

Qigong - Energy Medicine for the New Millennium

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Qigong (“chee gung”) is an ancient Chinese health modality that has been proven effective for a range of diseases and conditions, and it is used extensively by tens of millions of people daily for preventative medicine and self-healing. Although the Qigong and Energy Medicine Database™ contains over 3500 medical and scientific references for Energy Medicine healing, Qigong and other energy-based therapies have not received widespread acceptance by Western medical practitioners. There are many reasons for the reluctance to adopt these therapies, including a lack of understanding of their benefits and how they work, a scarcity of clinical trial results, and an undefined scientific foundation. However, exciting new discoveries are being made in Energy Medicine research and practice that help to explain Qigong’s amazing self-healing, health maintenance, disease prevention, and chronic disease management benefits. This paper characterizes Qigong as Energy Medicine by examining the scientific basis, the medical need for, and the scientific research supporting the benefits of Energy Medicine. It also proposes a Human Energy Project to fully research and map the human bio-energy field.

Keywords: Qigong, tai chi, Energy Medicine, electromagnetism, CAM, psychoneuroimmunology, meditation, bio-energy, energy-based therapy, qi, acupuncture, human energy project, electropollution, bio-energy

What is Energy Medicine?

The National Center for Complementary and Alternative Medicine (NCCAM) is one of the twenty-seven institutes within the National Institutes of Health. NCCAM’s charter (NCCAM 2004) is to explore complementary and alternative healing practices. Complementary medicine is used with conventional medicine to effect a treatment. An example of a complementary therapy would be using Qigong (Cohen 1997, Chen 2002) to reduce the dosage of a particular drug required to treat a chronic illness. By contrast, alternative medicine takes the place of conventional medicine; e.g. the use of herbal remedies, special diet, or energetic therapy to treat cancer instead of chemotherapy or surgery.

NCCAM defines five categories of Complementary and Alternative Medicine (CAM):

- Alternative Medical Systems, such as homeopathy, Traditional Chinese Medicine (TCM), and Ayurvedic Medicine.
- Mind-Body Interventions such as support groups, prayer, meditation, and healing art, music, and dance.
- Biologically Based Therapies, e.g. herbs, foods, vitamins, aromatherapy, and special diets.
- Manipulative and Body Based Therapies, e.g. chiropractic, musculo-skeletal, and massage.
- Energy Treatments, which are divided into Bio-field Therapies such as Qigong, reiki, and therapeutic touch, and Bio-electromagnetic Therapies such as magnetic field therapy.

According to the above categories, all energy-based healing modalities are Energy Treatments (i.e. Energy Medicine). However, many energy-based modalities also include combinations of the other categories. For example, Qigong is considered a major branch of and precursor to Traditional Chinese Medicine, incorporates Mind-Body Interventions, and is also a Manipulative and Body Based Therapy.

Indigenous systems of energy healing have evolved in all cultures. These health modalities, such as TCM and Ayurvedic Medicine, are based on the concept of a vital energy, or life force that animates all living things. This abstract concept has different names in various cultures, including Qi (“chee”), Ki, Great Spirit, Holy Ghost, and Prana. In order to remain healthy, one must balance this energy and ensure that it flows freely throughout the body. Disease occurs when the flow of vital energy is blocked (stagnant) or unbalanced.

Although homeopathy, light therapy, aromatherapy, sound healing, magnetic field (magnet) therapy, crystal healing and various other lesser known forms of Energy Medicine have proven effective, the most widely

Qigong: Energy Medicine for the New Millennium

used methods to manipulate the human energy field for health involve meditation, massage, breathing, and movement, either individually or in combination. The primary energy healing therapies that use these methods are Qigong, acupuncture, acupressure (acupuncture without the needles, also known as Tui Na and Shiatsu), Reiki, Therapeutic Touch, meditation (including Mindfulness Meditation), Yoga, Tai Chi (a moving form of Qigong), and pranic healing. Each of these disciplines is based on one or a combination of the following common energy models: The Oriental meridian system, the Indian chakra system, and the Western Aura Field (MacRitchie 1993), (Gerber 1996). When combined, these three systems comprise the human bio-energetic field, or Qi Matrix (Jahnke 2002).

