Using sterile lancets, 4 drops of blood were taken at each data point to make 4 microscope slides. Slides were photographed under darkfield microscope while blood was active. Analysis of blood was done looking at blood characteristics such as rouleux and fibrin.

Amino Acid Panel:

Amino Acids were checked to look at changes in overall body functioning. Amino acids build proteins and most components of the body, so changes in amino acids show changes in both use, as the body may use more of an amino acid to create a specific effect, and production, as most amino acids are synthesized internally.

Amino acid analysis was done on TSQ Quantum Triple Quadrupole LC-MS/MS Mass Spectrometer using amino acid test kit. Analysis was done at PacifiqueBio laboratory in San Diego which analyzed the urine for amino acids levels.

Urine samples were taken pre - post water in sterile urine cups and placed in V-Monovette Urin 4ml Borsaire test tubes. Samples were flash frozen and were driven to Carlesbad, CA to guarantee sample viability on a one-time basis at the completion of data collection.

Thought Technology BioGraph Infiniti Physiology Suite:

The physiology suite is used to measure the overall physiological functioning of the body. This is done immediately before and after drinking the water to see how physical function changes quickly.

Complete Thought Technology IS7910 Biograph Infinity Physiology Suite testing including ekg, temp, galvanic skin response, blood volume pulse, respiration and emg measures were taken. CardioPro SA7597 Infinity HRV analysis software was used to analyze measures.

A 3-minute measure was taken prior and one was taken while drinking the water. A final 6-minute measure was also taken after the 3-minute while drinking measure. Analysis was done with CardioPro software and measures panel was loaded into spread sheets for additional statistical analysis.

Omron Body Composition and Weight Scale (2021):

The scale is used to measure the interstitial resistance using multiple measures. This says how

difficult it is to send a signal through a cell, and by extrapolation how well it is functioning. If cells cannot receive signals, they can't do what the body needs them to do.

Made by Omron Healthcare in 2021, the HBF-514C Body Composition and Weight Scale has seven measures available: Body fat %, Body Mass Index, Skeletal Muscle, Resting Metabolism, Visceral fat, Body age, weight. Measures for this study include original weight, body fat and body age.

Bio-Well

The Bio-Well measures the gas emissions of the fingertips and maps them to the body using the meridian system. Fingers are placed individually on a glass plate and a millivolt of electrical current is run through the plate to produce a scatter pattern. This is then analyzed for frequency and density, among other factors. This provides a lot of information about how the body is functioning overall.

Bio-Well 3.0, with 3.0 Bio-Well software.

BioPulsar

The BioPulsar looks at the electrical conductivity of a variety of acupuncture points on the hands. It then maps these acupuncture points to corresponding body systems, including but not limited to the neck, the heart, and the upper arm. This provides a lot of information about how the body is functioning overall.

BioPulsar-Reflexograph by Auramed version 4 meets medical device act test specifications CE 0483 and EMC test specifications directive 89/336/EEC with brass 24 carat gold plated sensors. With version 4.9 BioPulsar software.

Doppler Perfusion Imaging

The Doppler Perfusion Imager looks at microcapillary dilation in the hands. This tells us if some of the changes in body functioning are due to changes in capillary dilation.

Perimed AB PIM II Laser Doppler Perfusion Imager with LISCA Opto-I Isolation Unit.

CO2 measures

CO₂ is a waste product produced by many bodily processes. It is expelled through exhalation. Changes in CO₂ production and expulsion can give insight into how effective these processes are, as well as how effective transportation and exhalation is.

Contec CO₂ Capnograph mainstream respiration rate End-Tidal and Portable air quality monitor 400-5000 PPM mini CO₂ detector.

Blood Glucose

Blood glucose is a fuel for many body processes. It is also toxic. Changes in blood glucose can be tied to changes in metabolism and the processes that use blood glucose as fuel.

TRUMATRIX meter starter kit with TRUMATRIX test strips.

Instrument/Questionnaires

Demographics:

This instrument is standard across research studies to keep track of populations which have been represented, or possibly underrepresented, in research.

This instrument records basic demographic information such as name, address, birth date and contact information.

Statistical Methods

Physiological, acupuncture and questionnaire outcomes were summarized in terms of means and standard deviations, stratified by visit. Mean changes from baseline were calculated and evaluated using a paired t-test. HRV parameters were summarized in terms of medians and interquartile ranges (IQR), stratified by source, epoch and testing period (pre/post vs. during drinking water). Differences between testing periods were evaluated using a nonparametric Wilcoxon signed rank test. All reported p-values are two-sided. Statistical analyses were conducted using R software (R Core Team (2021). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria), version 4.3.1.

