Rationale and Evidential Basis

for the

Bio Energetic Synchronization Technique

and its

Clinical Application

by

M.T. Morter, Jr., M.A., D.C.

October 1996

ISBN 0-944-994-08-3

Rationale and Evidential Basis

for the

Bio Energetic Synchronization Technique

and its

Clinical Application

by

M.T. Morter, Jr., M.A., D.C.

October 1996

ISBN 0-944-994-08-3

Rationale and Evidential Basis

for the

Bio Energetic Synchronization Technique

and its

Clinical Application

M.T. Morter Jr., M.A., D.C.

Rationale and Evidential Basis for the Bio Energetic Synchronization Technique and its Clinical Application

M.T. Morter, Jr., M.A., D.C.

First Printing

Printed in the United States
ISBN 0-944-994-08-3

Morter HealthSystem, Inc.
1000 West Poplar Street
Rogers, Arkansas 72756

1-800-874-1478
1-501-631-8201 (Fax)

Rationale and Evidential Basis for the Bio Energetic Synchronization Technique and its Clinical Application

M.T. Morter, Jr., D.C.,
Developer

October, 1996

Table of Contents

***

THEORETICAL BASIS

Overview

The Bio-Energetic Synchronization Technique (BEST) was first introduced by Dr. M.T. Morter, Jr., in 1975.[1] The Technique derives its name from the fact that it is applied to biological systems expressing energy exchange with the environment. Furthermore, outcomes have indicated that its application allows the body to enhance the utilization of energetic forces in a synchronized manner. Hence, the technique was named, and represented by the acronym, BEST. Since 1975, emphasis has been placed on describing the rationale of BEST and developing the most efficacious method of administering its clinical application. This document represents a refinement of information which reflects both of these goals. The document is designed to periodically present new information which would justify modifying the tenets presented within. It is, therefore, dynamic in its construction and predicated upon the premise that continuing research and investigation is necessary to match humankind's quest for knowledge.

Since the theoretical basis of BEST is linked philosophically and practically to several disciplines, including physiology, nutrition, physics, psychology, chiropractic, acupuncture, and medicine including the mind/body specialties of psychology and psychiatry, it transcends any one area. In that context, it can be fundamentally described as follows:

> BEST is an expanded concept in health care, practiced as a non-force procedure that addresses the spine and/or total body by way of proper physiological input and integration of the sensory system, allowing for appropriate transmission of neurological information through the process of homeostasis.

Rationale

BEST is closely linked to four fundamental concepts: cellular communication, magnetic segmentation, pulsation-synchronization, and nutritional coordination. The objective of the Technique's clinical application is to restore balance to the systems which express the concepts outlined above, and thus affect organismal homeostasis. Through BEST, it is proposed that the body regains control over the interference which provoked the imbalance, and in the process becomes more responsive to other forms of intervention which affect the various systems of the body. The theory supporting the BEST approach is herein described.

Cellular Communication

Several ideas exist regarding the manner in which cells communicate. Many of these ideas have been worked out in single cell life forms, multicelluar organisms, and then extrapolated to higher animal models. For example, a "peptide mating factor" is known to

play a critical role in the cell-cell communication in single yeast cell recognition during reproduction.[2] Each cell not only secretes a specific peptide, but the "opposite" sex has a specific receptor site on its cell surface which recognizes the peptide, thus signaling the cells to fuse. In terms of humans, specific peptides, have been shown to be ubiquitous in their distribution among the various physiological systems. These peptides, are believed to be "informational" in facilitating cell-cell communication.[3]

Cells also communicate with the external environment. The slime mold, *Dictyostelium*, spends part of its life cycle as an aggregate of up to a million ameboid cells. When anterior cells of the aggregate come into contact with a "differentiation-inducing factor," which is a lipid-like compound, the cells respond by changing morphology, becoming a stationary stalk, which produces spores.[4] Chemotaxis, or attraction to specific chemicals, has also been shown to influence the movement of bacterial cells. When these cells are in the presence of certain chemicals, they are attracted in the direction of the concentration gradient. That is, the organism is more strongly attracted to reach its destination, which is the area of greatest concentration of chemical.[5]

In humans, cell-cell communication is also facilitated by membrane junctions which allow for exchange of "substances."[6,7] Although the exact nature of many substances involved in cell-cell communication is unknown, it is apparent that cells do communicate, both with the external and internal environments. It is also apparent that the information exchanged is essential for the normal growth and development of the organism. This "normalcy" can be disrupted, as is evidenced in tumor cells. Not only are the tumor cells different metabolically from normal cells, but they also have properties that allow them to communicate differently when encountering a typical cell. For example, in tissue culture, when normal cells touch, they exhibit contact paralysis. That is, they remain stationary after contact. They do not move over one another. Tumor cells, exhibit no contact paralysis when encountering normal cells. The tendency to move over normal cells is believed to be a principal factor explaining the invasive nature of tumor cells.[8,9]

The most perplexing, yet intriguing, expression of cellular communication is found in the biological development of an organism. The process, although well studied, has to date yielded little information regarding how a single cell can give rise to a multicellular structure (blastula) of apparently identical cells, then suddenly differentiate a multiplicity of cell-cell, and cell-environmental communications which allow for the patterns of development. Many theories have arisen,[10-12] some of which suggest the alignment of the developing embryo to various energy fields such as electromagnetic or gravitational. Consequently, while specific chemicals can account for many facets of cellular communication, it appears that other phenomena must be considered to gain an understanding of the means through which the intelligence of the body is communicated at the cellular and organismal levels.

Cell-cell communication, as well as cellular communication with the external environment is an established phenomenon. Although continuing research will be necessary to unravel the many questions which arise, it can readily be appreciated that the

human organism relies upon cell-cell and cell-environment communication to maintain its survival and function within its potential. When interference to this communication is present, it is also evident that the functions of the organism become compromised, with pathology or even death being the end result.

In recognition of the importance of cell communication as one component of human health, BEST theorizes that cellular communication interference can be arrested by employing methods which enhance the natural energy exchanges between cells and the environment. Prior to presenting these methods in the Clinical Application section of this document, it is necessary to present several concepts which pertain to cell communication.

Shifting Energy Fields

One tenet of BEST rests on the concept of shifting energy fields. While this idea was first proposed by the author in 1976,[13] similar concepts have recently gained wide spread notoriety.[14-16] As described in the Technique, the total energy content of the human body is apportioned between the emotional, physical, and mental fields. When the living system is freely adaptive, these energy fields also shift freely between one another. Although the concept of "Aura" was introduced as part of the theory of the BEST technique in 1976, study in other disciples[14-16,17] has provided considerable evidence substantiating the presence of such "energy fields."

As applied to the concepts of BEST, it has been proposed that energy fields exist internally in the mental, physical, and emotional realms. It is further proposed that the field is one medium of inter- and intra-cellular communication, and with the external environment. Interestingly, energy fields have recently been postulated to reflect one form of non-synaptic transmission between nerve cells.[18] It is also proposed that externally, another energy field, identified as an "corona" by Kirlian photography,[17] and further characterized as having electrical properties,[14,15] is believed to serve as the *primary* sensory system of the body. This field is believed to extend a few feet from the body, with a sensory portion located in the periphery, and a motor portion located close to the body. Interactions between the internal energy fields of the body, and external stimuli is believed to occur through the aura, or external energy field. For example, a sudden fright (first perceived by the external energy field) would, on a short term basis, initiate an energy shift from the mental field into the emotional and physical fields. Relief from the threatening situation (also perceived through the external energy field via the five senses), would bring a restoration of the energy to the deficient mental field. The restorative process could actually flood so much energy back to the mental realm, that for a brief period, the physical and emotional realms could become deficient in energy, leaving us with a "drained" feeling. In a short period of time, however, the normal apportion of energy would be re-established between the fields and a state of "balance" would be evident. Although expressed in different terms, this phenomenon is routinely described in physiology as the "fight or flight" syndrome;[19] and has been shown to involve a number of substances, such as neurohumors, which mediate utilization of the excess energy shifted into the physical realm by initiating such work as muscle contraction and acceleration of

biochemical pathways to maintain the higher energy requirements during the period of need. Additionally, endocrinology has long recognized the dramatic effects of "pheromones," or volatile hormones which "float" about in the external environment before being imbibed or otherwise perceived by an organism, subsequently promoting physiological changes in the recipient.[20] Perhaps "pheromones" elicit their action by first interacting with the external energy field.

While the "adaptive" process described above is essential to the survival of humans; modern society, with its many perceived "threats," has imposed a modification of this response. It is not uncommon to witness individuals who appear to be under long term "fight or flight," described by Hans Selye,[19] as part of the General Adaptation Syndrome (GAS). These individuals often enter into the chronic "exhaustion" phase of this syndrome during which pathologies including atrophy of the thymus, spleen, and lymph tissues occur; further leading to diminished immunological resistance to disease. It will be of interest to follow future studies dealing with the issue of diseases associated with immuno-suppression, such as AIDS, to determine if they are a consequence of a compromised immune system, or the promoter of immuno-deficiency.

Fright is not the only "stressor" which will elicit a shift of energy. Anxiety, excitement, physical trauma, and even the day-to-day accumulation of petty annoyances can promote energy shifting from the mental to the physical and emotional fields. Consequently, rather than the *short term* (acute) shifting of energy between mental, physical, and emotional fields which serves to meet the needs of adaptation to survival challenges, the GAS results in *long term* (chronic) energy shifting which ultimately leads to disease, and possibly death.[19]

It is apparent, that if energy can shift from the mental to the physical and emotional fields, it can also shift vice versa, or in any other combination of the three fields. While a short term shift between energy fields would likely produce short term effects, followed by a normal restorative balance of energy, with alleviation of diverse symptoms; it is proposed that any shift in energy, leaving one or more of the fields energy deficient for a long term, could result in the same net effect as the "exhaustion" phase of the General Adaptation Syndrome. That is, symptoms and general malaise, perhaps leading to disease and even death, can arise if the natural apportionment of energy is diverted among the mental, physical, and emotional realms on a long term basis. The problematic recovery from the long term energy shift is postulated to occur through some "blockage," or other encumbrance, forming in the normal pathways which restore the natural balance of energy within the various fields.

Although circulation, distribution, regulation, and synchronization of the body's field energy normally occurs through innate pathways, clinical observations lead to the conclusion that "blockages" to these pathways do occur. As will be discussed in the Clinical Application section, specific contacts on the body serve as "switches" (much like Chinese acupuncture gates) to resolve these "blockages", thus allowing the natural balance of energy to occur.

In the long term sequela, initial problems would likely manifest in symptoms leading to pathology, exacerbated when "blockage" is present to the restoration of energy balance. For example, if the mental field is primarily deficient, symptomotolgy would likely include dullness, nervousness, or lack of coordination. A deficiency in the physical energy field could include symptoms such as sciatica, headaches, gallbladder problems, appendicitis. An emotional field deficiency could lead to any combination of the myriad symptoms associated with emotional instability. The pathologies arising in the long term shifting of energy fields could involve virtually any disease associated with the mental, physical, or emotional realms. The connection between loss of energy in one field, such as the emotional, promoting physical effects within the "soma" or body, has been well documented and described as psychosomatic illness.[21]

The Priority Cycle: Shifting Energy, Nerve Interference

The shifting of energy from one field to another is postulated to possess another interesting characteristic; *priority*. Stimuli, perceived by the body as stressors, elicit a sympathetic response.[19] It is postulated that this response results in a re-distribution of energy among the mental , physical, and emotional fields. The "excess" energy which accumulates in some part of the body may register as pain, while the area which was made deficient by the transfer becomes susceptible to pathology. Rather than concentrating on elimination of the pain, this hypothesis suggests that restoration of the deficient energy field would be more appropriate.

For example, if the abdomen becomes an energy deficient area, the physical manifestation of that deficiency could arise as symptoms of appendicitis. Under such conditions, it is proposed that the body will divert excess energy to that area as part of the healing process. The excess energy diverted from either the mental or emotional fields may be perceived in the abdominal area as pain. If the appendix is removed surgically, the body makes use of the excess energy supplied to that area by applying it to the healing process of the surgery. For a period of time the body will be free of the symptoms of appendicitis as the appendix is no longer present, and the energy is being used to heal the wound. As healing completes, however, the excess energy is still there due to its original *priority*, and the body once again registers pain. If exploratory surgery ensues, the pain will likely abate once again as it is used to heal the surgery. If the cause of the initial energy shift was due to some stressor, it will continue to occur, with all accompanying symptoms, regardless of what is removed, until energy balance is restored between the three fields. This concept is often reported in the medical profession and has led to several theories of "psychic" influence in organic disease.[21]

It is reasonable to assume that a shift in energy from the mental, physical, or emotional realm would manifest ultimately through the weakest link of the body. Many chiropractors hold that the expression of pathologies are mediated through subluxation of the spine and its associated structures, as described by B.J. Palmer.[22] If the pathology is first expressed at the level of the spine, which is intimately associated with the mental,

physical, and emotional energy fields, it is plausible that a cascading effect of further somatic pathologies could be mediated by nerve interference arising from or creating the condition of vertebral subluxation. Although chiropractic makes no claim to a direct cause and effect relationship between subluxation and any specific disease, the postulated significance of the subluxated state has been described.[23] When this interference is uncorrected the bodily dysfunctions which are likely to arise have traditionally fallen under the treatment regimens of medicine.