By contrast, Western Medicine is based on a completely different paradigm: The Newtonian model of the human being as a bio-chemical machine. Remedies consist primarily of chemical intervention (drugs), surgery, or technology. Even pharmacology utilizes a chemical, bio-molecular mechanistic approach. To be sure, Western Medicine is superior for certain types of conditions, like setting of bones and immunization against disease, yet does little for preventing illness or adequately providing care for common chronic conditions, such as cancer, asthma, heart disease, and diabetes. In spite of proven effectiveness for these and other conditions, Energy Medicine has not been widely accepted.

Western Medicine's Reluctance to Embrace Energy-Based Therapies

Some of the reluctance to embrace energy-based therapies comes from outright fakery and fantastic or unsubstantiated claims made by unscrupulous Energy Medicine practitioners. There are numerous unproven remedies as well as stage tricks passed off as healing miracles. Another barrier to adoption is lack of knowledge of Energy Medicine on the part of Western medical and health professionals. Moreover, many CAM practitioners are unfamiliar with how to run randomized clinical trials (RCTs), which are recognized as the gold standard for Western medical research. In addition, no one has accurately described anatomically the energy pathways through which the vital energies are supposed to flow or proved the existence of the "life force" that distinguishes living organisms from inanimate objects. The energy pathways and life force cannot be detected using conventional scientific instruments. As Eisenberg (1995) explains, "For traditional Chinese medicine, Qi (vital energy or life force) is more than a concept; it is a physical reality. From a Western scientific standpoint, however, the existence of Qi is unproven. As a form of energy it remains unclassified."

Likewise, doubts have been raised because of the ways in which some energy remedies are administered. The mechanism by which they interact with their target organs is not understood. Papers claiming to prove Energy Medicine's efficacy are viewed with skepticism because there is a lack of RCTs and fundamental data gathering in laboratory research to verify the results. Clinging to the emotional and dogmatic fervor of the past, biologists and medical scientists claim that patients of energy therapies are victims of some kind of trickery, quackery, deception, illusion, or hallucination. Worse, to varying degrees the Western medical establishment has harassed, ostracized, and threatened pioneering bio-energy researchers including Rife, Mesmer, Burr, and Lakhovsky. Although no longer accurate, there "continues to be a strong academic bias against any suggestion that the electrical and magnetic fields that are generated by tissues and organs might have any important biological purpose – they are widely thought to be mere by-products of cellular activities, useful for diagnosis only" (Oschman 2003).

Perhaps the most reasonable hesitance to accept energy-based therapies is expressed by the editors of the *New England Journal of Medicine*: "There cannot be two kinds of medicine -- conventional and alternative. There is only medicine that has been adequately tested and medicine that has not, medicine that works and medicine that may or may not work. Once a treatment has been tested rigorously, it no longer matters whether it was considered alternative at the outset. If it is found to be reasonably safe and effective, it will be accepted" (Angell 1998). A similar viewpoint can be found in the *Journal of the American Medical Association* (Fontanarosa 1998).

Unfortunately, in embracing a particular scientific paradigm, Western Medicine has ignored, dismissed, not understood, or been slow to recognize the value of alternative and complementary healing modalities. For example, even though the Chinese have been successfully treating patients using acupuncture for thousands of years, it wasn't until 1997 that it was officially approved as a treatment in the United States. This was

after endorphins had been discovered as the endogenous peptides responsible for acupuncture's analgesic effects. In addition, Western doctors are for the most part unfamiliar with the profound health benefits of Qigong (Sancier 1996) or Tai Chi (Li 2001), which is an internal martial arts form of Qigong. Furthermore, the Health Action Clinic in Santa Barbara, California has been delivering a comprehensive holistic (i.e. natural healing) system based on Qigong for nearly twenty years. This program is being used as a model for low cost complementary medical programs in clinics and hospitals (Mason 2003).

The Deficiencies of Western Medicine and the Need for Energy Medicine

In spite of the criticism and misunderstanding of Energy Medicine, the need for energy-based therapies to complement standard Western medical practices has never been greater due to well-understood deficiencies in Western medical treatment and healthcare:

- There is the widespread belief in our culture of the technological fix. This extends especially to drugs that are used to address chemical imbalances. In the meantime, prevention, nutrition, exercise, healthy living habits, and self-healing have been de-emphasized or discarded. Just a few of the consequences of this are a dramatically over-weight population and degenerative diseases that have replaced infectious diseases as the most pressing health issues.
- There is an inability to effectively treat certain conditions, especially stress-related and chronic conditions that often resist a cure or even symptom relief.
- The “increased reliance on technology as well as the economic imperatives and the constraints of managed care mitigate against the expressions of care and concern that should characterize the physician-patient relationship, a dialogue that enhances the healing process beyond the immediate effects of drugs and other treatments” (NCCAM 2001).
- Western Medicine underrates or is in denial about the effectiveness of mind-based therapies such as meditation, spirituality, and remote intention. Nonetheless, the interaction of the nervous, immune, and endocrine systems in disease treatment and prevention has been recognized and researched in the field of neuroimmunology. Solomon went a step further by identifying the relationship between emotions, or mental state, and disease (1964). It is to no one's surprise that stress is acknowledged as the most common psychological contributor to illness. Psychoneuroimmunology has emerged as an entirely new category of medical science in recognition of the fact that a person's emotional and psychological state does affect their pain and healing, as well as general overall health:

“Every cell in our body has a characteristic vibration. When these cells vibrate at a certain rate and in a certain pattern, the body functions well and the person feels good. When they vibrate at a different rate and pattern, the body functions less well and the person feels not so good ... every thought is a pattern of energy characterized by a certain vibratory rate and pattern ... the vibratory pattern of the thought and its consequent emotion are experienced throughout the entire body, by each cell, and this vibratory influence triggers the release of certain kinds of neuropeptides which flood through the body ... thus thoughts are patterns of energy which influence the functions of the whole body” (Treishman 2001), (Pert 1997).

- People are frustrated by the inability of mainstream medicine to meet their needs. As Pert (1997) observes: “It's obvious the public is catching on to the fact that they're the ones paying monstrous health care bills for often worthless procedures to remedy conditions that could have been prevented in the first place.”
- Psychologists treat the mind as a separate entity from the physical body. On the other hand, physicians treat the body without due consideration of the mind and emotions. This has greatly slowed the process of finding new cures and treatments for diseases. The body and mind are not separate. They must be treated together (Pert 1997).

Qigong: Energy Medicine for the New Millennium

- The Department of Health and Human Services (DHHS) reports that healthcare spending has reached \$1.55 trillion or 15% of GDP in 2004. This doubtless does not include the true impact of Medicare/Medicaid, and there is no fiscally sound plan in place to address the burgeoning costs. The sick-care system is about ready to implode under the strain of the retiring baby-boom generation. Furthermore, healthcare choices are becoming more limited and costly.
- The White House Commission on Complementary and Alternative Medicine Policy states that conventional medicine is not addressing chronic illness and diseases (WHCCAM 2002). The focus has been on interventions and not wellness and health promotions that have been left to the individual. The Commission says the focus should be on physical, mental, spiritual, and emotional aspects of disease prevention, which are not being adequately addressed by orthodox Western Medicine.
- Research results have shown that surprisingly small amounts of electromagnetism can affect the normal functioning of biological systems. There is an urgent need to investigate the potential dangers of electromagnetic pollution and to develop standards for safe levels of human exposure (Becker 1985). One could reasonably ask why the Russian standard for microwave exposure is one thousand times less than in the US.
- There are increased occurrences of misdiagnosis or mistreatment. Prime examples are iatrogenic disorders, which are conditions caused by combinations of drugs, often with one taken to combat the side effects of another.
- Adverse drug reaction is a leading cause of diseases and death. Chemical cures are still unpredictable. In spite of their “precision” dosages, there is insufficient research on what else is going on in other parts of the brain and body when these drugs are administered (Pert 1997).
- Pharmaceutical therapies can turn ordinary viruses into human killers through the emergence of drug resistant genes.
- Drugs tend to replace and reduce the human self-healing and immune functions. Chemotherapy and antibiotics are prime examples.
- Some non-energetic conventional remedies are widely used, and even reimbursed by insurance companies, but have not been proven to be medically or cost effective and have side effects that can be harmful. Side effects can constitute a permanent harm to the human system. In most cases, they are only identified in terms of symptoms, with little or no understanding of how they work. However, they are considered acceptable risks of conventional medical treatment.

The Scientific Foundation of Energy Medicine

In order to fully understand energy therapies, it is necessary to review the two fundamental paradigms that characterize Western Medicine: Mind-body dualism and Newtonian mechanics. Although the philosophical mind-body split originated with the Greeks, Descartes is credited with creating the scientific divide between the mind and body as the father of modern medicine. The separation was initially required to allow science to continue exploring the physical universe without being accused of encroaching on the domain of the Church which included the mind and soul. Added to this separation, the discoveries of Sir Isaac Newton further exacerbated the limitations of Western Medicine, leading to a number of the deficiencies noted above.