Amino acid levels were summarized in terms of medians and interquartile ranges (IQR), stratified by visit. Changes from Visit 1 to Visit 2 were summarized in terms of median changes and IQR. Changes were evaluated using a nonparametric Wilcoxon signed rank test. All reported p-values are two-sided and $P < 0.05$ was used to define statistical significance.

Discussion

Vitals

There was an equally significant change in both groups in weight. This is likely due to having both groups drink the same amount of water. Despite this when drinking the infused water, the BMI went up less. While drinking the infused water there was also a larger change in muscle % and fat %. Diastolic blood pressure also dropped significantly in the group drinking the infused water. O₂ saturation increased by the same amount in both groups. Pulse dropped significantly in both

groups. CO₂ dropped significantly in both groups. Glucose dropped significantly in the group drinking the infused water. The change in muscle % and fat % suggest changes in metabolism and metabolic function, especially when combined with the significant decrease in glucose. There was also a decrease in CO₂ which supports this as well. The decrease in pulse suggests a relaxation effect in both groups, while the decrease in diastolic blood pressure in the active group only suggests that there were additional relaxation/cardiovascular effects. The increase in O₂ saturation is especially interesting in combination with the CO₂ decrease. It suggests a more effective gas transfer in the lungs.

Amino Acids

There were 12 significant amino acid changes, and 3 that were near significant. 3 of these link directly to DNA, and 1 is an essential amino acid. Getting any change in amino acids 1 hour post intervention is very fast. 3 of the amino acid changes were the same as with the first water study, while 2 more were in the same pathway as significant changes from the first water study. The control group did have a significant decrease in GABA which was likely caused by excitation.

BioWell

There were a number of areas of significance, including Spine – Cervical Zone, Urogenital System, Cerebral Zone (cortex), and Left Kidney. All of these areas increased significantly.

Physiology Suite

The group drinking the infused water showed significant changes in Skin Conductance, EKG, Temperature, and Respiration. The group drinking the untreated water showed significant changes in Skin Conductance, EKG, EMG, and Temperature. There was significantly more of a change and relaxation in respiration in the active group than in the control group.

BioPulsar

BioPulsar showed significance in a number of different areas that can be grouped into Legs and Arms, Intestines, Detoxification systems, Cardiovascular systems, Spine, Face, and Hormone systems. The active group Liver results were much more consistent and less variable in the active group after drinking the infused water. The active group Thymus gland results were significantly higher at three out of 4 time points in the active group after drinking the infused water. The active group Ureter results were much higher at multiple time points in the active group after drinking the infused water.

The BioWell and BioPulsar results both suggest that the infused water is impacting most major systems in the body. This is especially interesting in combination with the glucose changes and the

amino acid results, as they suggest a possible pathway for these effects. This is especially true given that three of the amino acids link directly to DNA and one is an essential amino acid. Unfortunately, while changing the timing of the Doppler Laser Perfusion Imager did have an impact on the results it is an incredibly confusing one. The numbers between groups and between before and after are too similar to make a determination.

Conclusion

The BioWell and BioPulsar results both suggest that the infused water is impacting most major systems in the body. This is especially interesting in combination with the glucose changes and the amino acid results, as they suggest a possible pathway for these effects.

LIFEWAVE WATER DEVICE STUDY 5

Connor, CA., Connor MH., Eickhoff, J., and Shipione, H

Introduction

LifeWave has a stated commitment to developing wellness products that support health, well-being and longevity. The LifeWave X₂O technology is focused on infusing water using light of specific wavelengths. This study was a single-blind randomized study with 20 completing participants to see if similar results were achieved with a different wavelength.

Device Purpose

To support over-all total wellness through using light of specific wavelengths to infuse water.

Keywords

Water, light, energy, amino acid, physiology suite, HRV, near infrared, data-logging multimeter, darkfield microscopy, body composition.

Materials

LifeWave X₂O technology, distilled water, plastic cups, beakers, beaker stands, and bottled water. Thought Technology Infinity Physiology Suite including HRV, EEG, EMG, TEMP, Galvanic Skin Response and Blood Volume Pulse. Vitals included Temp, pulse, respiration, blood pressure and O₂saturation. Blood glucose were also taken. Interstitial testing included weight, kCal, BMI, % muscle, % fat, visceral fat and body age. The Biowell provided the Bioelectric-magnetic measures. Urine samples for amino acid testing, test tubes, urine cups, -20C freezer, racking.

Method

A randomized controlled sample of 20 individuals, men and women age 40-90 were recruited, and consented at study scheduled date. On scheduled date, participants were on-site for approximately 2 hours. Defined measures were taken and then while attached to HRV system participants drank 8 oz of. either untreated or treated water depending on visit and randomized order. Base water product used was commercial distilled water lightly chilled prior to device treatment. Water was treated for approximately 45 minutes. Water was infused using panels set at a. 550nm- 632nm- 710nm and b. 385nm - 675nm-865nm. Duplicate measures were taken immediately following water consumption.