Biomagnetism and Field Energy

One of the hypothetical tenets of BEST proposed in 1975, and subsequently evidenced [8,9] deals with the concept of disease arising from a breakdown of communication at the cellular level. While science points out that cell communication can be interfered with in a variety of ways, it is reasonable to assume that all forms of interference involve disruption in communications which are expressed through different levels of cellular "field energy."

In 1981, the concept of biomagentism as one element of cellular "field energy" was incorporated as an integral component of BEST. Special emphasis was placed on the orientation of magnetic fields emitted from various anatomical regions, as well as the effects of applying magnetic energy to various anatomical regions. Since that time, considerable multidisciplinary interest in this phenomenon has resulted in the advent of substantive reports. Biomagnetic fields have been detected from the human body by the use of a Superconducting Quantum Interference Device (SQUID). These fields, in the range of nano to milliTeslas, are now being mapped for the purpose of obtaining low-resolution images of internal body structures.[24]

Additionally, extraordinarily large biomagnetic field strengths have been detected from the human hand.[25] These investigators have proposed that the large emission of biomagnetism from certain individuals represents an expression of external "Chi, or Qi." It is of interest that the approximate 1,000 fold increase in magnetic field strength over normal human biomagnetism was not accompanied by any corresponding bioelectric current change in the individual studied. While the source of the increased biomagnetism remains unclear, Seto concludes that it is not generated from internal body current alone.

Dr. Buryl Payne, in *The Body Magnetic*,[26] presents information suggesting that external magnetic fields enhance blood flow, affect changes in calcium metabolism, alter the pH balance of various body fluids, affect release of certain hormones, and alter some enzyme activities. A further importance of magnetism in the maintenance of homeostasis has been reported by Nakagawa.[27] The noted authority on magnetism claims that modern society's plethora of alternating current electrical devises have diminished the earth's natural magnetic field fluctuations to the point of creating a "Magnetic Deficiency Syndrome" in susceptible humans resulting in a long list of symptoms. Apparently, this claim has not gone unnoticed, as much of contemporary research in biomagnetism is

focusing on the diagnostic value of changes in the body's magnetic fields,[28-30] as well as the effects on various body systems of applying external magnetic fields.[24,31-33]

Continued research will unfold the significance of biomagnetism in health and disease. However, it is apparent that "energy fields" do emit from the body, and that biomagnetism can be considered to both contribute to these fields, as well as influence them. The information coming forth at this time, therefore, supports the rationale of BEST in both its theoretical basis and its clinical application.

In this regard, the significance of biomagnetism, especially as it relates to changes in "field energy" must be considered from two perspectives. The first involves the energy as it emanates from the body. In light of studies, referenced above, and clinical observations during the application of BEST, it appears that the body's magnetic orientation and field strength are altered during periods of stress (broadly defined). Since communication is an energetic process, this phenomenon alone can reasonably be considered as having the potential to interfere with intra- and inter-cellular communication. The results of this interference would likely be manifested as an overall energy imbalance within the body; expressed as some degree of pathology at the level of either, or any combination of, the emotional, physical, or physiological systems (energy fields).

Pulsation Synchronization - Wave Production and Interactions

Another contributing component to "field energy" is postulated to be cellular and organismal "pulsations" or "beats" which produce waves. These pulsations are likely to be derived from other wave producing phenomena which have been variously described as biological rhythms,[34] synchronous oscillations or phase transitions,[35] or stereotyped movement.[36] The tendency for similar functions of the body to oscillate in phase (synchronously) internally, or with an external rhythmic source (metronome), has been well documented. While the sum total of all systems may elicit a synchronous pulsation, perceived externally, it is important to recognize that not all functional systems of the body may oscillate in synchrony with one another. For example, the cells of the liver may not oscillate simultaneously with the heart.

External synchronization of oscillations have been demonstrated in subjects asked to "clap" in syncopation with a metronome. After approximately 30 seconds, these subjects fall into phase with the metronome.[35] This same phenomenon is observed when subjects are asked to oscillate their index fingers in antiphase. As the frequency of oscillation is increased, the finger oscillations fall into phase with one another.[35] Phase synchrony or synchrony of biological rhythms has also been demonstrated between organisms. For example, fireflies vary considerably in their flashing periodicity, with a similar interval of about one second between flashes. When swarms of fireflies are placed either in the presence of an outside flashing light signal, or gathered together with members of their own species, the entire swarm quickly flashes in synchrony.[37]

Since oscillating movements can be detected at the molecular level,[38] as well as the organismal level, it has been speculated[35] that oscillation at the organismal level is the net superimpositional result of all other lower level oscillations. In animal models, when oscillations are observed to occur in synchrony, groups of similar cells or linked organs, within one organism, or even numerous organisms of the same species, are usually involved. If waves emanating from different groups of like cells, or individuals oscillating at the same frequency and amplitudes are superimposed (pass through the same space at the same time) one pattern will usually entrain the other, resulting in a magnified synchronous oscillation[38] expressed as one wave of the same frequency but twice the amplitude (known in physics as constructive interference).

However, since different regions of like cells (or linked tissues or organs) in one organism can oscillate at slightly different frequencies (heart vs. lung vs. stomach), a special superimpositional pattern emerges when they overlap. This pattern can be described by imagining the sound of a tuning fork of a known wave frequency being compared to a note, supposedly of the same wave frequency, on a piano. If the two sounds are not identical the waves produced will overlap in and out of phase with one another. At those points when they are in phase, constructive interference will occur and a large amplitude wave will be produced. When they are out of phase they will cancel one another.[38] Consequently, the in and out of phase movement, which occurs on a regular basis, will be heard as a "beat" or visualized as a "pulsation."

With the many different wave producing phenomena of slightly different frequencies being generated within the human body, it is not surprising that the organism as a whole would emit a regular "beat" or "pulsation." When each group of oscillators is synchronized, the organismal "pulsation" will reflect a characteristic rhythm. When maladaptation occurs in a given group of similar functioning cells (oscillating group) that closely linked group of cells or tissues is likely to fluctuate out of synchrony. Not only could this be interpreted as a signal that normal function of the cell or tissue group is being disrupted, but the change in oscillation pattern, itself, is likely to be affect the "pulsation" rhythm at the organismal level.

One of the clinical goals of BEST is to bring the various systems of the body into their natural oscillatory pattern. When this is achieved, as will be described in the Clinical Application section of this document, it is perceived as a regular organismal "pulsation" rhythm. The restoration of the natural oscillatory pattern to dysfunctional oscillatory groups, is referred to as pulsation - synchronization. This natural oscillatory pattern has been clinically observed to occur simultaneously at any two places on the body.

Nutritional Coordination

The basis of health is recognized to be a function of different factors interacting synergistically. The net effect of these interactions is a manifestation of the adaptive abilities of the organism. Under conditions when the body is lacking none of the essentials

for its function, and all internal processes are in harmony, the organism is expected to function optimally. The concept of optimum function, however, requires explanation.

It must be appreciated that optimum function is limited by the matter through which it is expressed. For example, a boney joint has a certain limit of resistance to forces placed upon it. When optimum conditions exist, the joint will adapt to those forces and express its function accordingly. If forces are imposed on the joint exceeding its physical limitations to resist, joint function will be compromised. The results could be tendon or ligament strain, tears, or osseous fractures. Consequently, optimum function is held to the limitation of matter.

Recognizing that function is limited by physical principles, in order to achieve the maximum potential of function, it becomes important to ensure that the matter through which function is expressed is itself in an optimum state. It is readily apparent that a sprinter, with fully developed respiratory function would not be able to express optimum speed if his/her muscular, skeletal, or nervous system was structurally less than optimum. For this reason BEST is administered to insure that, within the limits of matter and all else being equal, the nervous system is expressing optimal function. Extrapolating this concept, BEST also seeks to correct inappropriate sensory input which may account for the plethora of visceral, neurological, and musculo-skeletal dysfunctions diagnosed by different allopathic disciplines, as well as the condition of vertebral subluxation recognized uniquely by the chiropractic profession.

However, an organism that is structurally intact may not function at peak capacity if other essentials are not available. This is especially relevant in regard to nutrients. It is necessary, therefore, to understand as much as possible relative to nutritional requirements which allow the body to express its function optimally. In this regard, it must first be recognized that scientific study of nutrition has only been conducted since the turn of the century. The majority of information regarding human basic nutritional requirements, including the vitamins, was originally extracted from studies on the albino rat.[39] It has only been within the last few decades that human studies have become a significant part of the body of literature concerning human nutrition.

There are many anecdotal reports attesting to the affects of nutrition on health which may or may not prove to be accurate. In this regard, while common sense and logic dictate that human nutrition would best be met by consuming whole foods, studies that actually demonstrate this belief across more than a small fraction of the known range of nutrients have yet to occur. Nevertheless, the position expressed in BEST is that unless scientifically demonstrated otherwise, the consumption of natural substances and whole foods for the purpose of deriving nutrition, is logically the most efficacious and scientifically sound source of nutrients. This position is enhanced through chemical analysis of a wide variety of vegetables and other foodstuffs regarding their respective nutritional content.[39] These analyses demonstrate that all known substances required for adequate nutrition are readily available through easily accessible foods. Nevertheless, it must also be considered that under some circumstances such as famine, or soil

contamination including depletion of some essential minerals,[40] that nutrient supplementation may be appropriate and possibly essential.

The importance of nutrients is exemplified through the following information sources extracted from studies which have been conducted through recognized scientific designs and models for investigation. Because of the wealth of information which has emerged over the past few years, the topics presented here encompass only major topics published in 1995, 1996 with the exception of reference to certain classical studies. The number of studies which are referred to have been chosen to demonstrate the increase in awareness surrounding the importance of nutrition in a variety of situations related to organismal function and healing. It is intended, furthermore, to emphasize the importance of maintaining nutritional balance to optimize human function. This author postulates that this essential process is best achieved through the consumption of whole foods and other natural products.

B Vitamins and Folic Acid

Gold[41] demonstrated a significantly lower level of thiamin (B1) in 17 cases of Alzheimer's dementia compared to the same number of individuals with other forms of dementia. He suggests that a thiamin deficiency affecting cognitive function could be the basis of dementia in Alzheimer's patients.

Vitamin B6 (pyridoxal 5-phosphate) levels have been shown[42] to be low (< 20 nm/L) in 10% of 304 coronary artery disease patients, compared to 2% of 231 controls. Since vitamin B6 inhibits platelet aggregation, low levels have been linked to an increased rate of coronary artery disease. This study also pointed out the inverse relationship between vitamin B6 and homocysteine (an amino acid) in the blood serum. High levels of serum homocysteine have also been linked to coronary artery disease. In this regard, Van der Wielen[43] reported increases in body weight and decreased serum homocysteine levels following small dosage B vitamin supplementation in 42 female subjects, all over 60 years of age. He also demonstrated that significant elevations in serum B vitamin levels could be achieved through low dosage readily obtainable through the diet. Hunninghake[44] has also shown that vitamins B12 and B6 reduce serum homocysteine levels, thus lowering the risk of cardiovascular disease.

Riggs et al[45] have also shown that vitamin B12 and folic acid levels, along with elevated levels of homocysteine, were associated with poor spatial copying skills while higher levels of vitamin B6 were related to better memory in two different measures.

The extent of B6 deficiency has been studied by Rudman[46] in a population of nursing home residents in which 70% were underweight, 26% hypo-albuminemic, and 50% anemic with the most common deficiencies being zinc, copper, and vitamin B6.

Additionally, the U.S. Public Health Service (PHS) has recommended an increase in consumption of folic acid based on a review of the literature.[47] The review showed that

folic acid at the 0.35 mg level was effective for the prevention of spina bifida and other neural tube defects, as well as a probable role in the reduction of cardiovascular disease as a result of lowered serum homocysteine levels. Another study conducted in Ireland,[48] showed that mothers with neural tube defects had significantly lower plasma red blood cell levels than controls, re-enforcing the belief that low red blood cell levels of folic acid detected in early pregnancy are markers of neural tube defect risk. Similar findings have been reported by Motulsky,[49] who suggests that consumption of 350 ug of folic acid/100 gm of food would be sufficient to reduce homocysteine levels in the serum; and if taken during the first four weeks of pregnancy, would reduce the incidence of neural tube defects by as much as 50%.

