

Energy Medicine and Biophysics



by Daniel J. Murphy, DC, FACO

Dan Murphy graduated magna cum laude from Western States Chiropractic College in 1978, and has more than 20 years of practice experience. He received Diplomate status in Chiropractic Orthopedics in 1986. Since 1982, Dr. Murphy has served part-time as undergraduate faculty at Life Chiropractic College West, currently teaching classes to seniors in the management of spinal disorders.

Dr. Murphy is on the post-graduate faculty of several chiropractic colleges. His post-graduate continuing education classes include "Whiplash and Spinal Trauma" and "Pain Neurology." Dr. Murphy is the coordinator of a year-long certification program in "Chiropractic Spinal Trauma," now (2000) in its twelfth year of being offered. This year, the program is being offered through the International Chiropractors Association of California. He has taught more than 700 post-graduate continuing education seminars.

Dr. Murphy is a contributing author to the book Motor Vehicle Collision Injuries, published by Aspen, 1996; and to the book Pediatric Chiropractic, published by Williams & Wilkins, 1998. He writes a quarterly column in the Journal of Clinical Chiropractic.

In 1987, 1991 and 1995 Dr. Murphy received the Post-graduate Educator of the Year award, given by the International Chiropractic Association.

In 1997, he received The Carl S. Cleveland, Jr., Educator of the Year award, given by the International Chiropractic Association of California.

Having read *Energy Medicine, The Scientific Basis*, by James Oschman, Churchill Livingstone, 2000, I noticed several parallels with Chiropractic Biophysics®, including:

(1) Human tissue responds to pulsating magnetic fields called "biomagnetic fields."

(2) Harold Saxon Burr was a full professor at the Yale School of Medicine. In 1972, he published *Blueprint for Immortality: The Electrical Patterns of Life*, in which he notes (paraphrased):

All living things, from mice to humans, from seeds to trees, are formed and controlled by electrical fields. (p. 16)

(3) Every muscle in the body produces magnetic pulses when in contracts. (p. 35)

(4) Local biological tissue electricity changes when tissues are injured. These injury potentials are important in triggering tissue repair. (p. 42)

(5) The cytoskeletons of all the cells in the body are linked to the connective tissue extracellular matrix. The trans-cellular membrane linking is termed "integrins." (p. 47)

(6) Likewise, there is a physical mechanical link between the cellular cytoplasmic matrix and the nuclear envelope, nuclear matrix, and the DNA of the genes/chromosomes. (47)

(7) APPLICATION:

This physical continuum, beginning with the skin to the genetic material, can be affected physically and electrically as a consequence of postural distortions, resulting in alterations in expression of our genetic material.

(8) This entire interconnected system is called the "connective tissue — cytoskeleton" matrix, or the "tissue — tensegrity" matrix. (p. 48)

(9) APPLICATION:

This means that the entire physical body is interconnected. A stress on one part of the system will spread to other parts of the system. This includes the genome and its genetic expression. One can change the genomic expression of DNA by alterations of physical stress. All parts and their properties are interlinked.

(10) Communication in living systems involve two main systems:

(a) Chemical

(b) Energetic (p.49)

(11) There are two kinds of energetic interactions:

(a) Electrical, classic of nerve and muscles function

(b) Electronic, classic of alterations of the tensegrity matrix

(12) Chiropractors and others solve health problems by attending to the quality of the tensegrity matrix. (p. 50)

(13) The molecules that link the cell interior with the extracellular matrix are called "integrins." (p. 50)

(14) We do not intuitively consider biological material to be crystalline, but they are. (p. 52)

(15) "Crystalline arrangements are the rule and not the exception in living systems." (p. 52)

(16) This crystalline arrangements generate piezoelectricity and streaming potentials in both hard and soft tissues. (p. 52)

(17) "Progressive changes take place [in the function of the tensegrity matrix] because of the ways in which individuals use their bodies in relation to gravity, because of habits or injuries." (p. 55)

(18) These concepts also "provide a basis for the restorative measures that can be used to correct gravity-related disorders." (p. 55)

