

Quantum Functional Energy Medicine: Basic Concepts

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Introduction

Energy medicine entails several systems that work with energy fields of the body to help restore health. Most energy-related therapies challenge the current biomedical paradigm because they cannot be explained by conventional physical, chemical, biochemical, or physiological mechanisms. Quantum physics provides a more appropriate paradigm to explain these therapeutic approaches. Energy therapies involve low-level (subtle) energy field interactions, such as Healing Touch, homeopathy, acupuncture, magnet therapy, bioelectromagnetic therapy, electrodermal therapy, and phototherapy.

The term quantum functional energy medicine refers to the array of energetic possibilities that may influence the biofield. The biofield is the field of energy and information that surrounds and penetrates the human body. It is composed of electromagnetic energy and subtle energy (for example, Qi). One mechanism of action of the biofield phenomenon is that it acts directly on molecular structures, modifying the conformation of molecules in significant ways. Another potential mechanism of the biofield is that it may transfer bioinformation carried by energy signals interacting directly with different energy fields.¹ Living systems may be thought of as complex, nonlinear, dynamic, self-organizing energetic phenomena with negative entropy. At the highest level of organization, each life form may possess an innate biologic field, or biofield. This

energy field maintains the integrity of the whole organism; regulates its physiologic and biochemical responses; and is integral to development, healing, and regeneration.²⁻⁴

The concept of life force is ancient and common to traditional healing

“If you want to find the secrets of the Universe, think in terms of energy, frequency and vibration.”

Nicola Tesla

systems such as Chinese and Ayurvedic medicine. These therapeutic modalities consider that a form of life energy flows throughout the body and that illness arises as a result of blockages, excesses, or irregularities in its flow. This energy has many names (for example, Prana, Qi, Ki, Mana, love, and spirit) and is similar to the present-day concept of the biofield, which is partly based on the electromagnetic field theory of modern physics. Additionally, many energy-guided healing systems, such as Reiki and Qigong, postulate that an individual's life force is connected with a universal life energy (aether). In the quantum physics realm, both a particle view and a wave view become necessary to fully describe the true nature of light and matter at the smallest level.

This dual model of the “complementarity principle” allows for explanation of a wide variety of energy effects.

Human Energy “Good” Vibrations

The dynamic human energy system is a complex network of different types of energies. Gerber⁵ described this network as follows: (1) **biochemical energy** (e.g. glucose, adenosine triphosphate, fats, protein, carbohydrates); (2) **bioelectrical**

energy (e.g. nerve signal transmission, cardiac electrical rhythms, neuro-electrical brain activity, piezo-electrical bone currents); (3) **biophotonic energy** (e.g. mitogenic radiation, ultraviolet biophotons emitted from DNA); (4) **bioelectronic energy** (e.g. inherent cellular/DNA activity; DNA vibrating at GHz frequencies); and (5) **biomagnetic energy** (e.g. perineural system, by-products of cardiac, nerve, and brain activity; by-products of cellular activity; and subtle energies [Qi, Prana, and etheric energy]). These energies are part of a bio-informational system that flows within living systems. This aspect of energy as information links to the concept of molecules as information and supports the orthomolecular understanding of health homeostasis.⁶

Energy supply is a necessary condition for the complexity of life (order, organization, compartmentalization),



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and any disturbance in energy metabolism may increase the likelihood of pathological outcomes by disturbing the physiological balance that sustains the healthy state.⁶

Interestingly, cancer cells can obtain approximately the same amount of energy from fermentation as from respiration (Warburg effect⁷). By contrast, normal cells obtain greater levels of energy from oxidative phosphorylation than from fermentation.⁸ Warburg showed that impairment of oxidative metabolism in cancer is due to mitochondrial dysfunction. Nevertheless, cancer research has focused on genetic mechanisms, erroneously considering that impaired oxidative metabolism is a side effect of malignant transformation rather than its central cause.^{9,10} Continuous energy excites a state of coherent electrical polar vibrations that depend on water ordering in the cell (structured water).¹¹

Energy transformation in mitochondria produces a special state of electrical vibrations. The inner membrane potential helps form layers of ordered water molecules around mitochondria, which provides vibrations that enable their high excitation. Disturbances in oxidative metabolism and coherence are a central issue in cancer development as well as most degenerative diseases.¹²

The mitochondrial dysfunction reported by Warburg is caused by inhibition of pyruvate transfer into the mitochondrial matrix. The number of protons transferred from the matrix is reduced, which in turn decreases membrane potential and changes the ordering of water molecules around the mitochondria. Decreased membrane potential leads to low vibrational energy, resulting in decreased energy production.