Newtonian mechanics has formed the irrefutable foundation of physics for over two hundred years. The Newtonian world-view is one of elementary particles, absolute space and time, and laws verified by experiment and observation that describe a wide range of physical phenomena. However, as Maxwell discovered, electric and magnetic phenomena could not be explained or described by a mechanistic model and involved a new kind of force. Maxwell unified previous findings into a single theory, electrodynamics, and discovered the electromagnetic nature of light. Subsequently, Einstein published his Special Theory of

Relativity which replaced Newton's notions of space and time, incorporated electrodynamics, and unified mass and energy via $E=mc^2$.

Although embraced by physics, Einstein's insight that mass is simply another form of energy has not yet been incorporated into modern medicine. For the most part, allopathic Western Medicine still clings to the Newtonian principle of the physical body and the Cartesian mind-body split. Einstein's Special Theory of Relativity and subsequent proofs of the wave-particle duality of matter as a consequence of the development of quantum mechanics and quantum electrodynamics indicate that there is more to humans than just the physical body. The electromagnetic basis of existence has been established beyond a doubt: "All matter, living and non-living, is ultimately an electromagnetic phenomenon. The material world, at least as far as physics has penetrated, is an atomic structure held together by electromagnetic forces" (Becker 1985). In fact, denying the "direct electromagnetic interactions [among] living molecules would be to deny the fundamental reaction upon which all life depends, namely the absorption of sunlight by green plants" (Oschman 2003).

The human energy and physical bodies occupy the same space-time just as different electromagnetic frequencies can occupy the same space-time. Humans exist as a very complex network of overlapping and interacting energy fields. Energetic processes include electrical and magnetic processes, vibrational resonance, bio-photon emission, non-local field effects, and ion flow. The discovery of matter as an energy field is a revolution in thought. There needs to be a corresponding revolution in medicine and healthcare.

Fortunately, energy-based technologies and therapies are making steady, albeit slow, inroads into mainstream Western Medicine. For example, acupuncture, healing with hands, and meditation have already been included in therapies in some hospitals in the USA. In recognition of the need to amend allopathic medicine, Congress formally established the Office of Alternative Medicine at the National Institutes of Health (NIH) in 1993. In 1998 Congress expanded the mandate and responsibility of the Office by creating the National Center for Complementary and Alternative Medicine. The importance of CAM is evidenced by the investment of over \$161M in NCCAM and other CAM research at NIH in FY2000 (NCCAM 2001). The NCCAM budget has been increasing yearly from the initial outlay of \$2M in 1992, and the estimated 2005 budget is a fifty percent increase over 2001.

A growing body of medical research is confirming the energetic basis of human existence, and energy-based tools have become integrated into standard medical practice. Examples include the Electroencephalogram (EEG) which was called quackery when it was first introduced, magnetoencephalography, magnetocardiography, electromyography, the Electrocardiogram (EKG), Magnetic Resonance Imaging (MRI), Computerized Axial Tomography (CAT/CT) scans, electron microscopy, therapeutic radiology (and sub-specialties like radiation oncology, spinal cord electrotherapy and electrostimulation), laserpuncture and low-energy lasers (JACM 1999), colorpuncture (in Oschman 2003), and Positron Emission Tomography (PET) scans. Electric impulses have been used to stimulate a biological subject, which generates a response in the form of electron and photon emission across a wide range of frequencies. This can be measured using Gas Discharge Visualization (GDV) technology (BEOGDV 2001). Pulsed electromagnetic fields have been used to aid in healing of bone fractures and sound waves have been used to treat kidney stones and heel spurs.

A bio-energetic model of acupuncture, including measurements of meridians as well as technologies to do the measurement, is well documented (Tsuei 1996). Acupuncture is the most widely recognized form of energy therapy. The National Institutes of Health has found it effective for nearly a dozen conditions, and the World Health Organization recognizes its effectiveness in treating almost four dozen ailments (Koontz 2003). Individual organs in the body and the skin above areas traditionally identified as chakras have characteristic energy frequencies (Gerber 1996). The electrical conductance and capacitance measured at acupuncture points that are terminal points of meridians have been found to increase after Qigong sessions. In addition, changes in visible light (photons) emitted from the hands during a Qigong session have been observed with a photon counting device, and analysis of electroencephalograms indicate changes in brain wave patterns during Qigong (Lin 2004).