(19) "Each tension, each compression, each movement causes the crystalline lattice of the connective tissues to generate bioelectric signals." (p. 55)

(20) "The entire living matrix forms an electronic and photonic network." (p. 55)

(21) "Conductors are substances, such as metallic wires, that readily conduct electricity. Insulators are the opposite: they are barriers to the flow of electricity. Semiconductors are between conductors and insulators in terms of their ability to conduct electricity." (p. 55)

(22) "The proteins of the body are semiconductors." (p. 55)

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PROMOTE CHIRO

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(23) "Virtually all of the molecules forming the living matrix are semiconductors." (p.60)

(24) Therefore, molecules do not have to touch to interact, as their energy can flow through electromagnetic fields. (p. 60)

(25) The prineural system sets up a low voltage current, the current of injury, that controls injury repair. This electrical system is sensitive to electromagnetic fields. (From Robert Becker) (p. 61)

(26) Our bodies behave as a tensegrity system. A tensegrity system is characterized by a series of continuous tensional networks. (p. 61)

(27) "Tensegrity accounts for the ability of the body to absorb impacts without being damaged. Mechanical energy flows away from a site of impact through the tensegrous living matrix. The more flexible and balanced the network (the better the tensional network), the more readily it absorbs shocks and converts them to information rather than damage." (p. 64)

(28) "Tensegrity accounts for the fact that inflexibility or shortening in one tissue influences structure and movement in other parts." (p. 66)

(29) The living tensegrity network is simultaneously a mechanical and electrical continuum. Therefore, mechanical influences to the structural system will influence the energetic informational system. (p. 66)

(30) The energy fields present prior to injury affect the body's ability to

respond to subsequent injury. (p. 76)

(31) Alterations in the tensegrity matrix will affect, through to cytoskeleton, the nucleus and the expression of genes. (p. 89)

(32) There is animal study evidence that the tensegrity bioelectric field one has prior to an injury will affect tissue and nerve healing of subsequent injuries. (p. 90)

(33) Prevention

While the focus in this discussion is on the healing of wounds, energetic bodywork can be of profound significance to the organism even if no specific problem is present. A healthy individual will be both happier and less likely to have an injury or disease. If problems do arise, they will recover more rapidly. Likewise, athletic, artistic and intellectual performance is enhanced when all of the body's communication channels are open and balanced. This point is well understood in many complementary practices, in which regular maintenance treatments or 'tune-ups' are given. These treatments are not for specific ailments, but serve to reduce the future incidence of medical problems, to enhance performance of all kinds of activities, and generally to facilitate the progress of individuals in their personal evolution, or in the achievement of their personal goals or 'destiny'."

(34) Claude Bernard (father of modern physiology), said: Energetic vital forces control and direct the genes to create structure. (p. 93)

(35) "Modern neurophysiology focuses primarily on the activity of less than half of the cells in the brain. The 'neuron doctrine' holds that all functions of the nervous system are the result of activities of the neurons. Integration of brain function is therefore regarded as arising from the massive interconnectivity of the neurons. This view is incomplete because it ignores an evolutionarily more ancient informational system residing in the prineural connective tissue cells that constitute more than half of the cells in the brain. Perineural cells encase every nerve fiber, down to their finest terminations throughout the body." (p. 93-94)

(36) "The prineural system is a direct current communication system reaching to every innervated tissue. The prineural system establishes a 'current of injury' that controls injury repair." "The current of injury is generated at the site of a wound, and continues until repair is complete." The current of injury is not an ionic current, but a semiconductor current that is sensitive to magnetic fields. "Semiconduction takes place in the prineural connective tissue and surrounding parts of the living matrix." (p. 94-95)

(37) Tensegrity matrix semiconduction currents "determine the sensitivity of the neurons to stimulation." The local electrical current field can cause the "threshold for depolarization" to be "far from threshold." Consequently, "a much larger stimulus will be needed for the nerve to be excited." (p. 95)

(38) Living Crystals

"All therapeutic and scientific approaches to the body can benefit from an appreciation of the crystalline nature of living

tissues. We do not usually consider our bodies to be crystalline, because when we think of crystals we usually think of hard materials, like diamond or agate." Living crystals are liquid crystals. "Crystalline arrangements are the rule and not the exception in living systems." (p. 129)

(39) Gravity is the most potent physical influence in any human life.

