Vital Force TECHNOLOGY™

Real Science. Real Solutions.

STRESS RELIEF FORMULA EFFECTS ON ADAPTIVE RESPONSE TO STRESS

Experiments on mice, human dermal fibroblast cells

and research with humans

Vital Force Technology™
A Division of Energy Tools International™

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Abstract

Poor adaptability to the long term stress, as it's known to medical practitioners, may cause a lot of medical problems resulting in the various diseases. Alternative methods of the stress treatment, like homeopathy and herbs, do not provide fast and powerful healing effect in comparison with pharmacological products. However these products are not free from the side effects. The Energy Tools Int. provides new solution to this problem offering its product **Stress Relief** formula, which works fast, efficient, is free from side effects and supports normal adaptive body reaction to the stress both in men, women and animals. Experiments on mice, human dermal fibroblast cells and with humans, presented below, proved that **Stress Relief** formula is a unique solution for maintaining an adaptive response to stress.

Stress Relief formula, one of the many subtle energy patterns created using Vital Force Technology (developed by distinguished Russian physicist, Dr. Yury Kronn [1]), is a product currently used and prescribed by many practitioners of complementary medicine for maintaining an adaptive response to tension, anxiety, strain and pressure, especially in conditions of extreme or prolonged stress. This formula is infused in the concentrated trace minerals, a substance absolutely friendly to the human body. It works on the energetic template, supporting the flow of subtle energy through the energetic system of the body, sending organizational information to support the body's natural ability to re-establish parasympathetic/sympathetic balance. Restoring the proper energy flow through subtle energy pathways (acupuncture meridians) supports the body work on reducing stress, anxiety, tension, anger and depression and maintaining positive emotions and moods. In this manner it can also help to normalize sleep cycles. **Stress Relief** can improve overall performance and stamina and could be used both by humans and animals in the dosage depending on the weight of the subject. An average dosage for 170 pounds men is 10-15 drops of the product diluted in the water or juice consumed 2-3 times daily.

Research on the effects of **Stress Relief** was conducted at the Riga Stradin University in Latvia (using the Open Field test, widely used for testing pharmaceutical drugs) by Prof. Simons Svirskis, at the Center for Cognitive Enhancement in Glendale, AZ (using QEEG Brain-mapping and the Perceived Stress Assessment test) by Jeffrey Fannin, Ph.D., at Beech Tree Labs, RI (exploring human dermal fibroblast cell growth rates) by Jeremy Lins, Research Scientist, at the Veteran's Hospital in Dayton, OH (using EEG and by stimulating alpha-rhythm in both hemispheres of the brain), and at Schuylkill Bio-Nutritional, Inc. in Schuylkill Haven, PA (using a standard heart rate variability test) by Dr. Jeffrey Marrongelle. These experiments, taken together, demonstrated that **Stress Relief** formula not only positively affects the central and autonomic nervous systems, but also enhances the viability of cells in stressful conditions.

Influence of Stress Relief subtle energy pattern on the locomotor activity in mice under stress conditions

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Materials and Methods

Rodent species, such as mice and rats, are commonly used to study different aspects of brain pathogenesis. Among various rodent models, mice are particularly widely used in bio-behavioral studies [2]. The subjects employed for this study were mice at age 6-7 weeks, considered to approximate human peri-adolescence. Forty male mice, weighing between 20 and 22 g were used. The animals were randomized into four specified experimental groups, ten animals per group: I – (No Stress, No SR66) – control group drinking trace mineral solution (TMS) not infused with **Stress Relief** pattern, II – (No Stress, SR66) – mice drinking TMS infused with **Stress Relief** pattern, III - (Stress, No SR66) – second control group of mice drinking TMS without subtle energy infusion that undergo short-term stress, IV – (Stress, SR66) – mice drinking TMS with infusion of subtle energy pattern that are exposed to short-term stress. Mice that received **Stress Relief** in drinking water (groups II and IV) were housed in a separate, isolated cabinet.