O'keefe et al[50] demonstrated in 17 non-pregnant females consuming 200, 300, or 400 mcg of folic acid for 70 days, that those taking 200 mcg/day had decreased levels of folate as well as elevated serum homocysteine, suggesting that folic acid should be increased in the diet. In regard to other B vitamins, studies have shown that B5 (pantothenic acid) given in levels of 2.5 gm, 4 times daily resulted in an average weight loss of 1.2 kg/wk, suggesting that B5 deficiency reduces normal fat utilization.[51]

Antioxidants in the Form of Vitamin C, E, Beta-Carotene, and Carotenoids

The various antioxidants have been demonstrated either singly, or in combination, to affect the prevalence of cataracts,[52] improved glycogenic control among non-insulin dependent diabetics, as well as lowering serum cholesterol and triglyceride levels.[53] Other studies have shown that vitamin C passes the blood brain barrier, exerting a free radical scavenging effect.[54] This finding is significant in combination with the knowledge that the amyloid precursor proteins which are characteristic of Alzheimer's dementia aggregate only in the presence of free radicals. This suggests a protective role for vitamin C as a free radical antagonist in the brain. Diplock[55] has shown that the toxicity of vitamin C, E, and beta-carotene is low to non-existent.

Beta-carotene has also been shown to reduce the extent of cervical cancer in 70% of 30 subjects receiving 30 mg daily for 6 months.[56] Cohen et al[57] have also shown through epidemiological and intervention studies that vitamin C in doses of 1 gm/day can reduce the risk of precancerous gastric lesions or gastric cancer. Similarly, epidemiological study has also shown that oral leukoplakia, a premalignant form of oral cancer was significantly reduced in 71% of 24 patients receiving either 30 mg/day beta-carotene singly, or beta-carotene (40 mg/day), in combination with vitamin E (80 mg/wk) for 6 months.[58]

Antioxidants have been related to coronary heart disease. Epidemiological study supports the effect of vitamin E reducing heart disease in doses greater than 100 I.U./day for more than one month.[59] Stephen[60] showed an inverse relationship between carotid artery wall thickness and vitamins C and E intake in subjects between 45-65 years of age. Tomeo et al[61] utilizing duplex ultrasonography, revealed apparent carotid artherosclerotic regression in 7 of 25 subjects whereas none of the 25 controls with atherosclerosis

showed regression of the condition. Vitamin C has also been shown to reverse endothelial vasomotor dysfunction in patients with coronary artery disease.[62] Stephens et al[63] studied long term administration of vitamin E in 2,002 subjects with angiographically proven coronary artery disease. Among those receiving either 800 or 400 I.U./day of vitamin E, blood levels increased significantly. Vitamin E was shown, within one year, to significantly reduce the risk of the primary trial endpoint of cardiovascular death or nonfatal myocardial infarction, leading the researchers to conclude that vitamin E provided substantial benefits to the patient population.

Thomas et al[64] and Wander et al,[65] have demonstrated that vitamin E serves as an effective antioxidant for low density lipoprotein. The effectiveness of antioxidants (vitamins E, C, and beta carotene) led Singh et al[66] to conclude that an antioxidant rich diet could lower cholesterol and improve antioxidant levels which act synergistically to provide protection against low density lipoprotein oxidation.

The importance of antioxidant activity in maintaining health has also been documented in several studies. Dekkers et al[67] point out that trained athletes compared to untrained athletes produce increased levels of several antioxidant enzymes to counteract lipid oxidation which is known to occur during heavy training. These authors suggest supplementation of vitamins C, E, and beta carotene to the untrained athlete engaging in heavy exercise. A study by Singh et al[68] in which levels of vitamins C, E, and beta carotene were compared between approximately 1000 hospitalized patients and approximately 200 non-hospitalized controls, showed vitamin C and beta carotene to be lower in all hospitalized patients compared to controls. Vitamin E was lower in hospitalized patients diagnosed with cardiovascular disease, stroke, Parkinson's disease, chronic renal failure, nephritic syndrome, type A behavior, postpartum psychosis, burns, liver disease, cancer, rheumatoid arthritis, and aluminum phosphide poisoning. Other researchers have also found low levels of antioxidants to be associated with age related macular degeneration, and specifically, vitamin E relative to exudative macular degeneration.[69,70]

The availability of these antioxidants in the diet has been studied by Rauma et al[71] in 20 Finnish female vegans, compared to 20 controls (omnivores). These researchers found that the vegans had significantly higher intakes of beta carotene, and vitamins C and E. They concluded that the vegan diet provides more dietary antioxidants than does the cooked omniverous diet. Krishnaswamy et al[72] recommend as part of a cancer risk reducing lifestyle that foods such as yellow and green fresh vegetables, rich in carotenoids and vitamins C and E be consumed. Such admonitions are important when considering that nearly 25% of all vegetables consumed by U.S. children and adolescents are french fries, and only 1 in 5 children consume 5 or more servings of fruits and vegetables per day.[73] The significance of this research is exemplified in a study conducted by the American Dietetic Association[74] in which 25% of an urban adolescent population were found to have two or more risk factors for cardiovascular disease including high cholesterol levels, obesity, poor physical fitness, and hypertension. These findings, coupled with the fact that a significant number of pharmacy colleges offer no required course work in nutrition,[75] serves to emphasize the lack of awareness and education within the drug

dispensing profession and society as a whole, regarding the role of natural nutritional balance in maintaining health.

Sodium/calcium, vitamin A

Whereas many nutrients have measurable beneficial effects in small to moderate levels, others exert an overall negative effect on optimum function if absorbed in larger than physiological levels. For example, an increase in dietary sodium has been shown to increase urinary calcium and decrease serum calcium, which in turn increases the secretion of parathyroid hormone. This hormone increases bone resorption, calcium absorption and renal calcium reabsorption to raise the blood levels of calcium. Investigators suggest that an increase in sodium as little as 100 mmol/dl of blood could increase urinary calcium at a rate sufficient to account for an annual bone loss of 1%.[76] Additionally, preformed vitamin A (not in the form of beta carotene), in consumption levels greater than 15,000 I.U./day, has been correlated to birth defects originating embryologically in the neural crest cells.[77]

Protein/amino acids

While speculation revolves around what would be considered adequate intake of protein, it is apparent that excessive consumption could account for many debilitating problems. In addition to increasing the blood levels of homocysteine (an amino acid derived from protein), which have been demonstrated to contribute to the risk of cardiovascular disease, meat consumption per se is considered to be responsible for up to $61.4 billion in annual health care costs. In a study reported in Nutrition Week,[78] vegetarians versus meat eaters were found to exhibit significantly lower rates of illness including heart disease, hypertension, cancer, diabetes, and gallstone problems due to obesity. Additionally, in a study involving twelve men between the ages of 27 and 37, seven grams of L-arginine (an amino acid derived from protein) was administered three times daily for three days, versus a placebo. In the group receiving arginine, impaired platelet aggregation was significantly correlated with the plasma levels of the amino acid. Tryptophan, another amino acid derived from protein, when present in high levels in the brain, has been linked to suicide and depression.[79]

Magnesium

Magnesium has been correlated with decreased rates of death from myocardial infarction,[80] and reduction of the severity of premenstrual syndrome and related migraine headaches.[81] Magnesium, administered to subjects with chronic low serum levels of ionized magnesium has also been shown to relieve migraine headaches, not associated with premenstrual syndrome.[82] Magnesium has also been associated with successful pregnancy. Within a group of 100 primigravidas, 18 to 28 years old, hospitalization was 4.3% in the group receiving magnesium versus 11% in the control group. Other indicators such as the Apgar Index, birth weight, and numbers of premature births were favorable in the magnesium group versus controls. The authors of this study, Zarcone et al[83] point out that magnesium is essential for more than 300 enzyme catalyzed reactions.

Zinc

In a review article, Lansdown et al,[84] have surveyed the literature with regard to the role of zinc and wound healing as this nutrient has been suggested for years to have beneficial effects in biological repair processes. Zinc is involved in the function of over 70 metalloenzymes and plays and important function in the development of the wound repair matrix. The review article points out that zinc must be properly balanced with copper to be effective, and that the topical use of zinc requires that it be applied at the appropriate time during the wound healing process to express a beneficial effect.

The literature provides information, far beyond the scope of this document, which further substantiates the important role of many macro, micro, and trace nutrients in the maintenance of health. The important point emanating from this treatise, however, is that science has firmly recognized the many facets of nutrition in all aspects of optimum biological function. This appreciation of proper nutritional balance is in agreement with the basis of the BEST approach to health, and serves as an integral part of the overall program of restoration and maintenance of spinal and overall organismal health. Until such time as science also substantiates the benefits of natural versus synthetic nutrients, BEST assumes the position that nutrition should be derived through the route of whole food and other natural product consumption whenever possible.

Physiological Implications

While the value of vitamins and other nutrients to overall health is becoming increasingly well defined through scientific study, the significance of consuming these nutrients via natural foods, while logically sound, awaits the validation that can only be achieved through thorough investigation. Although the choice of nutritional source may in some arenas be debatable, the physiological consequences of nutritional balance are readily observed. In this regard, one important aspect of diet is that it affects the intracellular and extracellular pH of the body, both of which can be readily detected through testing of the saliva and urine. Additionally, the consequences of the expression of inappropriately timed physiology may also be reflected in salivary pH. This issue is important since protein function, membrane permeability, and gas exchange, all essential processes of life, are inextricably linked to body pH.

The ability of the body to buffer, or resist pH change, within the range of 7.36 - 7.41 has been well documented. If the blood pH falls below 7.36 the individual could either be in metabolic or respiratory (or both) acidosis. Conversely, if the blood pH is above 7.41, metabolic or respiratory alkalosis (or both) is evident. When either of the conditions exist, the kidneys are stimulated to compensate by excreting or retaining hydrogen, which ever is appropriate to maintain the normal pH range of the blood. The kidneys also engage in other excretory/reabsorption exchanges involving potassium, carbon dioxide, sodium, and ammonia to compensate when substances which could alter the pH balance accumulate in the blood stream. The two major buffer systems in the body;

the chemical (carbonate/carbonic acid, hemoglobin, protein) and the physiological (respiratory, urinary) are generally sufficient to resist pH changes outside of the range described above.

Because the buffering capacity of the body is limited, with severe physiological consequences if breached, it seems reasonable that a diet which could overly stress the buffer systems abilities should be avoided. For example, certain foods significantly increase the blood acidity indirectly by producing acids following their metabolism, while others produce bases, thus exerting an alkalinizing effect. Since the acid or alkaline forming potential of foods is determined by their composition, it is possible to ascertain this aspect of their chemistry. Foods that produce a substantial mineral residue, or ash, (after burning) of any combination of chloride, sulfur, and phosphorous have acid-forming potential. Those that produce substantial amounts of potassium, calcium, sodium, and magnesium have alkaline-forming potential. Some foods such as rhubarb (oxalic acid) and cranberries (benzoic acid) directly increase acidity as they are not metabolized by the body. Sodium bicarbonate directly affects alkalinity for the same reason. Consumption of foods with strong acid or alkaline forming potential, consumed over long periods may tax the body's ability to remain in acid-base balance.[19]

Based on this knowledge, a correlation is logically assumed between individuals exhibiting physiological signs and symptoms (even at a subclinical level) of acidosis or alkalosis in connection with their dietary and consumption patterns. Additionally, an acid-base imbalance can be expressed in conscious and subconscious behavioral patterns which impact on muscle tone and posture. It is for this reason that BEST emphasizes the importance of a diet, most efficaciously derived, which avoids exacerbation of acid-base extremes, while supplying adequate nutrition. No attempt is made to advise patients regarding their nutritional status. Rather the information is presented to enhance knowledge, thus increasing the spectrum of choice which every patient must make in consideration of his/her individual health.

CLINICAL APPLICATION

Overview

The clinical basis and practice of BEST can be applied singularly or in combination with other techniques unique to chiropractic, acupuncture, medicine, or other mind/body disciplines. It is presented in two Levels of Care. The first, referred to as Basic Care, focuses on the detection and countering of information errors (neural interference) filtering through the cerebellum which affect skeletal muscle tone and other autonomic neural output. These errors are countered by updating memory associated with skeletal muscle tone. Advanced Care further counters information errors (neural interference) by updating information to the thalamus and hypothalamus with the intent of improving internal function and evaluating physiological response to subconscious memory of experiences and feelings, and the active process of thinking.

The Bio Energetic Synchronization Technique concentrates on rebalancing physiological systems by updating memory patterns. These range from acute, tenuously imprinted subconscious memory to chronic entrenched complex memory patterns. The Bio Energetic Synchronization Technique uses light pressure applied in a gentle manner to specific anatomical areas to provoke an appropriate stimulus to affect memory patterns.

Clinical Application of Biomagnetism

Biomagnetic North/South Segmentation and Pulsation Synchronization

Clinical observation through palpation and comparison against a standard magnet suggests that the body normally expresses a uniform biomagnetic field, and synchronized whole body pulsation. As described in the Rationale Section of this document, whole body synchronized pulsation is likely the concomitant effect of all organ pulsations manifesting in one global pattern. This pattern is believed to be accompanied by a uniform cellular communication wherein individual cells are joined magnetically North to South throughout the body.

