

Pharmaceutical Drugs and the Human Energy System (Biofield)

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Abstract

What is Human Life-Force Energy and What Type of Proof Do We Have?: The concept of subtle human energy fields, or life-force energy, has been recognised and woven into traditional healing systems for millennia. Traditional Chinese Medicine (TCM) describes an intricate network of energy meridians through which this energy, known as "chi" circulates. And, in the traditional Indian system of Ayurveda, the human energy field takes the form of energy vortexes called "chakras", through which energy, known as "prana" travels. Accumulating evidence for the existence of these and other subtle, spatially-oriented and biologically-generated, human energy fields has been demonstrated through objective testing methods. As a result, in 1992, the term "biofield" emerged to describe this energy. Biofield Energy is defined as "a massless field, not necessarily electromagnetic, that surrounds and permeates living bodies and affects the body." [1]

Index terms— biofield; biofield science; biofield research; drugs; pharmaceutical drugs. Pharmaceutical Drugs and the Human Energy System (Biofield)

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1 I. What is Human Life-force Energy and

What Type of Proof do we have? he concept of subtle human energy fields, or lifeforce energy, has been recognised and woven into traditional healing systems for millennia. Traditional Chinese Medicine (TCM) describes an intricate network of energy meridians through which this energy, known as "chi" circulates. And, in the traditional Indian system of Ayurveda, the human energy field takes the form of energy vortexes called "chakras", through which energy, known as "prana" travels.

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53 environments across time and space. These energetic relationships increase in scale from subatomic and
54 organismic, to interpersonal and cosmic levels. [2] Potential evidence of the latter can be found in the correlation
55 between solar storms and increased rates and severity of myocardial infarctions. [1,4] Several distinct biofields
56 have been identified, some of which have been exploited for diagnostic and therapeutic uses, and more are being
57 posited. A few of these include:

58 2 a) Electromagnetic Fields

59 One of only 4 forces in nature -along with gravity, and strong and weak nuclear forces, electromagnetism
60 is the most important natural force at work in living systems. [1] Electromagnetic fields (EMFs) generate
61 electrocardiograms and electroencephalograms that have been a standard of medical diagnostics for decades.
62 More recently, biofield investigations show that subtle magnetic fields generated by the heart radiate outwards
63 from the body. This energy is transmissible to nearby individuals, producing a synchronisation of EEG waves
64 between the source and recipient. [1,2]

65 3 b) Biophotons

66 Also known as ultraweak photon emissions (UPE), cellular glow, or ultraweak bioluminescence, this biofield energy
67 can be detected both in cell cultures and on the body surface via photomultipliers. [4] Biophoton generation
68 patterns have been associated with fluctuations in cerebral blood flow and metabolism. [2] High levels of UPEs
69 have been measured from reactive oxygen species indicating that biophotons may prove to be a sensitive marker
70 for metabolic stress. [2]

71 4 c) Cellular Membrane Potentials and Charged Particles

72 Taken together, the combined effects of transmembrane potentials with the oscillatory frequencies of molecules,
73 and charged particles across an entire organism, create what has been described as a 'bioelectric scaffold' through
74 which stem cell development, tissue repair, organ regeneration, and homeostatic processes are facilitated and
75 coordinated. [1,2,5]

76 5 d) Sub-EMF Level Electron Flux Fields

77 The possibility of a sub-electromagnetic energy field has been raised via experimental evidence, which may support
78 the phantom limb phenomenon reported by amputees. The evidence stems from energy imaging in plants, which
79 confirms that when leaves are cut the energy of cut portion is retained as a precise and accurate phantom. [4]
80 Moreover, leaf phantoms conduct electrical current and interact with electromagnetic fields. [4]

81 6 e) Biofield Receptor Systems

82 Where there is an effector there is a receptor, and the search for biofield receptor systems to date, has produced
83 evidence for three such categories [2] :