Open-field test

The Open Field test (OF) is a validated method commonly used in neuroscience and pharmacology that assays aspects of locomotor, exploratory and emotional behavior (risk assessment and anxiety-like behavior) in response to a novel environment [3]. Rodents will typically spend a significantly greater amount of time exploring the periphery of the arena—usually in contact with the walls—than the unprotected center area. Mice that spend significantly more time exploring the unprotected center area demonstrate anxiolytic-like baseline behavior. The primary measures are: locomotor activity (track length, velocity, characteristic of movements, etc.), exploration (number of rears), and anxiety-like behavior – decreased entry and activity in the center of the arena.

The Open Field (OF) behavior test involved placing an animal in a separate arena of a 50 × 50 cm white-painted plastic platform with 25-cm high surrounding walls. The total distance travelled in the arena reflects general exploratory activity that could be changed by locomotor ability, and is reduced in case of sedation, prior stress, paralysis, or impairment of movements, and conversely increased in case of excitation or anxiolytic and stress-decreasing influences. Spontaneous Motor Activity Recording and Tracking (SMART) software combined with a video camera was used as a digital video-tracking system to monitor the location of the animal within the OF. For the purpose of analysis by SMART, the OF was virtually divided into three zones (outer perimeter, middle part, and central zones). In each 10-min tracking period session, four mice (one from each group) were gently put onto the center of separate arenas, and locomotor behavior was registered for the following 10 minutes. The SMART software program allowed us to automatically trace the position and movements of the animals and calculate the main parameters of our interest: zone crossings (zone entrances), the distance travelled, maximal velocity, fast movement episodes, central zone crossings and time spent in the central zone.

Results

Compared to the control animal group, the group with a 9-day intake of SR-energized water showed a significant increase in characteristics of locomotor activity of non-stressed mice in OF. An even more pronounced effect was observed in animals undergoing short-term stress in a five-minute Porsolt test procedure, 30 minutes before OF. **Fig.1** represents some real tracking examples (six sessions out of ten), and demonstrates considerable locomotor activation in SR-drinking mice.

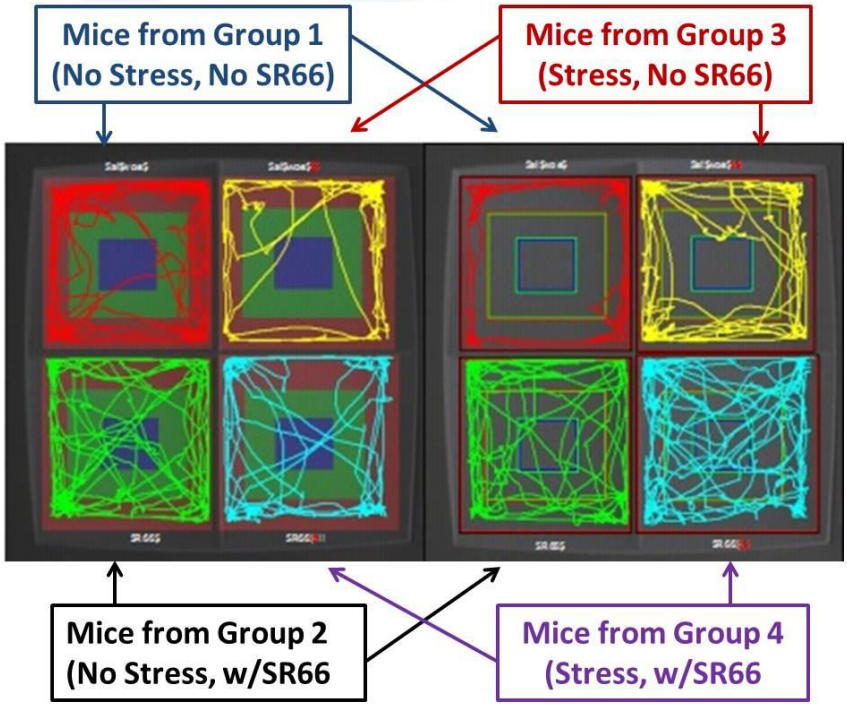


Fig. 1 - Tracking examples of mice locomotor activity in Open Field (OF) test.[12]

After nine days' intake of water with SR pattern, non-stressed mice exhibited locomotions at a higher level than was observed in the control animals. A more pronounced effect was observed in mice exposed to stress 30 min prior to the OF test. Regression analysis showed a similar relation between SR66-group and control group I in each session with high significance. Similar effects were observed in zone crossing activity, maximal walking speed and fast movement episodes.