Unlike other areas of the body, however, the hands have been shown to normally express magnetic North/South polarization when challenged with any magnetic source. Assignment of magnetic polarity to the regions of the hand is based on clinical observations regarding application of the North and South poles of a bar magnet to various anatomical regions. When muscles, *which are part of the segmentation patterns described and discussed below*, are challenged before and after application of the magnet, one pole will strengthen the muscle while the other pole will weaken the same muscle. Since various regions of the hands have been shown to elicit the same response, they have been assigned the same magnetic polarity as the standard bar magnet.

Following this method of differentiating magnetic polarity, the palm and the middle and small fingers of the right hand are magnetic North seeking, while the index and ring finger are magnetic South seeking. The palm and the middle and small fingers of the left hand are magnetic South seeking, while the index and ring fingers are magnetic North seeking. The dorsal side of each hand is opposite in magnetic polarity to the palmar side. The thumbs are neutral on both hands (Figure 1).

It is important to mention that the North pole of a magnet is identified as such because it is attracted to the magnetic North pole of the earth. Since opposite magnetic fields attract, the North pole of the magnet is actually emitting South energy. This is readily visualized by placing opposite poles of bar magnets close to each other and observing the field pattern of attraction displayed by iron filings. In the same fashion, the North digit of a hand would emit South energy and vise-versa. Thus any area of a hand which is designated North emits energy which would be attracted to a South segmented area of the body, but be repelled by a North segmented area (since both also act as bar magnets). From a clinical perspective this is important. For example, when making physical contacts on the patient, if the practitioner applies a North digit to a South segmented area of the body, energy will be exchanged between patient and doctor. This has been clinically observed to "drain" the practitioner, but rejuvenate the patient. Consequently, it is important for the practitioner to make physical contact with areas of the hand which are the same in polarity to the segmented areas of the patient's body. When this is done, it is hypothesized that the repulsive forces between the practitioner and the patient force the patient's energy back into the segmented area thus disrupting or "breaking up" the biomagnetic segmentation. The various segmentation patterns are discussed below.

Biomagnetism and Timing Problems

When any one or more body systems are dysfunctional, it is hypothesized that the body compensates by altering its uniform biomagnetic relationship into one manifested as biomagnetic segmentation. These various patterning arrangements, which have been detected through clinical observation, have lines of demarcation which seem to follow the borders of muscles. This response appears to be an accommodation to what would otherwise be a scrambling or disorganization of cellular communication occurring when the body is stressed beyond its ability to retain the usual North/South magnetic relationship. The segmentation patterns of North/South cellular communication, recorded through approximately twenty years of clinical observation, are depicted in figure 1. Observations have similarly revealed that concomitant with biomagnetic segmentation, the whole body pulsation will become asynchronous. Areas of asynchronous pulsation are perceived similar to arterial pulses and may be tender to the touch expressing slight edema indentations. In chronic conditions, hard nodules may be present at these sites. As pulsations are hypothesized to be the medium through which the body communicates its various activities, the asynchronous pulsations are, subsequently, believed to represent communication interference throughout the body.

When segmentation is eliminated, all else being equal, whole body pulsation synchronization is also restored. Although segmentation can take a variety of forms, biomagnetic North/South segmentation has been shown, clinically, to be detectable through specific contact points correlated with muscle imbalance and change in muscle strength. Through the application of appropriate contacts made by specific regions of the practitioner's hands, areas of segmentation are eliminated, as described in the previous section. When this occurs, synchronicity is subsequently restored to the whole body pulse. The elimination of biomagnetic segmentation and restoration of whole body pulse synchronicity are postulated to eliminate this form of interference to the normal flow of neurological information throughout the body. This restoration of normal energy flow is accompanied by change in a number of clinical indicators, as described under the protocol.

Care Objective

The principal objective of BEST is to locate and remove neurological interference which, other than physical trauma, is postulated to be the cause of various homeostatic imbalances. Theses imbalances may manifest as the variety of disease states identified by allopathic medicine, field energy imbalances recognized by numerous mind/body healing disciplines as well as vertebral subluxation, uniquely addressed through chiropractic care. These imbalances, through their kinesio-pathophysiological sequelae may secondarily perpetuate nerve interference.[85] Consequently, BEST is administered to affect the expression of these imbalances via their neurological etiology, thus interrupting the neurological interference/kinesio-pathophysiological loop. In this manner, all else being equal, any homeostatic imbalance which is compensatory to the neurological interference, would be expected to be resolved by the body.

The alleviation of interference to the nervous system also promotes restoration of normal and appropriate homeostatic physiology to the body. This is postulated to be achieved through a restoration of muscle symmetry by re-setting the balance between neurological afferent input to the higher cortical centers and efferent cerebellar motor outflow. Homeostasis is affected through restored motor balance which not only affects vertebral subluxation by repositioning of the vertebra and contiguous articulations, but is also postulated to improve visceral function and the reduction of neurological anxiety and defense physiology.

Sensory (Memory) Engrams and Inappropriate Physiology

Physiologists have proposed "learned" motor skills to be the result of muscular responses to sensory engrams, or "memory patterns." Once sufficient sensory input has been acquired, requiring a specific motor response, the response can then be elicited through the stored sensory engram depicting that event. This stored information, or memory, is then used by the body to promote a particular motor activity. Guyton[86] states:

> "Once a sensory engram has been established in the sensory cortex - that is, once the movement has been learned - the person then uses this sensory engram as a

guide for the motor system of the brain to follow in reproducing the same pattern of movement...to do this, the sensory signals from the fingers, hands, and arms are compared with the engram, and if the two do not match each other, the difference, called the error, supposedly initiates additional motor signals that automatically activate appropriate muscles to bring the fingers, hands, and arms into the necessary sequential attitudes for performance of the task."

It has also been proposed that up to 99% of on-going information received by the sensory cortex is discarded.[86] This suggests that the remaining 1% is available for immediate motor response. In BEST, this is termed the "Integrative Function" of the brain, which is used to select information to express appropriate motor responses. BEST views the motor responses to the 1% of sensory information to be dealing with some aspect of survival. Motor responses that pertain to the other facets of our lives are thus activated by stored sensory engrams. Guyton[86] also states:

"Only a small fraction of the important sensory information causes an immediate motor response. Much of the remainder is stored for future control of motor activities and for use in the thinking processes. Most of this storage occurs in the cerebral cortex, but not all, for even the basal regions of the brain and perhaps even the spinal cord can store small amounts of information."

Once sensory engrams are established, and stored, they can be elicited by a variety of circumstances which impact on the formation of numerous maladaptive states involving physiology, metabolism, and biomechanics. The various states of maladaptation are generally the product of anxiety related to stress. In this context stress is defined as "*any stimulus that changes the present functioning of the body.*" It is well known that elicited thoughts associated with anxiety can promote neurological responses equivalent to the initial event. For example, if a person experiences a fright or great joy (stress), both sympathetic and parasympathetic stimulation occur which affects blood pressure, muscle activity, digestion, vision, perspiration, and other factors. The same neurological response can be elicited at a later time if the person "re-lives" the event at or below the conscious level. The frightening or joyous event (both emotional) which resulted in a short term burst of neurological response is know as stress, a situation to which the body is well adapted. When the body is operating in the mode of expressing engrams associated with traumatic events, it also exhibits the characteristics associated with neurological "switching" adaptations. For example, if an individual steps on a nail, the body automatically shifts weight bearing to the opposite leg. In this regard, the body compensates for the loss of normal function resulting from the trauma by "switching" to an adaptive pattern of response.

The memory of the stressful event and any neurological "switching" which accompanied the response is also stored as part of the engram. If the engram is elicited and subsequently expressed inappropriately, BEST regards this as a "timing problem." That is, the response is appropriate to the event but not its memory. If re-living the event and the neurological "switching" that accompanied the body's response continues,

consciously or unconsciously evoked, the response condition then becomes one of "distress," a condition to which the body is not well adapted. The physiology of distress can readily lead to a wide variety of conditions in the body which could produce pathology. These include such reactions as overproduction of stomach acid, diarrhea, hives, palpitations, respiratory imbalance, profuse sweating, blurring of vision, and prolonged muscle contraction. The last mentioned reaction could readily lead to muscles creating a disrelationship between vertebrae. If this is accompanied by insult to surrounding tissues sufficient to interfere with the flow of neural activity, any number of conditions including various disease states, and musculo-skeletal aberrations including vertebral subluxation can result. In this instance a specific discussion is necessary. Other than as a result of physical trauma, a vertebral subluxation has a similar etiology to other somatopsychic conditions. Since there are numerous engrams stored for expression at appropriate times, it is not difficult to recognize that the frequent inappropriate expression of one or more engrams could have an on-going detrimental effect on the body. It is also reasonable to assume that as long as the engram is being expressed inappropriately, the subluxation sequela will likely continue. This concept is important in regard to the usual chiropractic practice of locating and applying an osseous "adjustment" to affect the misalignment component of vertebral subluxation. Even when an adjustment is successful, if the sensory engram etiology of the subluxation is uncorrected, the condition is likely to shortly reappear, thus constituting a *Sensory Dominant Subluxation* (SDS).

It is proposed that changes in the normal biomagnetic field distribution can lead, through inappropriate physiological responses, to the wide range of metabolic dysfunctions, pathologies, and biomechanical problems currently treated by the many health disciplines and allopathic medicine. These changes not only impose dysfunction on various body systems, but also create interference to the neurological sensory input/motor output loop. Until eliminated, this interference interrupts the normal flow of sensory information necessary to re-set inappropriate cortical output derived from sensory engrams.

BEST Basic Care

Commencing Basic Care, patients often present with physiology that is inappropriate to present need. Such a response represents a "timing problem." That is, the information that is emanating from the cerebellum which affects skeletal muscle tone of the paravertebral musculature is derived from sensory engrams, embedded in memory, that are inappropriate to the patient's current status. Timing problems, and the presence of vertebral subluxation are evaluated as described below.

Inappropriate Physiology and Sensory Dominant Subluxation

Methods, Protocol, and Clinical Objective

Basic Care involves correction of the affects of inappropriate expression of sensory engrams on specific systems of the body, which may involve the skeletal musculature and

the viscera. Aside from the expression of sensory engrams on the physiology of homeostasis, effects on the various systems of the body may also result in the formation of Sensory Dominant Subluxation (SDS), as described above.

> *The method of assessment is, therefore, to note observable physiological effects assumed to arise from neurological interference, with the inference that physiological dysfunctions, biomechanical aberrations, visceral disease states, and other maladaptive conditions are likely to be present if such findings are positive.*

Clinical evaluation of inappropriate motor expression is initiated by assessing the patient in the prone position. Through this protocol, different phenomena have been observed which are used to determine the type of response the sensory engram is provoking, which in turn determines the clinical approach of the practitioner. The clinical objective is to verify, post treatment, restoration of appropriate sensory-motor response activity by demonstrating specific Assessment Findings in the patient:

Assessment Findings

* Legs equal in length in the horizontal and perpendicular positions.
* Equal (bilateral) muscle tone in the legs and in the paraspinal musculature
* Whole body pulsations synchronized in rhythm and intensity.
* No biomagnetic segmentation polarized North/South or vice-versa on the anterior and posterior sides of the body, with the dividing line being the coronal suture and the tips of the toes.

> *If all of these findings are not demonstrated, the procedures described below must be repeated.*

Prone Evaluation

A flow chart depicting the protocol involved in the prone evaluation is shown in Figure 2. The significance of each phase of the protocol is herein described:

In the prone position, the patient is asked to consciously relax his/her musculature. The practitioner then palpates for muscular tightness along the paraspinal musculature, moving outward to the larger muscle groups of the extremities.

Type A - Sympathetic Excess

Increased unilateral muscle tone/tenderness is interpreted as a Type A response, suggesting an increased sympathetic output since the muscles cannot be relaxed by conscious control. Other indicators of sympathetic excess include elevated blood pressure, rapid heart rate, dilated pupils, indigestion, and dry mouth. The Type A response of increased unilateral muscle tone is detected through a "rope-like" palpatory finding of the

paraspinal musculature, and often the larger muscle groups of the extremities. The increased muscle tone is presumed to reflect an inappropriate cerebellar output or "timing problem," derived from sensory engram(s). The tenderness of the musculature (predominantly observed in the erector spinae) is believed to reflect the accumulation of lactic acid as a result of prolonged increased muscle tone.

Treatment

Clinical observations encompassing approximately twenty years, have resulted in the following approach regarding specific anatomical areas of contact. These areas have been demonstrated to be the most effective in eliciting assessment findings indicating restoration of appropriate sensory-motor activity.

1. In addition to the paraspinal musculature, palpation findings may also indicate laterality and tenderness over the axis body, and equal tenderness over vastus lateralis and/or tensor fascia lata. If tenderness is not apparent in area of musculature, then the epsilateral sciatic notch is evaluated. Similarly, in the absence of palpatory tenderness of the axis, the practitioner may detect tenderness of the superior border of the trapezius or the musculature overlying the suprascapular spine. Promoted by inappropriate motor outflow derived from sensory engrams, the tenderness of the contact points is likely associated with tendon stretching stimulating the afferent sensory neuron pool which enervates the boney skeleton. The painful areas are also believed to elicit a "guarding" reaction via the golgi tendon apparatus which sustains the inappropriate muscle tone or tension, thus exacerbating the muscle tenderness, tension loop.