The Resonance Symphony Orchestra

The quantum principle of entrainment states that powerful rhythmic vibrations from one source will recruit less powerful vibrations

from another source. This is known as resonance. Resonance is a phenomenon in which a vibrating system or external force drives another system to oscillate with greater amplitude at specific frequencies. Resonant systems can be used to generate vibrations of a specific frequency. This action may restore transmembrane potential and electron transport across cell and mitochondrial membranes, restoring cellular metabolism that correlates with health. This electromagnetic rejuvenation energy resonates at many different cellular frequencies and can tune each cell (by resonance) back to its original cellular frequency. Every organ and every cell in the body has its own resonant frequency. Together, they make up a composite frequency like the instruments of an orchestra. When one organ in the body is out of tune, it will affect the whole body. By restoring vibrational frequency, it may be possible to bring a diseased organ into harmony.

Life Energy: The Chi Mysticism

Everything in the universe is made up of energy vibrating at different frequencies. At the quantum level, the things that appear solid in our physical dimension as perceived by our senses are made up of vibrational energy fields. Every vibration produces a corresponding geometric form, and in this way crystals are built up. Crystals collectively form a body of an element according to its particular vibration. A unique vibration may produce a perfect state of resonance, its own pitch and tone.

A tone is a steady periodic sound characterized by duration, pitch, intensity (or loudness), and timbre (or quality). A simple tone has only one frequency, although its intensity may vary. A complex tone consists of two or more simple tones, called "overtones." Rhythm is a strong, regular, repeated pattern of movement or sound in time that can apply to a wide variety of cyclical natural phenomena. Beat is a pulse (regularly repeating event) in a basic unit of time. These relationships

create what we call "harmony." Harmony is the simultaneous occurrence of frequencies, pitches, or chords that lead to balance, homeostasis, and therefore health.

All life exists within a sea of vibration (Energy, aether), and rhythm is fundamental to all of life. Therapeutic effects have been observed in several meditative and healing practices that use resonance and rhythm in the form of chanting and prayers to produce a trance state, a change in dimension (a change in frequency and vibration).

Frequencies, Dimensions, and Consciousness

In the human brain, alpha waves are in the frequency range of 7.5–12.5 Hz. Alpha waves are connected to deep relaxation, dreaming, and light meditation. The alpha waves are a gateway to deeper states of consciousness. They promote mental coordination, calmness, alertness, inner awareness, mind–body integration, and learning.

The Schumann resonances (SR) are a set of spectrum peaks in the extremely low frequency portion of the Earth's electromagnetic field. They are global electromagnetic resonances. The energy of the Earth vibrates at a 528-Hz frequency. This frequency is thought by some to be so powerful that it can help repair DNA damage and restore harmony and equilibrium. Alpha waves closely resemble the fundamental SR frequency at a smaller scale.

An individual's bio-frequency may directly correlate with health status. The higher the vibration, the healthier the human body. Consistent exposure to negative stressors can lower energetic frequency. Energetic clearing methods such as prayer, meditation, and other energy practices can be used to significantly increase baseline frequency (up to 15 MHz). In other words, energetic resonance can be elevated to restore harmony within the body. Electromagnetic imbalance can negatively affect the specific vibrational frequencies of molecules, cells, tissues,

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and organs within the body. This energetic alteration often manifests as chemical imbalances that are associated with many diseases and illnesses.

The term consciousness is used in several ways. In general, "consciousness" refers to a state of total awareness or perception. Consciousness is one form of energy. We define consciousness as the highest level of energy (the Gamma state, Nirvana, Heaven, Moksha). Consciousness as a physical process is caused by the organization of energy in the brain. Consciousness increases the likelihood that an organism will direct its attention to whatever is most important for its survival. Consciousness is in an entangled state with the physical universe. In this quantum sense, information can exist outside the body.

Quantum Energy Therapies

There is an increasing appreciation of the electrical (energy) nature of biological functioning. One of the first scientists to explain this phenomenon was Georges Lakhovsky.¹³ Lakhovsky proposed that exposure to a blend of higher frequencies stimulates the cell's life force (chi), restoring vigor and balance. Regeneration is the replacement of irreparably damaged or lost cells by new ones. It may happen in a natural way by inherent restoration of physio-metabolic resonance although it can also be achieved by lasers, hyperbaric oxygen, nutrients, stem cells, exosomes, and other regenerative biological-informational therapies. It is possible that cancer can be treated with high frequency therapies. Therapeutic strategies that restore mitochondrial function may trigger apoptosis in treated cells. In tumor tissues, reversing mitochondrial dysfunction with metabolism-modulating cofactors, oxygen, lasers, and information molecules may hold promise as an anticancer strategy.¹²

Biophoton Therapy: Let There Be Light!

Biophoton therapy is the application of light to particular areas for healing purposes.