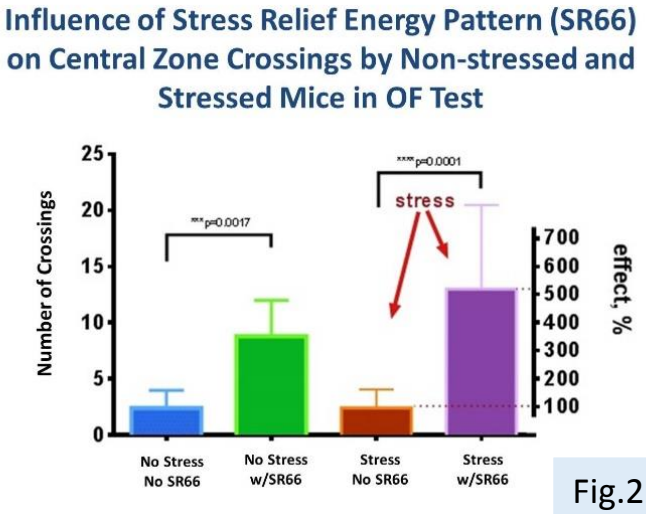


Fig.2

Crossing of central zone (also time spent there) is one of the characteristics that can describe anti-stress or anxiolytic activity [4]. As shown in **Fig.2**, the effect of SR reliably demonstrates ($p<0.0001$) a boost in central crossing activity of both non-stressed and stressed animals.

Table of Results

Counting Parameters of Non-stressed Control Group (No Stress, No SR66), as 100%

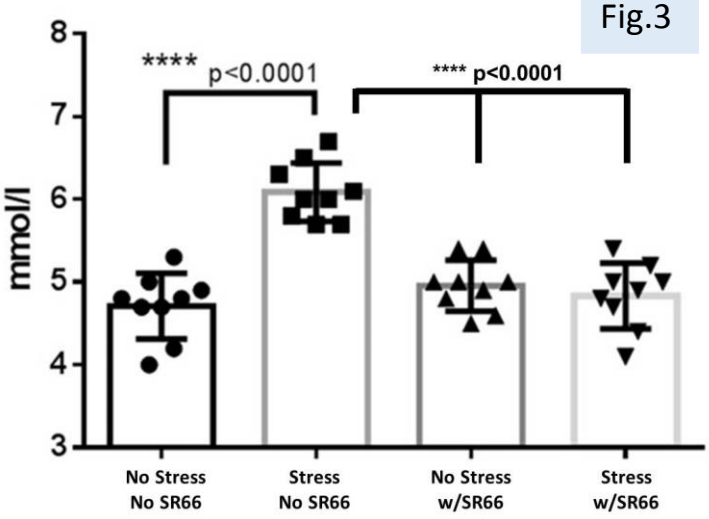
Table 1

		Distance Walked	Maximum Walking Speed	Duration of Fast Movements	Central Zone Crossing	Time spent in Central Zone
No SR66	Group 1 No Stress No SR66	100%	100%	100%	100%	100%
No SR66	Group 2 Stress No SR66	81%	91%	76%	100%	111%
With SR66	Group 3 No Stress w/ SR66	131%	125%	160%	400%	433%
With SR66	Group 4 Stress w/ SR66	153%	136%	187%	625%	600%

Table 1 represents a comparison of the major parameters measured in the Open Field test for all groups of mice, when paramenters measured for the control group (No Stress, No SR66) were considered to be 100%.

Blood Glucose Level in Mice

Fig.3



Along with the Open Field test, the blood glucose level in all mice groups was measured to determine physiological changes produced by stress [5]. Tests showed that mice in the stressed group that didn't drink water with **Stress Relief** had significantly elevated levels of glucose in the blood – 30%, higher than in the control group. The stressed mice that drank water with **Stress Relief** had the same glucose level as the non-stressed mice in the control group (**Fig.3**).