2. In the presence of excess sympathetic output, the goal of the Basic Level of treatment is to relax the tight muscles. This is accomplished by holding light contacts as described in 1, above. The two contacts are held with the magnetic North seeking finger of the respective hands. Once the tenderness associated with these contacts has been resolved, other areas of the dorsal musculature are palpated and assessed for tenderness. If tender areas above and below the diaphram are detected, then contacts are also made on these areas.

3. The practitioner holds the contacts, while the patient is asked to hold his/her breath following a full inspiration. During this period, the practitioner notes the pulsations emanating from the contact points. The practitioner holds the contact points until the pulsations felt at the respective points become synchronized. This may require two held inspirations by the patient. The synchronization is a reflection of the body disrupting the areas of somatic magnetic segmentation. Since the magnetic polarity of the practitioner's fingers is the same as that of the segmented areas of contact, the natural repulsive forces believed to be generated through the contact points rules out energy transmission from the practitioner to the patient. Consequently, the disruption of segmentation more likely reflects a re-organization and utilization of the patient's magnetic field energy to dissipate the segmented condition. When pulse synchronization has occurred, palpation should reveal that the musculature has relaxed with tenderness no longer present.

Pulse synchronization is considered an indication that the biomagnetic segmentation has been diffused. Concomitant with this input, while the patient is holding inspiration, the cortex perceives a *non-traumatic* warning of anoxia. To conserve oxygen, it is postulated that the brain responds to this perceived warning by selectively lowering the activity of areas of the brain involved in non-critical areas of survival. In consideration of this hypothesis, it is understandable that the practitioner consistently notes a relaxation response in tense musculature. This is likely accomplished through the golgi tendon/gamma motor neuron circuit as the areas of the brain responsible for this muscular state lower their activity and motor output. In instances which have been clinically observed, this same phenomenon is also apparent regarding visceral dysfunctions, which is discussed below under the protocol applied for parasympathetic excess.

It is surmised that the reduction of segmentation and synchronization of pulse, enhances the flow of appropriate sensory information to reach the cortex where it is processed. In this manner, motor activity inappropriate to the circumstances, driven by sensory engrams which resulted in increased muscular tension, is re-set through a diminution of cerebellar output reflected in a relaxation of inappropriately tensed musculature. The success of this treatment, when considering sympathetic excess, is evaluated by observing the relaxation of the tense musculature, both autonomically, as well as consciously by the patient.

4. It is at this point in the protocol that procedures associated with other disciplines may be used to affect the outcome, if the practitioner's assessment has indicated a necessity for such intervention. This could include, but not be limited to, such procedures as those offered by practitioners of polarity therapy, acupuncture, massage therapy, chiropractors, osteopaths, and under conservative conditions not involving administration of toxic substances, medical physicians. Correction of conditions specifically addressed by practitioners such as those mentioned above, are likely to be more effective, since the neurophysiological factors which contributed to the inappropriate physiological parameters associated with various maladaptive characteristics are no longer present.

5. If the treatment for sympathetic excess has been successful, the patient will also exhibit even leg length in the prone position. The legs are checked for contralateral balance by observing the eveness of the heels relative to one another. This evaluation is conducted in two positions while the patient is prone; one with the legs parallel to the table, and the other with the legs elevated 90 degrees.

6. If the legs are balanced (or even) when observed parallel to the table, or raised perpendicular to the table, clinical observations have demonstrated that the practitioner is then able to establish the highest level of coherence of the sensory/motor activity through the "double crown procedure." In this application, a magnetic North seeking finger and South seeking finger of one hand are placed along the mid-sagittal suture of the cranium with the coronal plane running between the two fingers. The fingers are positioned such that the magnetic North seeking finger is posterior to the coronal plane and the magnetic

South seeking finger is anterior to the coronal plane. Thus the fingers are anterior and posterior on a region of the cranium corresponding to the somesthetic region of the cortex (central sulcus of Rolando) which is situated between the somatomotor and somatosensory areas of the cortex. When this contact is made, the magnetic North seeking finger is placed on the area of chief complaint if it is on the posterior side, or South seeking finger if area of chief complaint is on the abdomen. When the practitioner perceives a synchronization of pulses in the cranial area, the *primary* area of chief complaint (abdomen or dorsal side of the body) perceived by the patient should disappear. When the clinical objectives thus far described are accomplished, it is concluded that sympathetic excess, elicited through inappropriate timing of sensory engram expression, has been eliminated.

7. If the legs are uneven, up and down, the practitioner should consider the patient to possibly be in a state of excessive parasympathetic output.

Other clinical signs which may be associated with excess parasympathetic output include:

a. Absence of tenderness of the axis unilaterally.
b. Cervical spine musculature exhibits bilateral tension.
c. Absence of tenderness of musculature over the sciatic notch.
d. Ipsilateral tenderness over the axis and the sciatic notch.
e. Absence of muscular spasms throughout the back.
f. Tender areas on the back that do not resolve.

Type B - Parasympathetic Excess

Parasympathetic excess is considered if any combination of the above indicators are present following administration of the protocol for sympathetic excess.

Alternatively, decreased muscle tone/flaccidity detected through prone palpation is interpreted as an indicator of a Type B response, suggesting an excess neurological parasympathetic output. Other indicators of excessive parasympathetic output include irregular heart rate, excess saliva, loose stool, and accelerated lacrimal gland activity. Clinical observation has shown that when the musculature is flaccid there may either be considerable pain, or little to no deep pain upon palpatory challenge. Additionally, clinical observation has shown that digestive symptoms do not accompany the acute phase of parasympathetic excess, but either upper and/or lower digestive symptoms may appear if parasympathetic excess becomes chronic.

Treatment

In the prone position, the patient is first examined for different patterns of leg length disparity. The practitioner passively flexes the legs up and down until a given

pattern is demonstrated on three consecutive flexions of the legs. This maneuver challenges the gamma motor neuron response, until the legs stabilize in their relationship to one another.

1. Clinically, one of the following three patterns emerges:

A. Both legs even, up and down. This pattern will be discussed in the Advanced Care section.

B. Legs uneven. The same leg remains equally long in the up and down position.

C. Legs uneven. The long leg in the down position becomes, the short leg in the up position.

2. If pattern A emerges, Advanced Care is indicated.

3. If pattern B emerges, the patient is palpated for tenderness in the occipital area and the ipsilateral sacrum. When sensitive areas are located in each respective anatomical region , the practitioner contacts these areas on the long leg side by applying light pressure with the magnetic North seeking fingers of the left and right hands. These contacts are held until pulsations are synchronized by the patient. The same protocol and rationale regarding held inspiration, as described for sympathetic excess, is invoked during this period of treatment. While currently lacking an explanation, clinical obersvations have consistently shown that contacts applied to the short leg side do not elicit tenderness, synchronization of whole body pulsations, nor result in correcting leg length differences.

If expressions of physiological maladaptations, unique to various health disciplines are detected by practitioners in those disciplines (i.e., vertebral subluxation, osteopathic lesions, field energy interference, aura disruption, meridian blockage, dysfunctional physiology), other techniques used for their correction can be administered during this phase of the BEST protocol. Fundamentally, the synchronization of body pulse, as well as dissolution of magnetic polarity segmentation allows for a more effective treatment by the wide variety of health disciplines. This occurs, since the formation of the sensory dominant subluxation or other physiological expressions of maladaptation are unlikely in the absence of segmentation which is postulated to represent interference to the flow of sensory and motor neurological information.

4. The legs are once again checked for balance. If pattern B disappears, and the legs are even up and down, the treatment is considered successful. The coherence of somatomotor and somatosensory pathways is further evaluated by the double crown procedure, as described in item 6 page 26. When synchronization of the three pulses is achieved, the primary area of sensitivity also dissipates.

5. If the legs remain uneven, repeat the prone treatment for the Type B response. If the legs remain uneven at this point, it is speculated to result from the technique being applied too rapidly to allow the brain to "unswitch" the neurological "switching" response, thus the restoration of "normal physiology" was incomplete.

6. If pattern C emerges, clinical experience has demonstrated that some region of the abdomen will demonstrate tenderness. With the patient in the prone position, the magnetic South seeking palm of the left hand is placed on the sensitive area of the abdomen (clinical observation indicates that the most sensitive area is generally proximal to the xiphoid). The magnetic North seeking first finger of the right hand is then placed either on the occiput or the sacrum, which ever is most distal to the area of the chief presenting complaint (regardless of its nature). In this position of hand held contacts, the body synchronizes its pulsations. If the finger contact was on the sacrum, it is then shifted to the occiput if the sacrum ceases to be tender, or vice-versa. Again, the pulsations are synchronized. This procedure is referred to as "completing the triangle," which involves the sacrum, occiput, and abdomen.

7. If inappropriate physiology have been detected by the practitioner, other procedures for their correction can be applied by the appropriately trained practitioner, according to the rationale described in item 3, above.

8. If, after completing the triangle, the legs remain unbalanced in the up and down position, repeat the protocol for Type B - Parasympathetic Excess.

9. If the legs balance, up and down, the treatment is considered successful. The double crown procedure is once again employed to demonstrate the highest level of somatomotor and somatosensory coherence.

Duration of Care:

Patients are initially seen every day for approximately one week, then three times a week until all *Assessment Findings* are present on initial evaluation. The patient is then seen once a week during which time he/she is introduced into Advanced Care.

BEST Advanced Care

Advanced Care is administered following Basic Care. Even when indicators suggest that the body is free of *somatic* segmentation (Basic Care), it is still in the interest of the patient to evaluate for, and determine the absence of sensory engrams expressed through the cortico-thalamus and/or hypothalamus pathways, possibly creating segmentation within those areas. Thus, while the clinical objective of Basic Care involves elimination of *somatic* segmentation (which is generally associated with the chief complaint as an effect of neurological interference), the clinical objective of Advanced

Care involves updating sensory information to higher neural centers which are proposed to lead to *neurological* segmentation, viewed as a cause of neurological interference.

Methods, and Clinical Objective

Certain indicators observed during Basic Care suggest that neural centers other than those addressed at that level of care are involved (see Basic Care). That is, when the chief presenting complaint continues after Basic Care, then Advanced care is indicated. The lack of leg balance in the prone position following Basic Care, for example, is hypothesized to indicate underlying psychosomatic expression which is recurrent, eliciting periods of either sympathetic output and/or parasympathetic output. This condition is affected by, but not able to be reconciled through BEST Basic procedures. The condition is, subsequently, postulated to result from engrams stored in the areas of the brain other than the cerebellum, which was addressed through the protocol of Basic BEST. The other areas surmised to store engrams are the cortico/thalamic areas and hypothalamus which either stores information, or receives input from the thalamus. Consequently, although attention may be drawn to the necessity for Advanced Care during the application of Basic Care, the former is also considered appropriate in the absence of these indicators.

Since different engrams are derived from different types of stimuli (i.e., physical trauma versus anxiety), approaches to achieve resolution of these engrams must also be different. Consequently, the principal objective of Advanced Care is to update information to the thalamus promoting appropriate output from the hypothalamus which mediates many internal functions metabolically and through the endocrine system. Assessments of the coherence of the thalamic/hypothalamic tract are derived from observed physiological responses to questions designed to elicit responses to subconscious engrams embedded in memory and through the conscious thought process.

> ***It is emphasized that BEST is not psychotherapy. At no time is the patient asked to disclose any personal or emotional event in their lives, (other than through the case history). Personal experiences are not part of the Technique. Moreover, patients are not counseled in regard to the resolution of personal problems. Should they seek such counseling from BEST practitioners they are referred to appropriate counseling specialists.***

Since it has been well established that stressful events, either stored in the subconscious or conscious mind, can be influential in promoting somatopsychic responses, it is postulated in BEST that the medium through which this occurs is the sensory engram. Consequently, methods are employed to assess for the presence of such engrams and to evaluate through clinically demonstrated indicators of physiological function that they have been resolved. It is through this procedure that the body is better able to resolve expressions of inappropriately timed physiology, the correction of which occurs either through the BEST protocol or the application of other recognized correction techniques offered through various disciplines. The BEST procedure utilizes a series of non-

conscious and non-verbal questions which, if correlated to traumatic events, elicit physiological responses from the patient reminiscent of the initial traumatic event, as they consciously evaluate and formulate non verbal answers to the questions. Then by having the patient follow the Advanced BEST conscious thought protocol during full inhalation, it is hypothesized that successful updating of subconscious memory engrams can be achieved. If the body reacts to the conscious thought protocol by re-enforcing (re-expressing) the presenting aberrant physiology, or creates a new dysfunctional response, updating is postulated to be promoted by a new stimulus into the Cortico-thalamus tract and/or hypothalamus, causing a de-segmentation of that area. Synchronization of pulsation, and other indicators, signifies the successful application of the techniques employed.