Protocol sequence:

- Amino Acid Urine Test
- Weight with interstitial age and birth age
- Base temp, blood pressure, glucose
- Biowell
- (Physio suite HRV)
- Drink The Water
- (Physio suite HRV - concurrent and after)
- Biowell
- Base temp, blood pressure, glucose
- Weight with interstitial age and birth age
- Amino Acid

Physiological Measures:

Vitals

The following vitals measures were taken including Pulse Oximeter, Blood Pressure, and temperature.

Amino Acid Panel

Amino acid analysis was done on TSQ Quantum Triple Quadrupole LC-MS/MS Mass Spectrometer using amino acid test kit. Analysis was done at PacificBio laboratory in San Diego which analyzed the urine for amino acids levels.

Urine samples were taken pre - post water in sterile urine cups and placed in V-Monovette Urin 4ml Borsaire test tubes. Samples were flash frozen and were driven to Carlsbad, CA to guarantee sample viability on a one-time basis at the completion of data collection.

Thought Technology BioGraph Infinity Physiology Suite:

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A 3-minute measure was taken prior and one was taken while drinking the water. A final 6-minute measure was also taken after the 3-minute while drinking measure. Analysis was done with CardioPro software and measures panel was loaded into spread sheets for additional statistical analysis.

Omron Body Composition and Weight Scale (2021):

Made by Omron Healthcare in 2021, the HBF-514C Body Composition and Weight Scale has seven measures available: Body fat %, Body Mass Index, Skeletal Muscle, Resting Metabolism, Visceral fat, Body age, weight. Measures for this study include original weight, body fat and body age.

Bio-Well

Bio-Well 3.0, with 3.0 Bio-Well software.

Blood Glucose

TRUMATRIX meter starter kit with TRUMATRIX test strips.

Instrument/Questionnaires:

Demographics

This instrument records basic demographic information such as name, address, birth date and contact information.

Statistical Methods

Physiological, acupuncture and questionnaire outcomes were summarized in terms of means and standard deviations, stratified by visit. Mean changes from baseline were calculated and evaluated using a paired t-test. HRV parameters were summarized in terms of medians and interquartile ranges (IQR), stratified by source, epoch and testing period (pre/post vs. during drinking water). Differences between testing periods were evaluating using a nonparametric Wilcoxon signed rank test. All reported p-values are two-sided. Statistical analyses were conducted using R software (R Core Team (2021). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria), version 4.3.1.

Amino acid levels were summarized in terms of medians and interquartile ranges (IQR), stratified by visit. Changes from Visit 1 to Visit 2 were summarized in terms of median changes and IQR. Changes were evaluated using a nonparametric Wilcoxon signed rank test. All reported p-values are two-sided and $P < 0.05$ was used to define statistical significance.

Discussion

Vitals

Weight and BMI changed significantly in both groups. This is likely due to the fact that we had both groups drink the same amount of water, and water has weight. Oddly BMI changed by different amounts between groups. Kcal also went up significantly in both groups, which is likely caused by increased hydration.

The active group showed a near significant decrease in systolic blood pressure, a significant decrease in diastolic blood pressure, a near significant increase in temperature, and a significant decrease in pulse rate. The significant decrease in diastolic blood pressure also caused between group significance.

Amino Acids

There was a near significant change in Leucine in the control group. The active group showed significant changes in α -Aminobutyric acid, Serine, Oxoproline, and Creatinine, with a near significant between group change in Creatinine. α -Aminobutyric acid, Serine, and Oxoproline all changed to significance or near significance in Water 4. Creatinine has not changed significantly in any of the prior water studies. It is produced by protein metabolism, but can lead to kidney problems at high levels.

BioWell

In the active group the nervous system, cardiovascular system, immune system, hormone system, waste processing system, intestines, spine, face, and kidneys were all effected significantly. The control group also showed significant changes in nervous system, cardiovascular system, immune system, hormone system, waste processing system, respiration, intestines, spine, face, and kidneys, though there were significantly fewer significant changes in those area. The active group showed over 150 significant or near significant changes, while the control group showed over 80 significant or near significant changes. The significant between group changes were in nervous system, cardiovascular system, immune system, hormone system, waste processing system, respiration, intestines, spine, face, kidneys, heart, and liver.

Physiology Suite

The active group showed significant changes in EKG, EMG, and Skin Conductance. The control group showed significant changes in Skin Conductance, EKG, EMG, Temperature, and Respiration. The between group significant changes were in EKG, Temperature, and Respiration.

Conclusion

The vitals measures show a probable relaxation effect, especially in combination with the physiology suite results. The amino acid and BioWell results suggest that there is a metabolic impact, though a slightly different one than the original light infusion technology.