The light (photons) is absorbed by the skin's photoreceptors and as wavelengths by internal photoreceptors. By stimulating certain areas of the body with specific quantities of light (wavelengths), biophoton therapy can help reduce pain as well as aid in various healing processes throughout the body. The theory behind biophoton therapy is based on the work of Morell,¹⁴ and expanded by Popp and colleagues.¹⁵ Morell and Popp theorized that light can affect electromagnetic oscillation, or waves of the body and regulate enzyme activity. The body's communication system might be a complex network of the interaction of resonance and frequencies. All photons that are emitted by the body communicate with each other in a highly structured light field that surrounds the body (biofield) and may also be the actual carrier of long-term biological memory. In addition, this light field regulates the activity of metabolic enzymes. The information transferred on biophotons is bidirectional. This means that as DNA sends information out, information about all the biophotons from the body is broadcast back to cells and, in particular, to tubulins, which are light-conductive system in the connective tissue. Illness may occur when biophoton emissions are out of sync. There is evidence that light emissions from patients with cancer is arrhythmic and scrambled, suggesting that cells are no longer communicating properly. Therapies are emerging that involve stimulating the body with specific quantities of light to reduce pain and promote healing processes.

Photobiomodulation: True Quantum Energy Medicine

"Photobiomodulation therapy" is the technical term for laser therapy. It is a light therapy using lasers or light-emitting diodes to improve tissue repair and reduce pain and inflammation.

It involves the delivery of light energy to modulate cellular mechanisms. Light is the most fundamental energy particle that is the source of life on

Earth. Pigmented substances that accept photons in living tissue are called "chromophores." When a photon within a specific wavelength strikes a matching chromophore, the energy of the photon is transferred to the chromophore. This causes a biochemical change within the cell or tissue. If this change activates or improves cellular function, it is called "photobioactivation."

Mitochondrial Photobiomodulation: Mito Medicine

The mitochondria is an important site of light action in cells and cytochrome c oxidase (the terminal enzyme of the mitochondrial respiratory chain) is the main responsible molecule for this activity. Mixed-valence copper components of cytochrome c oxidase are believed to be the photoacceptors. The excitation of the photo-acceptor molecule sets in motion cellular metabolism through a cascade of cellular signaling reactions or retrograde mitochondrial signaling. ATP is not only an energy currency inside cells but also a critical signaling molecule that allows cells and tissues throughout the body to communicate with one another.¹⁶ ATP is believed to play a role as an important signaling molecule in many metabolic activities. Even small changes in ATP level can significantly alter cellular metabolism. Increasing the amount of ATP may improve cellular metabolism, especially in suppressed or malfunctioning cells. Degenerative conditions develop when the body's self-healing reserves lose their restorative power. It is thought that photons dissociate inhibitory nitric oxide from the enzyme cytochrome oxidase, leading to an increase in electron transport, mitochondrial membrane potential, and ATP production. Stem cells and progenitor cells appear to be particularly susceptible to photobiomodulation. A tumor-killing effect specific to ATP has been described.¹⁷ ATP signaling acts, in part, to trigger apoptosis of tumor cells and/or to promote cell differentiation.



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➤ At the cellular level, visible red and near-infrared light energy stimulates cells to generate more energy and undergo self-repair.

Quantum Functional Energy Medicine: The Physician-Healer

Ancient scholars came to understand that everything is composed of the same energetic substance that vibrates at different frequencies. Traditional Chinese medicine, for example, is based primarily on the understanding of the transformation of universal Qi throughout the human body. According to traditional theory, energy or Qi flows along energy channels or meridians that run throughout the body. When the flow of Qi is disrupted or blocked, it can be released by stimulating specific points along each channel.¹⁸ Qi itself does not flow down the nerve but instead surrounds the electrical flow with an intangible field that can be manipulated to some degree. This is reminiscent of an electron flow in a magnetic field and also congruent with Ayurvedic medicine's concept of the chakras (Energy vortices) and nadis (similar to meridians). Correcting the flow of energy is considered necessary to ensure restoration or maintenance of health. Acupuncture deals with the body's own energy.

Conclusion

Today quantum physics proposes that all matter is composed of energy that is constantly vibrating at different

frequencies. Underlying all of this motion is a ubiquitous force, an absolute energy medium, that has the ability to be everywhere at once. Quantum physics calls this force "vacuum energy" or "zero point energy." The wave-particle duality concept states that the movement of a particle through the absolute energy medium creates waves. A particle/photon in a quantum field, therefore, resembles a molecule in a chemical environment. The ability to electrostimulate living tissue at the subcellular level and thereby energize the life force has huge medical implications.

The right wavelength at the right time may have a specific therapeutic action. This is an orthomolecular principle with a quantum regenerative twist.

The human body is a magnificent quantum bio-physic phenomenon. It is an interplay of frequencies with molecules to provide the appropriate information to sustain the negative entropy state we call "homeostasis," or health.¹⁹ Certain frequencies may repel disease, and there may be a link between frequency (vibration) and health. Quantum physics describes the universe as fluctuating fields of energy and matter. When an organ of the body becomes unable to reproduce the necessary equilibrium to sustain health, the resulting deficiency in electronic energy produces imbalance, often throughout the system, which may develop into injury or disease. Energy medicine, vibrational medicine, regenerative medicine, orthomolecular medicine, restorative medicine, and functional medicine are complementary informational systems. Together, they can create a holistic new treatment paradigm to achieve the state of health.

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