Protocol

The following procedure is designed to bring resolution to the underlying psychosomatic engrams which are responsible for inappropriate physiology which has been temporarily resolved, or has not been resolved by the Basic Best protocol. This approach has its basis in the repulsive force between the field energy of the practitioner and that of the patient. This action provokes reorganization of the patient's field energy and subsequent dissipation of areas of magnetic polarization. While the ramifications of field energy have been presented in the Rationale section of this document, some aspects relative to the clinical application of Advanced Best are briefly interjected in this section. Although the human energy field was first introduced as part of BEST in 1981, The concept of field energy has been well documented through the disciplines of acupuncture, aura readers, Rolphing healers, and numerous other mind/body approaches to healing. Additionally, biological field energy has been qualitatively demonstrated through kirlian photography, and quantified as well as characterized non-linearly through the studies of Valerie Hunt.[14,15] The studies of Hunt, in particular, demonstrate that human field energy interacts with the environment and can transact with that of another individual. Furthermore, the work of Hunt correlates changes in field energy with functional integrity of the individuals studied.

Based on this knowledge, and clinical observations of profound changes in patients under BEST care, a protocol has developed which utilizes the human energy field as an interface through which engrams associated with subcortical areas of the brain can be affected. This is accomplished through the following protocol which is employed in the absence of Type B or Type A indicators, or in the event that BEST Basic Care has not resolved the timing problems.

Assessment by Intention

Establishing an inter-relationship with the patient's energy field is accomplished with the practitioner assuming a standing position at the foot end of the supine patient. The practitioner, while observing the patient's leg length , mentally envisions a series of questions, anticipating an inaudible yes or no answer from the patient. This yes or no

response from the patient, *prompted by intention from the doctor*, (similar in construct to the currently recognized technique of noncontact touch referred to as Therapeutic Touch,[87-90] is consistently detected through specific changes in leg length and muscle strength. The purpose of the noncontact intentionality is to access to the patient's biofield through which the body responds physically.

Leg Length Changes

Obtaining a Baseline for Yes Versus No Responses

Clinical observations have revealed that if the practitioner mentally requests a "yes" response, the patient's body will respond by expressing a change in leg length. This may be manifest as the right leg shortening relative to the left leg. If a "no" response is requested, the right leg will respond opposite by lengthening relative to the left leg. The response may, however, be the reverse when a "yes" versus "no" is requested. Because the practitioner does not know exactly what the yes or no response will be, a base-line patient response must be determined each time the practitioner inaudibly asks any one of the series of questions posed to the patient. In addition to leg length, the practitioner checks the legs for spacticity by passively and gently rotating each leg internally, as the existence of spasms in the larger muscle groups could affect the ability of the legs to lengthen or shorten, or rotate freely. If this occurs, the practitioner should clear the leg spacticity either through the application of Basic or Advanced Care. This parameter is checked at various intervals throughout the procedure, and at the conclusion of the session to assure that leg length responses have not been influenced by muscle spacticity.

Muscle Strength Changes

A combination of arm and shoulder strength is tested primarily because the patient can readily visualize change while in the supine position. Also, it offers another indicator in addition to the leg length response. In the manner described above, through *intention*, the practitioner elicits a "yes" or 'no" response from the patient. Also, as with the change in leg length, a base-line must be established before any question in the series is asked, since the base-line response may reverse. That is, strength versus the lack of strength may be a "yes" during one question, but may represent "no" at a later stage of questioning as the segmentation pattern of the patient changes.

The method of strength testing requires the following procedure:

1. Patient in the supine position. The head is never lifted, nor does the patient sit up.
2. Elbow locked, arm held perpendicular and straight to the body.
3. The hand of the straight arm is open with palm facing the feet.
4. The shoulder remains on the table to prevent recruiting of other muscles.
5. The practitioner's palm is open as pressure is placed on the wrist, and force is applied in the direction of the feet.

Questioning Procedure

Once the "yes" versus "no" base-line has been established, the practitioner proceeds with a series of inaudible intention questions. These questions are designed to elucidate the general area of origin of the engrams eliciting inappropriate physiology. The general areas differentiated are listed below:

a. Chief complaint.
b. Conscious memory.
c. Subconscious memory which may require clues (Table ?).
d. Viscera (internal organs).
e. Communication between organs (synergy or integration)
f. Emotions relative to a wide variety of topics (Table ?).
g. Biofield (energy surrounding the body).

Focusing

Once the general area has been identified, the practitioner advances the patient to the most specific area of concern. With the practitioner observing the legs for changes in length, intention questions regarding the position of the eyes as to right or left, up or down, and eyes open versus eyes closed are posed to the patient. In this regard, the practitioner inaudibly asks the patient if the eyes should be up or down or to the left or right, and if the eyes should be open or closed. These parameters have been chosen in consideration of the following relationships:

> It is well known that either parasympathetic or sympathetic excess, or stimulation of both aspects of the autonomic nervous system, results in a variety of thoroughly characterized physiological responses in the body. Furthermore, it is surmised that eye movements can be influenced via the reticular formation. This is based on the anatomical relationship between the extraocular muscles responsible for eye movements and motor neurons located in the vestibular nuclei, as well as indirectly from the superior colliculus, both of which receives input from the reticular formation. Since the reticular formation, which is also stimulated via excess sympathetic and parasympathetic activity, appears to be important in organizing fast (saccadic) and smooth (pursuit) eye movements, it is hypothesized that excessive autonomic activity is associated with specific eye movements.

Since the vestibular nuclei, are also associated with motor innervation to the extrinsic eye muscles, it is hypothesized that the brain identifies eye movement in the same direction if the head were turned. Thus asking the patient, through intentionality, if the eyes should be to the right, is equivalent to turning the head to the right. The purpose of establishing left versus right is to provoke the memory areas of the brain to re-create, as closely as possible, the physical position of the patient when the event leading to the

sensory engram was experienced. Additionally, if a "yes" response is given by the patient when asked if the eyes should be closed, this is interpreted as a problem within the non-conscious areas of the brain (thalamus and/or hypothalamus), as opposed to a "yes" response to eyes open. This response would be interpreted to indicate a problem at the conscious (cortical areas) level. Once again, the purpose of posing these questions is to determine as closely as possible, the area of the brain in which the engrams are stored.

The protocol, to this point, serves to establish communication with the patient's biofield, and to identify more specifically, the area of concern. The practitioner then poses intention questions as to whether contact should be made on the temporal bone near the sphenoid, or on the occipital bone. Clinical observations have demonstrated that the possible quadrants of sub-cortical segmentation can be resolved through contacts involving the temporal and/or the occipital bones of the cranium. When a response has been obtained via changes in leg length and/or changes in arm strength, the practitioner assumes a seated position at the head of the supine patient. In this position, if the patient responded "yes" to the temporal contact, the practitioner places the magnetic North seeking finger of one hand, or both if the contact is to be made bilaterally, on the temporal bone near the region of the greater wing of the sphenoid. If the response is "yes" for contact on the occiput, the practitioner places the magnetic South seeking finger of one hand, or both if the contact is to be made bilaterally, on the occiput. The contact may also involve the temporal bone on one side and the occiput on the other. The areas of contact are often tender upon palpation. It is important to note that clinical observation has demonstrated that the area of chief complaint should never contacted as the effect on the patient is one of energy intensification, often resulting in a extreme pain and discomfort.

The practitioner, re-assuming a position at the foot of the patient, or standing to the side to test arm strength, then *audibly* poses specific questions to the patient to focus the area of concern. Tables 1 and 2 list the various subcategories which are addressed in the questioning procedure. The patient is asked to *think* about the answer. At no time during this procedure is the patient asked to audibly reveal the details of any event. The practitioner is interested only in the body's "yes" or "no" response to the questions as evidenced through changes in the leg length or arm strength.

When a given question receives a "yes" response, the practitioner moves to a position behind the head of the supine patient and makes the appropriate temporal and/or occipital contact. In this position, the contacts are held while the patient is asked to inhale and hold their breath (previously described under Basic BEST) until the pulses synchronize. The patient is asked to exhale, then breath in and out. The pulsation should remain synchronized during the full cycle of respiration. This is interpreted as the body removing the sub-cortical segmentation manifested through the various "yes" responses and the initial asynchronous pulsations. Tenderness at the contact points should also resolve as the pulses synchronize.

The questioning procedure, accompanied by appropriate contacts, continues until, ideally, there are no longer responses to the specific questioning protocol which suggest

further intervention. At this point, through inaudible *intention* questioning, the practitioner asks of the patient... "Is proper nutrition lacking in your system?" if a "yes" is received, as the practitioner allows his/her mind to reflect a wide variety of nutrients, the patient is queried as to "Is this particular dosage of nutrient supplement satisfactory?" Notes are made as to the responses regarding quality and quantity of nutrients. The second question posed is, "Am I finished?" If the answer is "yes," as indicated through leg length changes, then the question is posed... "Is there anything else I can do today?" If the answer is "No," it is assumed that the session is completed. The patient is asked to sit up and then lie down again. This process activates the righting reflex and is presumed to re-set the cortical and subcortical pathways. If the sensory engrams are still operating, the patient will lapse back into the presenting pattern.

The success of the session, at this point, is gauged in relation to two assessments. The first involves testing changes in leg length in response to *intention* questioning the patient with "Am I finished?," and "Is there anything else I can do today?" The practitioner considers the session successful if the right leg exhibits a slight shortening, indicating a "yes" response. If the right leg lengthens slightly, the body's response is considered a "no" and the protocol of inaudible *intention* questioning is repeated. As a second assessment, when the practitioner considers the session completed, the arms are tested for strength in the absence of any questioning procedure. If one or both arms test weak, then the cranial contacts are verified and the protocol of inaudible *intention* questioning is repeated until both leg length and arm strength tests indicate successful completion of the session.

Optional Assessment

Patient's under advanced care are re-assessed after 3-5 visits, generally encompassing a two week period. If findings suggest lack of resolution of sensory engrams at this level of care, it is likely that the nutritional status of the patient is a factor. While this recommendation is optional, clinical experience has shown that in patients with unresolved engrams, poor nutrition may be a factor. As presented in the Rationale section of this document, an imbalance in the nutrition base of an individual may be expressed in ways that affect proper physiological expression. In the absence of nutritional balance, aberrant physiology may mask, or inhibit, successful progress by the patient.

If the practitioner believes that nutrition may be a factor, the BEST concept of nutritional balance, which is presented in the Morter Health System Nutrition Seminar, may be considered. In this system, clinical observations have shown that monitoring urine pH under controlled circumstances may be an indicator of the status of the body's alkaline mineral reserve. If this reserve is inadequate, it is postulated that the body may be deficient in its ability to neutralize non-physiologically produced acids, derived from certain foods. Many of these foods have identified, as well as those which enhance the body's mineral alkaline reserve. Thus by monitoring urine pH, under appropriate conditions, an indication of the body's balance between diet and mineral alkaline reserve can be evaluated, and corrective measures adopted at the patient's discretion.

In addition, pH testing of the saliva is postulated to reflect the rapid response of the body to neutralize a pH challenge. This is accomplished by having the patient suck on any commercial brand "lozenge," which is acid in nature, in the mouth for a brief period. Under normal circumstances the body will quickly neutralize the acid as demonstrated by testing the saliva with pH paper before and after the challenge. However, it is proposed that if a predominating pattern of inappropriately timed physiology is present, it may "override" the normal response to the acid challenge. Since an inadequate response to the challenge may also reflect an imbalance in alkaline mineral reserve and/or an emotional "override," it is suggested that the results of this optional assessment, be interpreted in concert with findings from the application of BEST Basic and Advanced Care.

Duration of Care

When the objective of clearing sensory engrams has been achieved, the patient is evaluated on a once a month basis. Generally, patients reach the monthly evaluation period within two months. However, individual variation may alter this time frame considerably depending on the degree of stress in the patient's life. If vertebral subluxation, induced by physical trauma is apparent, patients under BEST care may simultaneously be under care for the corrective care employing any of the currently acceptable techniques for correction of vertebral subluxation or other expressions of inappropriate physiology.

Outcomes Assessment and Research

BEST offers the hypothesis that a body free of sensory engram influence, and in the absence of physical trauma, should also be free of other expressions of inappropriate physiology. Routinely, during the monthly sessions, patients are examined for the presence of these inappropriate responses. Clinical records and preliminary investigation, to date, suggest that the hypothesis has credence.[91] Questionnaires are also routinely given to patients from the onset through the extent of care, to assess their understanding, satisfaction, and benefits or negative consequences. BEST is currently being evaluated through an extensive research program, conducted through a major university, designed to elucidate the mechanisms of action associated with its methods and protocols. Additionally, as part of the research program, continuous monitoring of improved quality of life reported by its recipients and other health benefits are under evaluation through retrospective and prospective studies. The information obtained from these endeavors is used to modify the Technique consistent with the findings derived from these outcome assessments and research findings.