Effects of Stress and the Relationship of Subtle Energy as Measured by EEG & QEEG Analysis

Dr. Jeffrey L. Fannin, Ph.D.,
Center for Cognitive Enhancement, Glendale, AZ

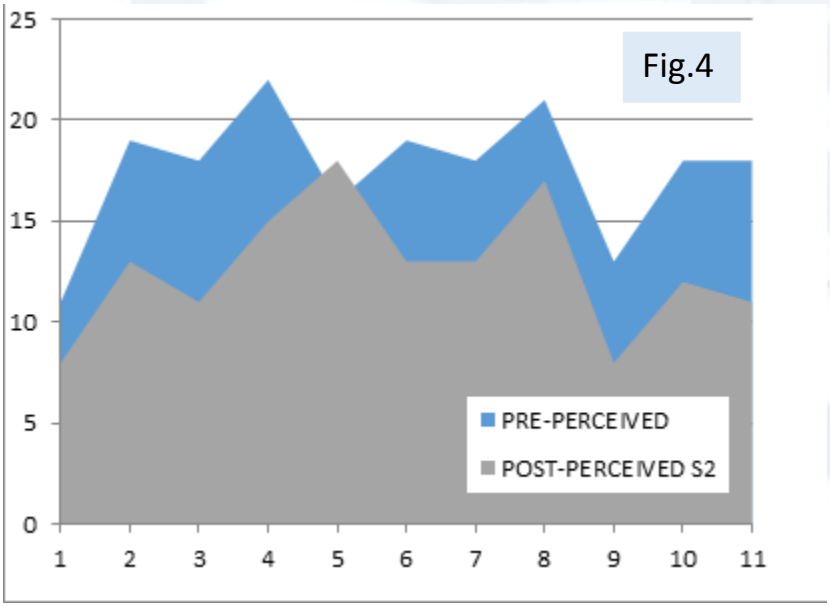
Materials and Methods

In the research study at the Center for Cognitive Enhancement participants used **Stress Relief** to evaluate their stress level. Approximately10 minutes of EEG setup was used for each person in a group of 10 subjects – 5 men and 5 women. EEG was converted to a Quantitative EEG (QEEG)

to display the data in a manner capable of evaluating a variety of reports, including: % of Power, Z-Score standard deviation, Amplitude Asymmetry, Coherence, Phase Lag and low resolution electromagnetic tomography (LORETA) [6]. After 10 min of baseline recordings participants were taking **Stress Relief** (10 drops in 8 oz. of water), and 4 min of EEG was recorded in the eyes closed condition. Participants used subtle energy formula three times daily for a period of seven days. Then they received Post-Study EEG, recording 4 min in the eyes closed condition. All participants filled out a Perceived Stress form, pre- and post-, and a Stress Profiler form, pre- and post- [7].

Results

The graph (**Fig.4**) presents data from the Perceived Stress Assessment test, pre- and post-. (Note: The x-axis represents the individual subject number and the y-axis indicates the perceived stress level according the Perceived Stress Assessment). Assessment was administered prior to using the stress formula. The assessment was re-administered after using **Stress Relief** formula (S2). All subjects registered a stress level between 11 and 22 prior to the use of stress formula. After using the formula, all subjects registered a stress level between 8 and 18. It shows that on average, **Stress Relief** formula diminished the stress level by about 25%.



Further, a majority of the subjects responded to the Stress Profiler Assessment, indicating they felt there was less stress and anxiety in their life. The average score of this group prior to using the stress formula was 222, putting the group into the category called, "A Little on Edge." After using **Stress Relief,** the average score from the Stress Profiler Assessment was reduced to 187, putting the group into the category called, "Easygoing."