- 84 1. Molecular-level ? DNA transcription is modulated by low-frequency EMFs. [2] 2. Charge flux sites
- 85 ? Voltage-gated calcium channels are affected by the presence of low-frequency EMFs. [2] 3. Endogenous
- 86 EMFs
- 87 ? Gap junctions constitute a bioelectric intracellular communication system that guides tissue development
- 88 and maintenance. [2] Additionally, a fourth proposed concept for a biofield receptor system integrates all of the
- 89 above, and revolves around the fascial network of collagen fibres and water molecules, that surrounds organs
- 90 and tissues. Collagen fibres are capable of conducting and modifying photon pulses and provide a form of
- 91 surveillance, alongside the immune and nervous systems. Water molecules contribute to this receptor system
- 92 via local synchronisation of electron spin, causing the collagen matrix in that area to act as a frequency-specific
- 93 electromagnetic receptor system. [1,2,4,6]

94 7 f) Clinical Evidence of Biofields

95 In vitro and in vivo published studies dating back to the 1960s demonstrated the ability of biofield energy to
96 facilitate wound healing and inhibit cancer cell viability. [7,8] More recently, an abundance of clinical data
97 provides illuminating (and increasingly irrefutable) evidence for the existence of human biofield energy, such as
98 the following reports:

99 ? An intriguing 2015 study reported that sceptical volunteers given a "crash course" in energy healing cured
100 laboratory mice injected with lethal doses of cancer cells. [7] ? In a 2016 experiment, Korean scientists produced
101 demonstrable evidence for the existence of acupuncture points. In that study, dye injected into acupuncture
102 points formed visible lines, while the same effect was not observed at non-acupuncture points. [9] ? A newly
103 developed biofield device, which delivers direct current through a saline water immersion foot bath, produced
104 improvements in red blood cell morphology and CO₂ transport in healthy participants in a 2018 study. [10] ?
105 To date, over 15 clinical trials have been conducted on various biofield therapies for cancer patients, with reports
106 of reduced pain and fatigue and improvements in biomarkers. [11] g

107 **8) Intrinsic and Extrinsic Factors that Affect the Human** 108 **Energy System**

109 The energy values of substances both intrinsic and extrinsic to the human body have varying effects on biofield
110 energy. These include frequencies we generate ourselves, such as our thoughts and emotions, energy from
111 substances we intentionally bring into our own personal biofields, and natural and manmade energy fields in
112 our environment that affect us energetically in a multitude of ways.

113 Basic nutritional elements have been shown to shift the present energy within the body as they are absorbed
114 and assimilated. Electrical conductance on the skin surface at acupuncture points has been shown to shift in
115 response to glucose ingestion, revealing a fluctuating pattern of energy shifting through the meridians, as glucose
116 is ingested and assimilated. [12] Thoughts, i.e. the electrical activity of cognitive function, affect the central
117 and autonomic nervous systems, contributing to the unique electromagnetic field of an individual, or aura. The
118 aura radiates outwards, carrying with it information about physiological, mental, and emotional status of the
119 individual. [13]

120 **9 h) Vibratory Signatures and their Effects on the Biofield**

121 All living and non-living things have a unique vibratory rate that can be measured and quantified in Hertz (Hz).
122 Living beings have higher rates of vibration while non living objects have little to no vibratory rate.

123 The foods we consume contribute their own inherent rates of vibration to our own, raising or lowering the
124 overall rate accordingly. In general, highly processed, pesticide-laden foods have relatively lower vibratory rates,
125 whilst fresh, organic plant foods, and fermented and raw sprouted foods offer the highest rates. [14,15] Similarly,
126 light energy in the visible spectrum is thought to exert a range of effects based on the vibratory rate of each
127 colour. In Ayurveda, colours within the lower frequency ranges correlate to lower chakras, and influence functions
128 such as survival and sexuality, while higher frequency colours correlate to higher functions: communication, love,
129 intuition, and spirituality. [16]

130 **10 i) Energetic Manipulation of Biofields**

131 Numerous therapeutic systems and medical practices have been found to have a beneficial influence on human
132 biofields, while other forms of energy have notably detrimental or even mixed effects.