Qigong: Energy Medicine for the New Millennium

Superconducting Quantum Interference Devices (SQUIDs) have been used to detect minute bio-magnetic fields in the body, including those from energy practitioners (Oschman 1998). Researchers at the Institute of HearthMath have discovered that electromagnetic fields generated by the heart act as a synchronizing signal for the entire body. In addition, the magnetic portion of the heart's field is five thousand times greater than that of the brain and can be measured several meters away using a SQUID magnetometer. These experiments also suggest that the electromagnetic energy of the heart can be exchanged between people who are close to each other or touching (McCraty 1998), (McCraty 2004).

Subtle, or vibrational, energy is broadly defined as energy that is not generally recognized by mainstream physics and for which there are no means of measurement. Subtle energy is another type of energy besides the four known forces of nature (gravity, electromagnetism, strong nuclear force, and weak nuclear force). It is fundamental to many unexplained phenomena such as the power of spirituality and prayer, the effect of remote intention, the operation of homeopathy, and the functioning of the mind/body information network. "Subtle energy phenomena is related to a type of unified energy, and is not just a physical field of very low magnitude. Contemporary quantum physics has mathematically described and predicted the presence of a unified energy which underlies conventional transverse electromagnetic (EM) vectors" (Srinivasan 1999). Experiments have shown that people possess subtle energy generation capability, this energy can be directed, and a "mind-electron interaction can be effective over appreciable distances" (Tiller 1999). Commercial devices have been created which produce measurable and consistent results in biological systems at subtle energetic frequencies (Clarus 2004). Water has been found to have the capability of storing and amplifying weak electromagnetic and subtle energy field signals, indicating water is a critical link between energy and matter (IHM 1997). Using DNA samples, vibratory energy fields have been recorded in vacuums (Gariaev 1991).

In addition, as reported in Oschman (2003), researchers have found that different organs and processes produce characteristic oscillating electric fields; all body parts have ideal resonant frequencies that coordinate their activities; energy practitioners are able to generate biomagnetic pulses; brain waves propagate through the circulatory system; biological rhythms can be affected by extremely low frequency electric fields; somatic memories are stored in non-nervous system cells; crystalline molecular arrays in the body are sensitive to energy fields; the brain waves of energy healers during a therapy session have been found to synchronize with the earth's geoelectric pulsations (Schumann Resonance); each molecule has its own electromagnetic signature; some people are allergic (i.e. have an electromagnetic allergy) to 50 or 60 Hz electromagnetic fields; signal molecules can activate their receptor sites without physical contact; and every human disease and disorder has been linked by at least one researcher to electromagnetic pollution.

The Effectiveness of Qigong and Energy Medicine

Convinced of the human bio-electromagnetic foundation and the effectiveness and benefits of Energy Medicine, a growing number of enlightened Western medical practitioners are starting to incorporate it into their practices. Energy Medicine offers potential cost savings, non-invasive diagnosis and treatment, and often better recovery for patients (Schuldt 2002). A very thorough introduction to Energy Medicine for internists, written by an MD, can be found in Benor (2002).

Although Energy Medicine is gaining acceptance for intervention, it is Energy Medicine's ability to address prevention and chronic conditions that has the potential to transform the healthcare system. Health is more than just the absence of illness. According to the Department of Health and Human Services seventy percent of disease is preventable (DHHS2000, DHHS 2010), and most of the seventy percent is due to stress: Up to seventy-five percent of all time lost in the workplace is stress-related (Covey 1999). Fortunately, humans are provided with a way to combat disease and stress: "We produce within us a remarkable natural healing resource. It is the 'healer within.' The human body comes with its own standard equipment for self-healing. Powerful yet simple self-healing methods will create a critically needed revolution in health care and medicine" (Jahnke 1997). The foremost of these methods, and the most scientifically studied, is Qigong.