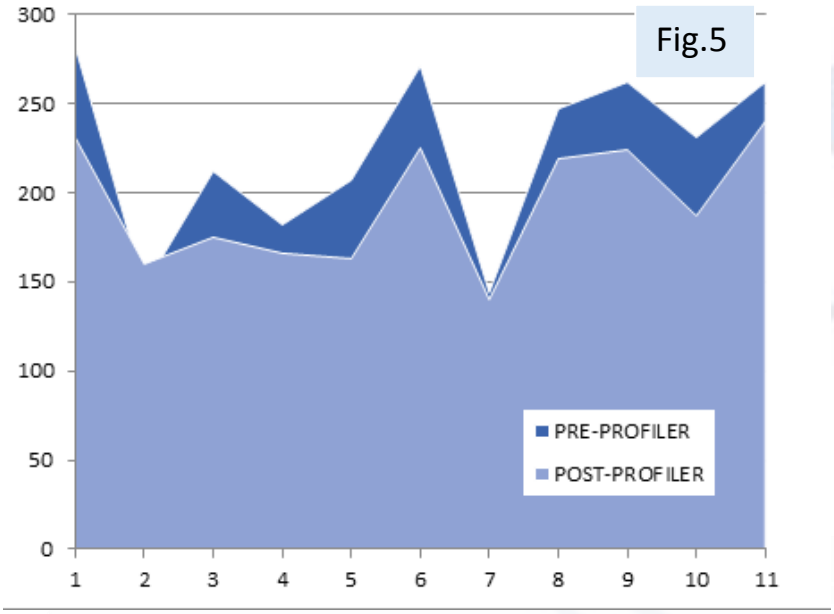


Fig.5 presents data from the Stress Profiler Assessment test, pre- and post- one week treatment. Research subjects

were given the Stress Profiler Assessment before using **Stress Relief** formula and it was re-administered within7 days after they had completed the use of the formula. Subject #7, offered conflicting information. This subject filled out the Perceived Stress Assessment and admitted that **Stress Relief** formula had a great effect of reducing his stress. This subject may have interpreted some of the 100 questions in the Stress Profiler Assessment incorrectly, causing the data to be inconsistent. In a majority of the subjects, except for subject #2, believed that their stress was less at the end of the research project. Subject #2 is 12-years-old using the student version of the Stress Profiler Assessment and is an anomaly to the group of subjects.