"Gravity pervades our bodies and our environment and affects our every activity. All of the structures around us - our homes, furniture, buildings, machinery, plant, and animal, - and our own bodies, are designed to function in a world dominated by gravity. The form of each bone, muscle, and sinew tells a story of its particular role in maintaining and moving the body in the gravitational field. Many of the injuries faced in the therapeutic setting are consequences of falling down, or of habitual movement patterns that strain tissues. Hence therapists of virtually every tradition can benefit from an appreciation of the ways in which gravity interacts with structures, energy flows, and emotions, and the clinical approaches that remedy 'gravitational traumas'." (p. 147)

(40) Gravitational Physiology

"To introduce the therapeutic significance of gravity, we summarize the work of Joel E. Goldthwait and his colleagues at Harvard Medical School." "A surgeon in Boston and founder

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of the orthopaedic clinic at the General Hospital, Goldthwait developed a successful therapeutic approach to chronic disorders. The aim of his therapies was to get his patients to sit, stand, and move with their bodies in a more appropriate relationship with the vertical. After years of treating patients with chronic problems, he concluded that many of these problems arise because parts of the body become misaligned with respect to the vertical, and organ functions therefore become compromised." (p. 147)

"Goldthwait's therapeutic approach was based in part on observations made while performing surgery on such patients. He noticed that abdominal nerves and blood vessels are under tension in individuals whose bodies are out of alignment. He also reported 'stretching and kinking' of the cerebral arteries and veins in those whose necks were bent. Various cardiac problems were correlated with 'faulty body mechanics' that distorted the chest cavity in a way that impaired circulatory efficiency. Goldthwait also documented with X-rays a build-up of calcium deposits around the vertebrae of individuals with chronic arthritis, and observed that these deposits can diminish when the individual acquires a more vertical stance. His therapeutic approach corrected many difficult problems without the use of drugs. He viewed the human body from a mechanical engineering perspective, in which alignment of parts is essential to reduce wear and stress. He pleaded with physicians to recognize and correct misalignments to prevent long-term harmful effects." (p. 148)

Goldthwait pleaded for everyone to pay more attention to the ways they hold and move their bodies in relation to the gravity field. However, medicine was being swept away in the tide of drug-based medicine that continues today. (p. 149)

(41) Simple mechanical calculations reveal that gravity gives rise to surprisingly large forces within the body as a consequence of levers that amplify the forces exerted on joints and other tissues.

(42) "The tensegrity concept is a useful way to conceptualize the interconnected gravitational support/energetic system in the body."

(43) The gravity system connects, via a family of molecules known as integrins, to the cytoskeleton of cells throughout the body. Therefore, an imbalance in one part of the body will affect the whole body. (p. 156)

(44) In postural distortions, gravity introduces tension to the tissue, which generate electricity (piezoelectric effect and streaming potentials), which signal cells altering their genetic expression of collagen protein synthesis. (p. 158)

(45) Our improvement of these distortions can change the patterns of electrical fields. (p. 159)

(46) Awareness of the biology of gravity:

"The basic principle of gravitational biology is known to any child who plays with blocks. The center of gravity of each block must be vertically above the center of gravity of the one below, to have a stable, balanced arrangement. If the center of gravity of one block lies outside of the gravity line, stability is compromised."

"Likewise, there is only one stable, strain-free arrangement of the parts of the human body. Any variation from this orientation will require corresponding compensations in other parts of the support system."