Energy therapies like Qigong place great emphasis on the breath and mind to balance and direct energy within the body, to activate self-healing, and create homeostasis. The Qigong and Energy Medicine

Qigong: Energy Medicine for the New Millennium

Database (Sancier 2004) contains 3500 references to the effectiveness of different forms of Energy Medicine, and especially Qigong (Sancier 1999). Tai Chi, a form of Qigong, has been proven very effective in reducing stress, preventing falls, reducing osteoporosis and incontinence, increasing balance, improving cardio-respiratory fitness, helping with chronic arthritis and lower back pain, and in producing other beneficial effects (Gallagher 2003). Modern adaptations of Qigong techniques have gained wide acceptance. They include meditation (Benson 1975), especially mindfulness-based meditation (stress reduction breathing and visualization techniques), therapeutic touch (Newshan 2003), and reiki (Miles 2003). What sets Qigong apart is its wide range of applicability and accessibility. Qigong addresses the majority of the five CAM practice domains (including mind-body interventions and energy therapies) defined by NCCAM. Qigong is easy to do and easy to learn. It has no harmful side effects, it's free, it doesn't require an expert, and everyone can learn to do it.

The Fundamental Nature of Energy Medicine Remains an Enigma

In spite of proven effectiveness for disease prevention and treating a wide range of diseases and conditions (Astin 2003), Energy Medicine remains an enigma. This is due to the fact that its fundamental nature and basic method of operation have yet to be fully explained, measured, and scientifically proven. What is missing is a section in Gray's Anatomy on Human Energy Anatomy. Many questions remain. For example, Magnetic Resonance Imaging is very sophisticated, yet it allows scientists and doctors to study only molecular structure and biochemical functions. It does not allow examination of energetic causes of illness, possibly before they manifest as biochemical illness in the physical body. Therapeutic touch, reiki, acupuncture, and meditation are all accepted therapies now, even though how they work is not understood. The effect of electromagnetism and electromagnetic pollution upon humans has not been quantified. Magnetic field therapy has been found effective, but its method of operation is unknown. The emerging science of psychoneuroimmunology reestablishes the body-mind connection and provides the physiological basis for emotions and their interrelationship with the nervous, endocrine, and immune systems. Thoughts and emotions are forms of energy that have characteristic vibratory patterns and frequencies (Pert 1997). Studies have shown that the mind can affect random number generators (Radin 1998) as well as the autonomic nervous system. In spite of this, the basis of emotions, the mind, and consciousness, as well as the interface between physical and energy bodies are unknown.

There is no explanation for spontaneous remissions, spontaneous healing, or the effectiveness of placebos. The power of remote intention (e.g. prayer) and distant healing has been proven in a number of research studies, yet the mechanism for how non-local communication processes can influence a variety of biological processes is unknown. Although well documented, spontaneous remission (IONS 2004), spontaneous healing, and "miracle cures" by shaman, priests, and faith healers have been largely ignored for lack of scientific evidence for how they work.

Furthermore, Western medical practitioners point out the lack of anatomical evidence of meridians in the body. Do changes in the energy body lead to illness at the cellular level in the physical body? Homeopathic medicine involves the use of micro-doses of drugs that interact with the human subtle energy system in an unknown way. What is the role of water in homeopathic remedies? Are energy patterns stored in water? What is the relationship between chakras, the nervous system, and the endocrine system? How do differentiated cells in the fetus know where to go? It has been postulated that they use a holographic energy template (Gerber 1996). Diagnostic tools are needed to measure the energy body. To be able to study energy therapies, their effects must be measured. Just as radio and x-ray astronomy allowed us to "see" and measure previously invisible phenomena, the same is now required to allow us to see the invisible subtle vibratory energies that constitute the human energetic being. Energy mechanisms cannot be validated without proper diagnostic equipment.

Surprisingly, even basic electricity and magnetism are still not explained, e.g. how charge, mass, and gravity are created. Virtually all body tissues generate electric fields when compressed or stretched, yet what part do these energy emissions play in the health maintenance and healing process? More research is required on scalar waves and vector potentials that are postulated to underlie energy therapy healing mechanisms (Imry 1989). What is the true healing effect of biomagnetic fields emitted by energy healers?

What is the role of structural coherence and crystalline array structures within cells in energy healing? How do environmental energies affect living systems?

Understanding the Foundation of Life: The Human Energy Project

To address the Energy Medicine knowledge and research gap, The White House Commission on Complementary and Alternative Medicine Policy recommends that the “National Science Foundation in collaboration with The National Center for Complementary and Alternative Medicine should examine frontier areas of science associated with CAM that are outside the current research paradigm and methodological approaches to study them” (WHCCAM 2002). In fact, besides many ongoing funded efforts in acupuncture, NCCAM is exploring meditation, tai chi, yoga, and it has a research initiative that will “support interdisciplinary collaborations and innovations to understanding the underlying processes of mind-body interactions and health and translating basic knowledge into interventions and clinical practices”.