133 **11 Examples include:**

134 ? Aromatherapy Plant essential oils have among the highest recorded vibrational rates. Oils at the lower end
135 of the range are used to heal physical illnesses, those in the middle of the range support emotional health,
136 and those in the upper-frequency ranges are thought to promote spiritual growth. [17] ? Grounding This is a
137 practise that uses the Earth's strong negative charge to supply electrons to the body. Grounding is practised
138 by placing one's bare feet on the ground, and is thought to neutralise free radicals, in essence, acting as an
139 antioxidant. [18] Published research has reported improvements in sleep, pain, stress response, immune function,
140 and blood sugar regulation. [6] ? Pulsed EMF Embryonic development, tissue regeneration, and other processes
141 requiring biological organisation are thought to occur through energy field phenomena. Pulsed EMF therapy
142 has been used to regenerate limbs in salamanders, and is being investigated as a potential treatment for healing
143 bone fractures. [2] ? Wireless Technology Counter to prevailing public health doctrine, detrimental non-thermal
144 health effects of nonionising EMFs from cell phones and other wireless technology have been well-documented
145 in the literature. [1,2] Studies show neurodevelopmental, neurodegenerative, cognitive, behavioural, endocrine,
146 immune, and genotoxic effects. [19] The pervasive use of wireless devices, and the imminent deployment of 5G,
147 raise concerns about the effects of our increasingly electromagnetic environment on the health of humans and
148 the environment as a whole. [20] ? Prescription Medicines Pharmaceutical drugs interact in various ways with
149 biofields, some beneficial and others harmful.

150 o On the potentially beneficial side, certain drugs have been found to act synergistically with bio-magnetic
151 fields, increasing response to drugs by severalfold. [20] Drug delivery systems are being developed around this
152 effect using magneto-electric nanoparticles designed to manipulate membrane electric fields to improve absorption-
153 a process known as electroporation. [21] Currently, however; though highly effective, its use is limited by the
154 inability of cells to reverse the process and reseal the cell membrane. [22] o Pharmaceuticals may also exert a
155 range of adverse mental and emotional effects through their interactions with the biofield. Empirical reports exist

156 in which patients describe shifts of consciousness from taking certain prescription medications; in some instances,
157 a fragmented, disconnected sense of self and in others an ecstatic sense of unity and wholeness, either scenario
158 being an unsettling departure from reality. Attempts to recreate such sensations have pointed toward over-
159 inhibition or over-activation of the anterior insula which serves an important role in maintaining an individual's
160 sense of self. [23]

161 **12 j) My Professional Experience and a Call to Action**

162 In my professional experience as a pharmacist and holistic energy therapist, I have observed, at times, the
163 biofield effects of pharmaceutical drugs in my patients. This has occurred most notably in patients on hormone
164 replacement, or other endocrine therapies, in the form of a certain sluggishness in chakra energy. In these
165 instances, as well as where the source stems from other types of physical, mental, or emotional trauma, working
166 with the client's energy field often helps improve the flow of stagnant energy, heal auric tears and remove any
167 blockages that may have developed as a result of health issues, stress and anxiety, depression and other life
168 experiences.

169 Restoring the balance and the flow of the energy system is a subtle healing process that is not always obvious,
170 but often recognised by others, and expressed in the way that they respond towards you. I have also used energy
171 therapy to help strengthen a client's vulnerability to adverse situations, or relations with others, in the workplace
172 and at home. In this way, the energy system affects, and is affected by, our behaviour. Biofield therapeutics can
173 act as an early intervention for behavioural health, a self-help tool, and a social investment.

174 Biofield science is growing rapidly, particularly in the fields of psychiatric and neurodegenerative disorders.
175 However, funding usually favours industry applications, and is lacking in basic science and clinical applications
176 research. [2] Amongst the most urgent areas requiring further study, researchers have identified the lack of
177 information on the effects of dose, delivery mode, and type of therapy on clinical outcomes. [11] With this
178 brief synopsis on biofield science, I invite my colleagues within the medical, health, and energyhealing spheres to
179 further investigate these important topics. I am seeking to collaborate directly with interested professionals, and
180 to conduct and publish studies that will contribute to the growing body of knowledge about the human energy
181 field. ¹

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.1 Conflict of Interest

The author(s) declare that they have no conflict of interest.

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