"Misalignment of any part will affect the whole system, and that restoration of verticality is a way to address a wide variety of clinical problems." (p. 165)

(47) Optimal performance in a gravity field occurs only at a narrow peak of balance, and the slightest deviation reduces optimum efficiency. (p. 166)

(48) Postural "alignment influences two kinds of communication: nerve impulses and semiconduction through the tensegrous network." (p. 167)

(49) "Every joint in the body participates in the energy flows essential to life, and that alignment depends on both the position of the hard tissues (bone) and the arrangement of the surrounding soft tissues (ligaments and tendons)." (p. 168)

(50) Biological systems respond paradoxically to electrical fields: In living systems, extremely weak electrical fields have potent effects, while strong fields may render little or no response. (p. 176)

(51) "Organisms are poised to respond to minute 'whispers' in the electromagnetic environment." (p. 179)

(52) Balancing or restoring normal electric fields can reverse a disease process. (p. 193)

(53) "Molecular electromagnetic communications can account for the rapid and subtle and integrated functioning of living systems." Millions of molecules can communicate with each other in this way, at the speed of light. (p. 197)

(54) "Living systems are exquisitely sensitive to low energy signals." (p. 200)

(55) "Living systems completely defy the logic that larger stimuli should produce larger responses." (p. 201)

(56) "Neurophysiologists focus most of their attention on the 'classical' nervous system, composed of the neuron, that conduct information from place to place as electrical impulses. The 'neuron doctrine' holds that all functions of the nervous system result from the activities of the neurons. Hence integration of brain function, memory, and even consciousness have been assumed to arise from the massive interconnectivity of the neurons."

"This is a partial view because it neglects another energetic and informational system consisting of the perineural connective tissue system, which constitutes more than half of the cells in the brain. (p. 223)

(57) Robert Becker has presented evidence that the perineural system regulates the operation of neurons, and not the reverse. (p. 226)

(58) "Biological physics is a field that is likely to be very productive in the future, particularly when more physicists become aware of the high

degree of crystallinity and coherence present in living systems, and the solid state properties of biological networks." (p. 234)

(59) The helical molecules [of DNA] in living systems are piezoelectric semiconductors that respond to magnetic and biomagnetic fields. (p. 235)

(60) [Altered posture affects the] "tensegrous semiconducting living matrix continuum. (p. 236)

(61) "Proteins carry out all of the vital tasks in living systems, and each protein must fold in a precise way to be most effective." This folding is altered by electromagnetic fields. (p. 240)

(62) A large portion of our genetic material does not code for proteins and is termed "junk" DNA. However, their helical piezoelectric semiconducting nature energize various proteins and enzymes to assume their optimal shape out of the infinite varieties of configurations that are possible. (p. 240)

(63) "Enzymatic processes themselves are field-sensitive." (p. 250)

(64) When it comes to affecting healing responses with electromagnetic fields, "small is powerful, or less is more." (p. 251)

(65) "To deny direct electromagnetic interactions with living molecules would be to deny the fundamental reaction upon which all life depends." (p. 254)

WOW!:

Biological physics, piezoelectricity, streaming potentials, gravity, vertical alignment, tethering of soft tissues, visceral function, semiconduction within the nervous system controlling traditional action potentials, mechanical engineering, whole body concept, chronic conditions, alterations of genetic expression, etc.

I hope you enjoyed these excerpts, paraphrases and quotes. Many will want to purchase this book.

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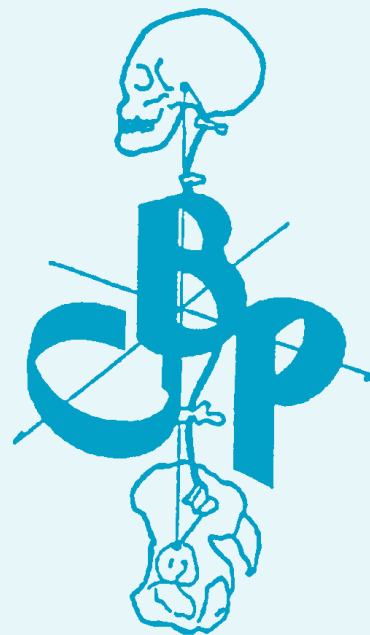
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