Training

An annual Certification Program is offered at the Morter Clinic in Rogers, Arkansas, and several other centers world wide. During an intensive five day session, practitioners are guided through the BEST protocol and certified after successful completion of three practical examinations. While numerous practitioners have completed the Basic BEST seminar, and others have extended their knowledge through the video

program, recognition as a certified BEST practitioner is acquired only through successful completion of the Certification Program. For more information contact the: Morter Health System, 1000 West Poplar, Rogers, Arkansas. 1(800) - 874 - 1478.

* * *

Consistent with the many philosophers advocating the natural healing qualities of the human body, clinical observations lead the practitioners of BEST to conclude that the body has the ability to heal and maintain itself if the properly coordinated impulse arrives at the correct location at the appropriate time; and if the cells of destination have the correct chemical composition (nutrition), then appropriate physiological function **must** *occur.*

References

1. Morter MT. Bio-energetic synchronization technique. The Digest of Chiro Econ 1975; 18(1): 26.

2. Herskowitz I. Life cycle of the budding yeast *Saccharomyces cerevisiae*. Microbiol Rev 1988; 52: 536-553.

3. Pert CB, Ruff MR, Weber RJ, et al. Neuropeptides and their receptors: A psychosomatic network. J Immunol 1985; 135 (2nd Suppl.): 820s-826s.

4. DeVreotes PN. Cell-cell interactions in *Dictyostelium* development. Trends Genet 1989; 5:242-245.

5. Hazelbauer GL. Bacterial chemotaxis: Molecular biology of a sensory system. Endeavour 1980; 4:67.

6. Hertzberg EL, Lawrence TS, Gilula NB. Gap junctional communication. Annu Rev Phsiol 1981; 43: 479.

7. Staechelin LA, Hull BE. Junctions between living cells. Sci Amer 1978; 238:140.

8. Armstrong PB. Invasiveness of non-malignant cells. In Invasion: Experimental and clinical implications. Mareel M, Calman K, eds. Oxford, U.K: Oxford University Press, 1984.

9. Bock G, ed. Metastasis (Ciba Foundation Symposium No. 141), Chichester, U.K.: Wiley, 1988.

10. Gerhart JC. The primacy of cell interactions in development. Trends Tenet 1989; 5:233-236.

11. Harland R. Growth factors and mesoderm induction. Trends Genet 1988; 4: 62-63.

12. Slack JMW. From egg to embryo: Determinative events in early development, Cambridge, England: Cambridge University Press, 1983.

13. Morter MT. Bio-energetic synchronization technique. The Digest of Chiro Econ 1976; 18(4):52-55.

14. Hunt VV. Electronic evidence of auras, chakras in UCLA study. Brain/Mind Bulletin 1978; 3(9).

15. hunt VV. Infinite mind: The science of human vibrations. Malibu, CA: Malibu Publishing Co., 1977.

16. Gerber R. Vibrational Medicine. Santa Fe, New Mexico: Bear & Company, 1988.

17. Kirlian S, Kirlian V. Photography and visual observations by means of high frequency currents. Journal of Scientific and Applied Photography 1961; 6: 145-148.

18. Kelso JAS. Dynamic Patterns: The self-organization of brain and behavior. Cambridge, MA: The MIT Press, 1995: 228-229.

19. Thibodeau GA, Patton KT. Anatomy and Physiology (2nd ed.). Baltimore: Mosby, 1993: 367, 567, 570, 754.

20. Stedman TL. Stedman's Medical Dictionary. Baltimore: Williams & Wilkins (26th ed.), 1995.

21. Hinsie LE, Campbell RJ. Psychiatric Dictionary. New York: Oxford University Press, 1960: 613, 614.

22. Palmer BJ. The subluxation specific-the adjustment specific. Davenport: The Palmer School of Chiropractic, 1934 (1986 printing): 496-510.

23. Leach RA. The chiropractic theories: A synopsis of chiropractic research. Baltimore: Williams & Wilkins, 1986: 35-108.

24. Davies SC, Ni C, Fardy J, et al. Magnetic susceptibility mapping of the human thorax using SQUID biomagnetometer. Journal of Medical Engineering and Technology 1994; 18(4): 127-133.

25. Seto A, Kusaka C, Nakazato S, et al. Detection of extraordinary large bio-magnetic field strength from human hand during external Qi emission. Acupuncture and Electro-Therapeutics Research 1992; 17(2): 75-94.

26. Payne B. The body magnetic. Soquel, CA: Psycho-Physics Press.

27. Roffey LE. Why magnetic therapy works. Massage Technique (July/August)1993:

28. Azanza MJ, del Moral A. Cell membrane biochemistry and neurobiological approach to biomagetism. Progress in Neurobiology 1994; 44(6): 517-601.

29. Schittenhelm R. Biomagnetic imaging. Digitale Bilddiagnostik 1990; 10(3-4): 76-85.

30. Schneider S, Hoenig E, Reichenberger H, et al. Multichannel biomagnetic system for study of electrical activity in the brain and heart. Radiology 1990; 176(3): 825-830.

31. Sandyk R. Premenstrual exacerbation of symptoms in multiple sclerosis as attenuated by treatment with weak electromagnetic fields. Internatl J of Neurosci 1995; 83: 187-198.

32. Sandyk R. Reversal of alexia in multiple sclerosis by weak electromagnetic fields. Internatl J of Neurosci 1995; 82: 223-242.

33. Sandyk R. Resolution of partial cataplexy in multiple sclerosis by treatment with weak electromagnetic fields. Internatl J of Neurosci 1996; 84: 157-164.

34. Wolff PH. The role of biological rhythms in early psychological development. Bulletin of the Menninger Clinic 1967; 31: 197-218.

35. Kelso JAS. Dynamic Patterns: The self-organization of Brain and Behavior. Cambridge, MA: The MIT Press, 1995: 103, 47, 111, 244.

36. Lewis M. Time-series analysis of stereotyped movements: Relationship of body-rocking to cardiac activity. American J of Mental Deficiency 1994; 89(1): 287-294.

37. Mirollo RE, Strogatz SH. Synchronization of pulse coupled oscillators. Journal of Applied Mathematics 1990; 50: 1645-1662.

38. Serway RA, Faughn JS. College physics. Philadelphia: Saunder College Publishing, 1989: 994, 444 - 446, 448, 487.

39. Guthrie HA. Introductory nutrition. St. Louis: C.V. Mosby Company, 1979: 585-653.

40. Price WA. Nutrition and physical degeneration: A comparison of primitive and modern diets and their effects. The American Academy of Applied Nutrition. Huntington Park, CA: Mission Press, 1958.

41. Gold M. et al. Plasma and red blood cell thiamine deficiency in patients with dementia of the Alzheimer's type. Archives of Neurology 1995; 52: 1081-1085.

42. Robinson K. et al. Hyperhomocysteinemia and low pryridoxal phsosphate: Common and independent reversible risk factors for coronary artery disease. Circulation 1995; 92 (10): 2825-2830.

43. Van der Walen RPJ. Nutritional status of elderly female nursing home residents; The effect of supplementation with a physiological dose of water-soluble vitamins. European J of Clin Nut 1995; 49: 665-674.

44. Jancin B. Folic acid is good strategy in vascular disease. Family Practic News 1996: 4.

45. Riggs KM, et al. Relations of vitamin B-12, vitamin B-6, folate and homocysteine to cognitive performance in the normative aging study. American J of Clin Nut 1996; 63: 306-314.

46. Rudman D, et al. Observations on the nutritional intakes of eating-dependent nursing home residents: underutilization of micronutrient supplements. J of the American College of Nut 1995; 14(6): 604-613.

47. Oakley, GP. Urgent need to increase folic acid consumption. JAMA 1995; 274(21):1717-1718.

48. Daly LE, et al. Folate levels and neural tube defects: Implications fro prevention. JAMA 1995; 274(21): 1698-1702.

49. Motulsky AG. Nutritional ecogenetics: homocysteine-related arteriosclerotic vascular disease, neural tube defects, and folic acid. American J of Human Genetics 1996; 58: 17-20.

50. O'Keefe CA, et al. Controlled dietary folate affects folate status in nonpregnant women. J of Nut 1995; 125: 2717-2725.

51. Leung L. Pantothenic acid and weight loss. The Nutrition Report 1995: 61.

52. Taylor A, et al. Relation among aging, antioxidant status, and cataract. American J of Clinical Nut 1995; 62(Suppl.): 1439s-1447s.

53. Eriksson J. Magnesium and ascorbic acid supplementation in diabetes mellitus. Annals of Nutrition Metabolism 1995; 39:217-223.

54. Barabas J, et al. Ascorbic acid in cerebrospinal fluid - a possible protection against free radicals in the brain. Archives of Gerontology and Geriatrics 1995; 21: 43-48.

55. Diplock AT. Safety of antioxidant vitamins and beta-carotene. American J of Clinical Nut 1995; 62 (Suppl.): 1510s-1516s.

56. Meyskens FL, Manetta A. American J of Clinical Nut 1995; 62(Suppl.): 1417s-1419s.

57. Cohen M. Ascorbic acid and gastrointestinal cancer. J of the American College of Nut 1995; 14(6): 576-578.

58. Garewal H. Antioxidants in oral cancer prevention. American J of Clinical Nut 1995; 62 (Suppl.):1410s-1416s.

59. Stamfer MJ, Rimm E, et al. Epidemiologic evidence for vitamin E in prevention of cardiovascular disease. American J of Clinical Nut 1995; 62 (Suppl.): 1365s-1369s.

60. Stephen B, et al. Dietary antioxidants and carotoid artery wall thickness: The ARIC study. Circulation 1995; 92(8): 2142-2150.

61. Tomeo AC, et al. Antioxidant effects of tocotrienols in patients with hyperlipidemia and carotoid stenosis. Lipids 1995; 30 (12): 1179-1183.

62. Levine GN, et al. Ascorbic acid reverses endothelial vasomotor dysfunction in patients with coronary artery disease. Circulation 1996; 93 (6): 1107-1113.

63. Stephens NG, et al. Randomized controlled trial of vitamin E in patients with coronary artery disease: Cambridge heart antioxidant study (CHAOS). The Lancet 1996; 347: 781-786.

64. Thomas SR, et al. Coantioxidants make alpha-tocopherol an efficient antioxidant for low-density lipoprotein. American J of Clinical Nut 1995; 62 (Suppl.): 1357s-1364s.

65. Wander RC, et al. Effects of interaction of RRR-alpha-tochopheryl acetate and fish oil on low-density-lipoprotein oxidation in postmenopausal women with and without hormone-replacement therapy. American J of Clinical Nut 1996; 63: 184-193.

66. Singh RB, Downing D. Antioxidants and coronary artery disease. J of Nut and Environmental Med 1995; 5: 219-224.

67. Dekkers J, Caroline, et al. The role of antioxidant vitamins and enzymes in the prevention of exercise-induced muscle damage. Sports Medicine 1996; 21 (3): 213-238.

68. Singh RB, et al. Dietary intake and plasma levels of antioxidant vitamins in health and disease: A hospital-based, case-controlled study. J of Nut and Environmental Med 1995; 5: 235-242.

69. Snodderly D, Max. Evidence for protection against age-related macular degeneration by carotenoids and antioxidant vitamins. American J of Clinical Nut 1995; 62 (Suppl.): 1448s-1461s.

70. Mares-Periman JA, et al. Serum antioxidants and age-related macular degeneration in a population-based case-control study. Archives of Ophthalmology 1995; 113: 1518-1523.

71. Rauma AL, et al. Antioxidant status in long-term adherents to a strict uncooked vegan diet. American J of Clinical Nut 1995; 62: 1221-1227.

72. Krishnaswamy K, Polasa K. Diet nutrition and cancer: The indian scenario. Indian J of Med Res 1995; 102: 200-209.

73. Krebs-Smith S, et al. Fruit and vegetable intake of children and adolescents in the united states. Archives of Pediatrics and Adolescent Medicine 1996; 150: 81-86.
74. Teen health. J of the American Dietetic Association 1996; 96 (3):238-242.

75. Miller SJ, et al. Nutrition education in colleges of pharmacy. American J of Pharmaceutical Education 1995; 59: 379-382.

76. Evans C, Eastell R. Adaptation to high dietary sodium intake. Challenges in Modern Medicine 1995; 7: 413-418.

77. Rothman KJ, et al. Teratogenicity of high vitamin A intake. New Eng J of Med 1995; 333 (21): 1369-1373.

78. Meat and health. Nutrition Week, November 1995: 7.

79. Maes M, et al. Seasonal variation in plasma L-tryptophan availability in healthy volunteers: Relationships to violent suicide occurrence. Archives of General Psychiatry 1995; 52: 937-945.

80. Rubenowitz E, et al. Magnesium in drinking water and death from acute myocardial infarction. American J of Epidemiology 1996; 143 (5): 456-462.

81. Boschert S. Magnesium can curb premenstrual migraine. Family Practice News 1996; 33.

82. Mauskop A, et al. Intravenous magnesium sulfate relieves migraine attacks in patients with low serum ionized magnesium levels: A pilot study. Clinical Science 1995; 89: 633-636.