Unfortunately, even when combined with numerous non-governmental energy healing research collaborations (e.g. Samuelli 2004), current and planned initiatives are not adequate. That is why a **Human Energy Project** on the order of putting a person on the moon, building the atomic bomb and the Human Genome Project needs to be undertaken to explore the fundamental energetic nature of existence. Humans are electromagnetic beings, and to adequately address society’s healthcare needs, our bio-electromagnetic nature needs to be fully understood. The benefits would be enormous, and would not be limited to the healthcare field. Such an investigation must be carried out at several levels, including fundamental physics and the application of the results to the delivery of healthcare via clinical science and basic medical research.

REFERENCES

- Angell M, Kassirer J. *Alternative Medicine -- The Risks of Untested and Unregulated Remedies*. New England Journal of Medicine 1998. 339:839-841.
- Astin, JA, et. al. *Mind-body medicine: state of the science, implications for practice*. J Am Board Fam Pract. 2003. Vol 16, No 2: 131-47.
- Becker, R.O; Seldon, G. *The Body Electric*. William Morrow, New York. 1985.
- Benor, DJ. *Energy Medicine for the Internist*. Med Clin North Amer 2002. 86(1), 105-125.
- Benson, H. *The Relaxation Response*. Avon Books. New York. 1975.
- BEO GDV Technique based on Kirlian Effect: Advanced scientific tool to study mind-body functions by reading aura*. 2001. http://www.sacredoilsofkrishna.com/gdv_tech.html.
- Chen, K. and Yeung, R. *A Review of Qigong Therapy for Cancer Treatment*. Journal of International Society of Life Information Science. Vol 20(2). 2002.
- Clarus. www.clarus.com/shared/science/science. 2004.
- Cohen, Ken. *The Way of Qigong*. Ballantine Books. New York. 1997.
- Covey, F. (October, 1999). *Rethinking stress*. <http://www.franklincovey.com/organizational/servprod/rts.html>
- DHHS 2000, Department of Health and Human Services. Healthy People 2000: National Health Promotion and Disease Prevention Objectives. Washington DC, Pub.#91-50213, 1991. Online document: odphp.osophs.dhhs.gov/pubs/HP2000/midcrs1.htm.
- DHHS 2010, Department of Health and Human Services. Healthy People 2010: Understanding and Improving Health. Washington,DC. Pub.#017-001-00550-9, 1/2000. Online document at www.healthypeople.gov/Document/tableofcontents.htm#under.

Qigong: Energy Medicine for the New Millennium

Eisenberg, D. *Encounters with Qi. Exploring Chinese Medicine*. W.W. Norton & Company, Inc. New York, NY. 1995.

Fontanarosa PB, Lundberg GD. *Alternative Medicine Meets Science*. Journal of the American Medical Association 280: 1618-1619, 1998.

Gallagher, Bill. *Tai Chi Chuan and Qigong: physical and mental practice for functional mobility*. Topics in Geriatric Rehabilitation, July-Sept 2003 v19 i3 p172(11).

Gariaev, P.P., et. al. *Holographic Associative Memory of Biological Systems*, Proceedings SPIE – The International Society for Optical Engineering. Optical memory and Neural Networks. 1991. Vol. 1621, p.208-91.

Gerber, Richard. *Vibrational Medicine*. Bear & Company. Santa Fe, NM. 1996.

Imry, Y., Webb, R.A. *Quantum Interference and the Aharonov-Bohm Effect*. Scientific American. 1989. Vol 4:56-62.

Institute of HeartMath. *New Technology Provides Scientific Evidence of Water's capacity to Store and Amplify Weak Electromagnetic and Subtle Energy Fields*. <http://twm.co.nz/water.html>. 1997.

Institute of Noetic Sciences (IONS). *Spontaneous Remission—An Annotated Bibliography*. http://noetic.org/research/sr/r_biblio.html.

Journal Alternative and Complementary Medicine, Vol. 5, Number 2, 1999, pp.177-188.

Jahnke, Roger. *The Healer Within*. Harper. San Francisco. 1997.