Human Dermal Fibroblast Cell Growth Rates

Jeremy Lins, Research Scientist, Beech Tree Labs, RI

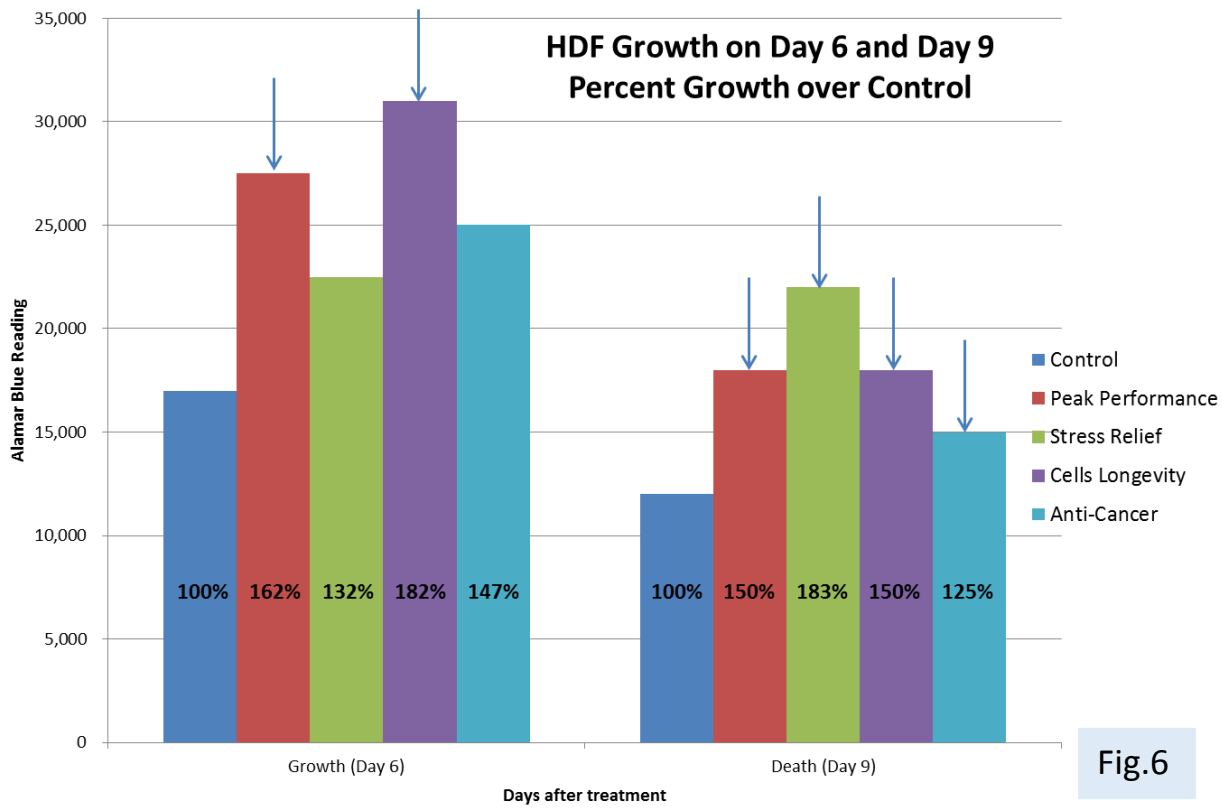


Fig.6

Samples with an arrow above them represent samples that were statistically significant when compared to the control cells.

Experiments on human dermal fibroblast cells (**Fig.6**) carried out with different subtle energy patterns formulas at Beech Tree Lab demonstrated that, even with the stress of food deprivation conditions, **Stress Relief** formula prolonged cells' life by 83% and enchanced their growth by 32% [8].

HRV Test Results Before and After Taking Stress Relief

Jeffrey L. Marrongelle, D.C., C.C.N.,
Schuylkill Bio-Nutritional, Inc., Schuylkill Haven, Pa.

Tests carried out at Schuylkill Bio-Nutritional, Inc. using a standard heart rate variability testing method (measuring heart parameters before and after the physical stress - **Table 2, Fig.7**),

Table 2

Paul D 7-09-01			
Male. Condition –MS.			
Posttest— 15 minutes after dose of Vital Force™ formula in 1 oz. of Noni			
	Pre-test	Post-test	Difference
Parasympathetic	-3.0	-0.5	+2.5/VS
Sympathetic	1.0	0.0	-1/S
Heart Rate - *supine*	60	58	-2
Heart Rate - *upright*	87	77	-10/VS
Tension Index - *supine*	156	70	-86/VS
Tension Index - *upright*	343	179	-164/VS
Optimum Variability (POV) *- supine*	7	16	+9/VS
Optimum Variability (POV) *- upright*	3	9	+6/S

VS = Very

Pat M 6-27-01			
Female. Condition –Sleep Apnea, Gallbladder			
Posttest— 30 minutes after dose of Vital Force™ formula in 1 oz. of Herbal Immune Formula			
	Pre-test	Post-test	Difference
Parasympathetic	-2.5	-0.0	+2.5/VS
Sympathetic	0.5	-0.5	-1/S
Heart Rate - *supine*	69	58	-11/VS
Heart Rate - *upright*	72	64	-8/S
Tension Index - *supine*	275	47	-232/VS
Tension Index - *upright*	788	108	-680/VS
Optimum Variability (POV) *- supine*	11	27	+16/VS
Optimum Variability (POV) *- upright*	1	25	+24/S