83. Zarcone R, et al. Role of magnesium in pregnancy. Panminerva Medica 1994; 36 (4): 168-170.

84. Lansdown A, et al. Zinc in the healing wound. The Lancet 1996; 347: 706-707.

85. Lance CA. The vertebral subluxation complex part I: introduction to the model and the kinesiological component. Chiropractic Res J 1989; 1(3): 23.

86. Guyton AC. Text book of Medical Physiology (7th ed.). Philadelphia: W.B. Saunders, 1986: 640-680.

87. Jonasen AM. Therapeutic touch: A holistic approach to perioperative nursing. Todays OR Nurse 1994; 16 (1): 7-12.

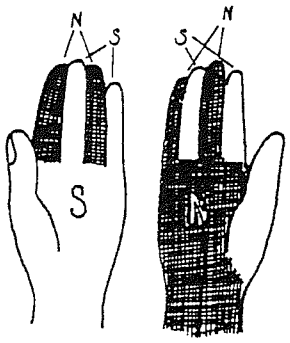
88. Wirth DP, Barrett MJ. Complementary healing therapies. International J of Psychosomatics 1994; 41 (1-4): 61-67.

89. Kneosian CV. Wound healing with noncontact therapeutic touch used as an adjunct therapy. J of Wound, Ostomy, and Continence Nursing 1995; 22 (2): 95-99.
90. Nagel T. What is the mind-body problem? Ciba Foundation Sympos.1993; 174: 1-7.

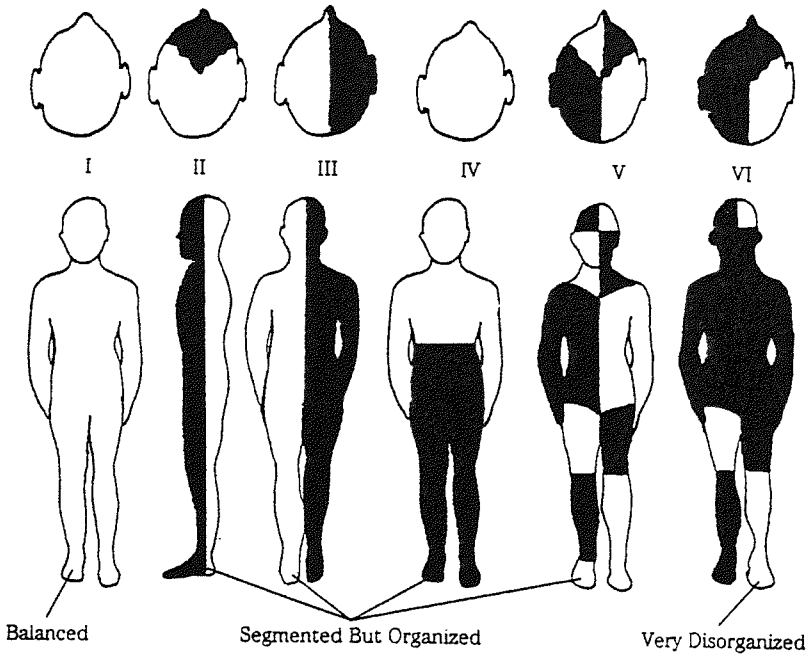
91. Hawk C, Morter TM. The use of measures of general health status in chiropractic patients: A pilot study. Palmer J of Res 1995; 2 (2): 39-44.

THE MORTER B.E.S.T. HOLISTIC APPLICATION

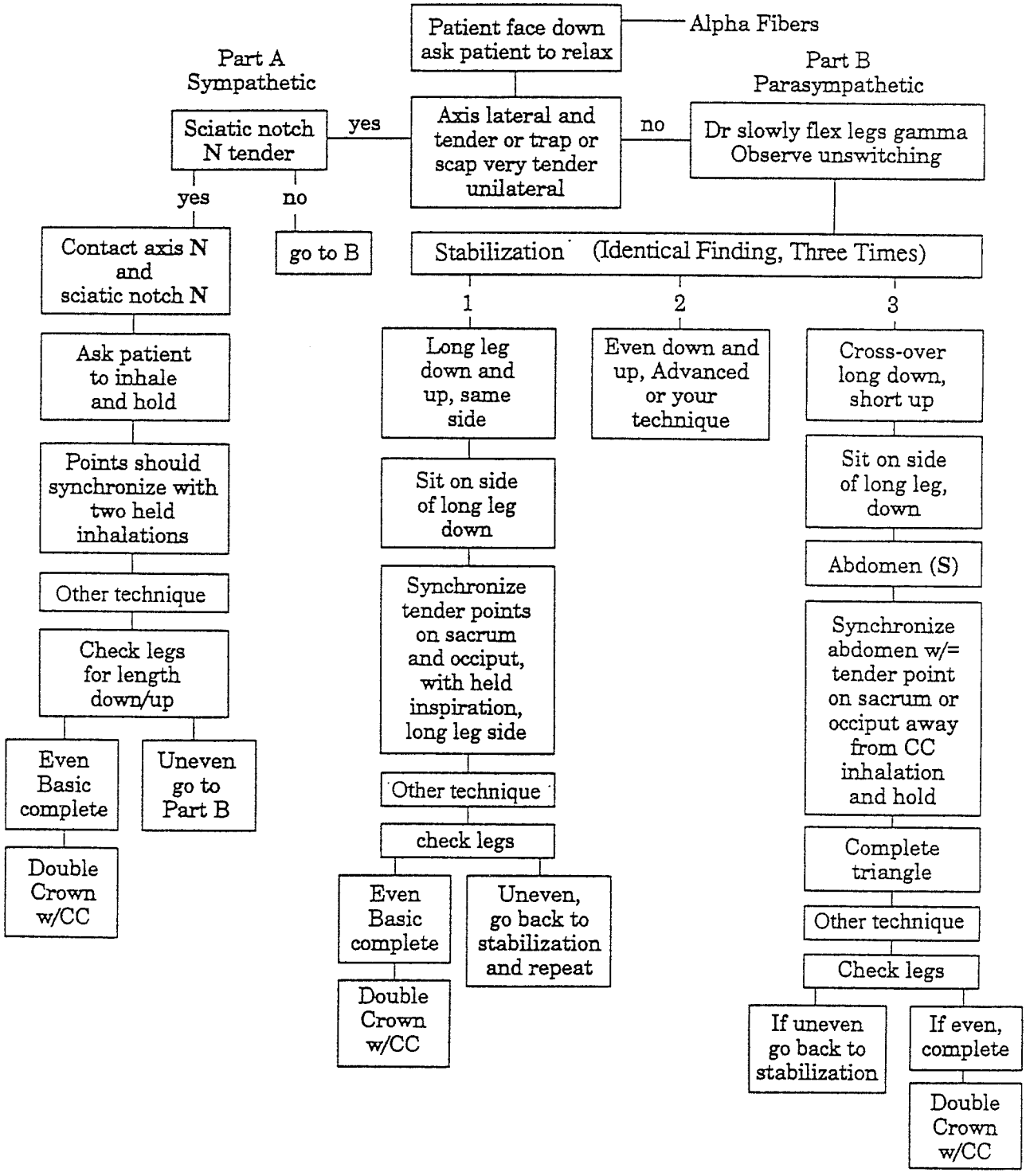
Hand Polarity



Body Segmentation-Survival Segmentation



MORTER BASIC B.E.S.T.
PRONE PROCEDURE



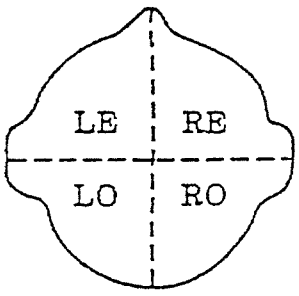
PROCEDURE (EMOTIONAL)
MIND / MEMORY / BODY

REMOVAL OF PSYCHOSOMATIC INTERFERENCE

1. First remove defense physiology (unnecessary muscle tension). Check for sympathetic or parasympathetic indicators and proceed accordingly.
2. Locate interference from mind/memory/ body/field.
   a. Check legs on presentation - make mental note.
   b. Ask for yes - observe - make mental note of leg length change.
   c. Ask for no - observe - make mental note of leg length change.
3. Questions to be thought by doctor:
   Is it:
   a. chief complaint?
   b. conscious memory?
   c. subconscious memory? Patient may need a clue to recall the person or experience that comes to mind daily. Use box to locate.
   d. insides? - Meaning organs
   e. integration? Meaning communication between organs
   f. feelings? - Meaning feelings from chart
   g. field? - Meaning energy around the body

Once the door has been located the following information must be determined.

Door B through G	Eye Position	Eyes Closed or Open	Contact Points	Hold Breath	Think About



Contact Points

Sensory Dominant Organism
Mind - Memory - Field

A. **Chief complaint?**	top priority	
B. **Conscious** memory?	stress on the mind, able to recall	
C. **Subconscious** memory?	1. friends 2. family 3. self* 4. TV / news 5. fear 6. religion / minister 7. community** 8. business / money	9. govt / politics 10. enemy / competitor 11. hurt other person 12. authority - MD 13. military / war 14. age (time period in life) 15. pet 16. education
D. **Insides**?	meaning organs	
E. **Integration**?	meaning communication between organs	
F. **Feelings**?	meaning positive or negative from chart	
G. **Field**?	meaning energy around the body	

* Self - have patient place himself/herself on a scale from worthless (0) to perfect (10). Test. If not reactive, ask patient to "move up or down the scale". Retest until you find the reactive number. The doctor is **not** to know the number or whether the patient moved **up** or **down.**

** Individualize for area, ie., chemical, toxic waste, smoke, noise, ...

****

NEGATIVE FEELINGS 1			POSITIVE FEELINGS 2		
A	1. LONELINESS	6. SELFISH	A	1. CREATIVE	6. LOVE
	2. EMBARRASSMENT	7. INDECISIVE		2. SENSITIVE	7. JOY
	3. DEPRESSION	8. DOMINATING		3. INSPIRED	8. PEACE
	4. ANGER	9. COMPULSIVE		4. IMAGINATIVE	9. SERENITY
	5. ANXIETY	10. JUDGEMENT		5. FAITHFUL	10. COMPASSION
B	1. GUILT	6. GREEDY	B	1. HOPEFUL	6. SINCERITY
	2. REGRET	7. RUTHLESS		2. ENTHUSIASTIC	7. HARMONY
	3. INADEQUACY	8. HATEFUL		3. CONTENTED	8. COMPATIBILITY
	4. APATHY	9. GIVING		4. ACCEPTING	9. CONSISTENCY
	5. BOREDOM	10. CRITICAL		5. EXPECTANCY	10. FAITHFULNESS
C	1. DESPAIR	6. REJECTING	C	1. PLEASURABLE	6. GRACIOUS
	2. SELF-PITY	7. DOUBTFUL		2. BLISS	7. LOYAL
	3. GRIEF	8. DISHONEST		3. ELATION	8. TRUE
	4. REMORSE	9. IMMORAL		4. ENJOYMENT	9. DEDICATED
	5. REJECTION	10. CYNICAL		5. FULFILLMENT	10. STEADFAST
D	1. DREAD	6. RESIGNED	D	1. AGREEABLE	6. UNWAVERING
	2. SHAME	7. SPITEFUL		2. GLAD	7. FIRM
	3. IMPATIENCE	8. FRUSTRATED		3. GRATIFIED	8. CONSCIENTIOUS
	4. PERSECUTED	9. OBSESSIVE		4. SATISFIED	9. STABLE
	5. ENVY	10. WORRIED		5. PLEASED	10. CAREFUL
E	1. IRRITATION	6. UPSET	E	1. JOVIAL	6. RELIABLE
	2. JEALOUSY	7. PRIDE		2. ADORE	7. TRUST
	3. POWERLESSNESS	8. VULNERABLE		3. DEVOTION	8. GOOD
	4. RESENTMENT	9. KILL		4. BIRTH	9. DEPENDABLE
	5. HURT	10. DEATH		5. WARMTH	10. HONEST
F	1. FEAR	6. DESTRUCTION	F	1. CHERISH	6. TRUTHFUL
	2. UNLOVED	7. AFFAIR		2. INTIMACY	7. MORAL
	3. ABANDONED	8. GRUDGE		3. FRIENDSHIP	8. VIRTUOUS
	4. ABUSED	9. BITTERNESS		4. PASSION	9. ACCURATE
	5. SUBMISSIVE	10. SUSPICION		5. BENEVOLENT	10. EXACT
G	1. INFIDELITY	6. PARANOIA	G	1. TRANQUILITY	6. DELIGHT
	2. HUNGER	7. SEX		2. QUIETNESS	7. RIGHT
	3. CONTRADICT	8. RIDICULE		3. CALM	8. PERFECTION
	4. ARGUMENTATIVE	9. DEMANDING		4. COMPOSURE	9. SEX
	5. FIGHT	10. REPULSIVE		5. DESIRE	10. HAPPINESS