Jahnke, Roger. *The Healing Promise of Qi*. McGraw-Hill. New York, NY. 2002.

Koontz, Katy. Energy Medicine Goes Mainstream. Natural Health, Oct 2003. v33 i8 p100(7).

Li, J X; Y Hong; K M Chan. *Tai chi: physiological characteristics and beneficial effects on health*. British Journal of Sports Medicine, June 2001 v35 i3 p148.

Lin, Shin. *Recent Developments in Qigong and Acupuncture Research*. University of California, Irvine. Under revision. 2004.

MacRitchie, James. *Chi Kung. Cultivating Personal Energy*. Element. Shaftesbury, Dorset. 1993: 91-97.

Mason, Russ. *Cultivating Qi and Activating the Healer Within. An Interview with Roger Jahnke, O.M.D.* Alternative and Complementary Therapies. August 2003.

McCraty, Rollin, et. al. *The Electricity of Touch: Detection and measurement of cardiac energy exchange between people*. In: Karl H. Pribram, ed. *Brain and Values: Is a Biological Science of Values Possible*. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers, 1998: 359-379.

McCraty, Rollin. *The Energetic Heart: Bioelectromagnetic Communication Within and Between People*. Chapter published in: *Clinical Applications of Bioelectromagnetic Medicine*, edited by Paul Rosch and Marko Markov. New York: Marcel Dekker, in press. 2004.

Miles, P. *Reiki—Review of a biofield therapy history, theory, practice and research*. Alter Ther Health Med. 2003. Vol 9, No 2: 62-71.

National Center for Complementary and Alternative Medicine (NCCAM). *Expanding Horizons of Healthcare. Five Year Strategic Plan 2001 – 2005*. <http://nccam.nih.gov/about/plans/fiveyear/>. 2001.

National Center for Complementary and Alternative Medicine (NCCAM). <http://nccam.nih.gov/health/whatiscom>. 2004.

Newshan G, Schuller-Civitella D. *Large clinical study shows value of therapeutic touch program*. Holist Nurs Pract. 2003. Vol 17, No 4: 189-92.

Oschman, James L. and Nora H. ENERGY: The Newsletter of the American Polarity Therapy Association. Summer 1998. Vol. 13, No 3:1

Qigong: Energy Medicine for the New Millennium

- Oschman, James L. *Energy Medicine: The Scientific Basis*. Elsevier Science Limited. China. 2003.
- Pert, C. *The Molecules of Emotions. Why You Feel the Way You Feel*. Scribner. New York. 1997.
- Radin, Dean. *Moving Mind, Moving Matter*. Noetic Sciences Review No 46. Summer 1998: 20.
- Samueli Institute. <http://www.siib.org/>. 2004.
- Sancier, KM. *Medical Applications of Qigong*. Alternative Therapies. January 1996. Vol. 2. No 1: 40-6.
- Sancier, KM. *Therapeutic Benefits of Qigong Exercises in Combination with Drugs*. The Journal of Alternative and Complementary Medicine. 1999; Vol 5, Number 4: 383-389.
- Sancier, KM. *The Qigong Energy Medicine Database*™. Qigong Institute. Menlo Park, CA. 2004.
- Schuldt, H. *Bio-energetic medicine is sufficiently mature to be incorporated into standard medical practice*. Townsend Letter for Doctors and Patients, Aug-Sept 2002, p130(3).
- Solomon, GH, Moos, RH. *Emotions, Immunity, and Disease: A speculative theoretical integration*. Arch. Gen Psych 1964; 11:657-674.
- Srinivasan, T.M. *A Subtle Energy Technology for Noise Reduction*. Physical and Psychophysical Systems. Jan, 1999.
- Tiller, W.A. *Subtle Energies*. Science & Medicine. May/June 1999. Vol. 6, No.3.
- Trieschmann, Roberta B. *Spirituality and Energy Medicine*. The Journal of Rehabilitation, Jan-March, 2001, v67 i1 p26.
- Tsuei, Julia J. *Scientific Evidence In Support of Acupuncture and Meridian Theory: I. Introduction*. IEEE, Engineering in Medicine and Biology Magazine, Volume 15, Number 3, May/June 1996.
- White House Commission on Complementary and Alternative Medicine Policy. Final Report. U.S. Government Printing Office (also www.whccamp.hhs.gov/finalreport.html). March 2002.

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