VS = Very significant
S = Significant

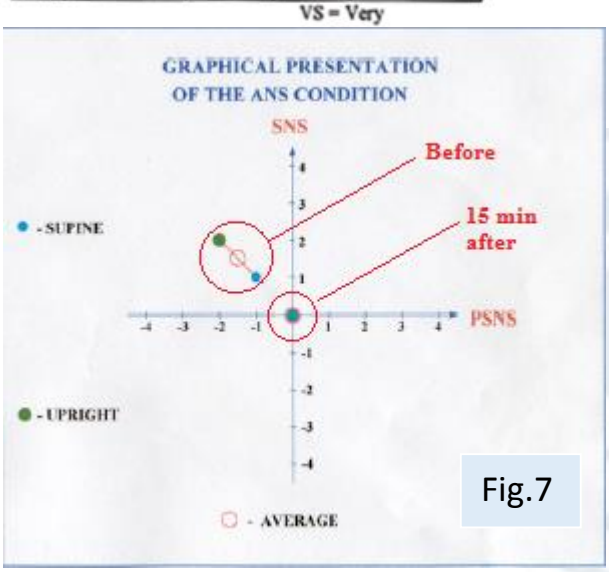
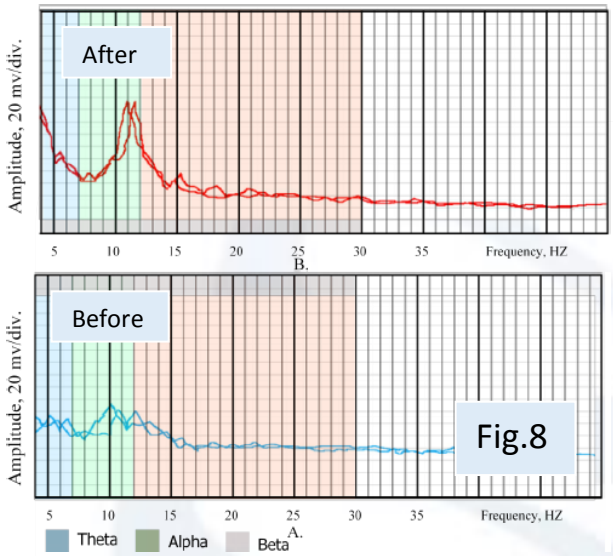


Fig.7

Hospital in Dayton, OH demostrated increased synchronization of the left and right hemispheres of the brain with the **Stress Relief** formula, as well as stimulation of greater alpha rhythm activity synchronously in both hemispheres of the brain (**Fig.8**) [10].



Stimulating Hemispheres of the Brain

Fig.8 shows the synchronization of the left and right hemispheres of the brain after exposure to the **Stress Relief** formula for 3 minutes while the eyes of the subject remained open.

Conclusions

Tests on mice demonstrated that animals drinking water containing **Stress Relief** formula were dramatically less affected by stress than those of the control group. They exhibited much better behavioral parameters than even mice in the control group that was not subjected to stress. While stress diminished the activity of the control group, mice drinking water infused with **Stress Relief** demonstrated significantly increased activity after being subjected to the stress test. This indicates that **Stress Relief** supports the nervous system without producing a sedative effect.

These experiments proved a strong anti-stress action is provided by **Stress Relief** formula. It not only reversed stress-induced hypomotility, but also reduced the fear and stress of the treated animals. Test results showing normalization of the blood glucose level of the stressed mice group to the level of the non-stressed control group also supports the anti-stress activity of **Stress Relief** formula.

Experiments on human dermal fibroblast cells showed that even in food deprivation conditions, **Stress Relief** significantly prolongs cells' life.

Experiments with men and women test groups also demonstrated the efficacy of **Stress Relief**. A majority of the subjects tested with the Perceived Stress Assessment and Stress Profiler Assessment responded that they experienced decreased stress levels using **Stress Relief** formula.

EEG experiments demonstrated increased synchronization of the left and right hemispheres of the brain after exposure to **Stress Relief,** as well as increased stimulation of alpha activity synchronously in both hemispheres of the brain.

Tests of heart rate variability revealed that **Stress Relief** formula significantly improved balance of the sympathetic and parasympathetic nervous systems.

Summarizing these results, we can see that in all of the experiments conducted, **Stress Relief** formula successfully worked on the cellular level, as well as on the systemic level both for animals and humans. It positively affected the central and autonomic nervous systems, normalizing the adaptive response of the body to stress [11].

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