# **ENERGY MEDICINE**

## T. M. SRINIVASAN

Biomedical Engineering Division, Indian Institute of Technology, Madras – 600 036, India

#### Received: 5 July, 1987

#### Accepted: 21 August, 1987

**ABSTRACT:** Energy medicine is the most comprehensive concept introduced in medical diagnostics and therapy to account for a whole range of phenomena and methods available to help an individual proceed from sickness to health. The modern medical theories do not account for, much less accept many traditional therapies due to deep suspicion that the older methods are not scientific. However, the Holistic Health groups around the world have now created an environment for therapies which work at subtle energy inputs, at the cellular and molecular levels. Moreover, there are other – as yet unexplainable – energy fields which are being utilized to rebalance the Body-Mind-Spirit triad in an individual. A brief introduction is provided to these subtle energy inputs and methods of manipulation of the vital forces in the sick. Many ancient health technologies such as Yoga, Ayurveda, Acupuncture etc have proposed and work under different energy movement in the body. These are all Energy Medical Systems whose efficacy is beyond any doubt in therapeutics. Thus, Energy Medicine forms a broad based system and its introduction is important to widen the scope and content of medical therapy so that optimal treatment of the sick is possible.

#### INTRODUCTION

Energy Medicine is the most recent and innovative method used in Holistic Medicine to provide a healthy homeostasis in an individual. A disease state is indicated by improper energy balances in the body and methods used to adjust these imbalances constitute Energy Medicine. Observe, so far we have not defined the *type of energy* in the above introduction. Hence, it is a general principle of energy balance and, methods of reaching a homeostasis in the body differ in different systems of medicine. In allopathic medicine, this balance is achieved through uptake of various biochemical's and transmitter substances. This balance can also be achieved through working at various levels of the Body-Mind-Spirit complex implied in our own ancient medical

technologies. Since many diseases are not confined specifically to the body especially, the so-called psychosomatic disorders that constitute up to 75 percent of all diseases-itis but necessary to work at all these levels to provide a comprehensive therapy to a patient. We shall briefly present the newer therapeutics approaches to through electromagnetic fields. Yoga, Ayurvdea, Acupuncture, including exercises kinesiology and, provide a model for therapy which accommodates all types of treatments, ancient and modern.

Any living organism is in constant interaction with its environment. In fact, we think matter is inert or dead, if there is no interaction with the environment. Thus, basically, a link exists between the organism and the environment through energy exchanges. The energy from the environment is perceived by the organism, the biological process convert this energy affecting the molecular and atomic structure, providing sometimes materials for growth; at other times, the energy might adversely affect the organism. Thus, most energies impinging on the body have an effect on it, some positive, while others, degenerative.

The earth is engulfed in all types of physical energies that have been measured and used for various purposes. There are three basic types of energies that a scientist talks about, viz. electromagnetic, acoustic and gravitational, along with some strong and weak interactions. The electromagnetic (E.M.) fields are of widely varying frequencies and energies. At the high energy level, it starts with gamma rays, and proceeding downwards, we have X-rays, ultraviolet radiation, visible light, infra-red, radio frequencies microwave. and ultimately, at the lowest frequencies, audio and sub-audio frequencies. The high energy levels of gamma and X-rays are made use of to kill tissues inside the body and to picture body segments. We usually think that at the lower end of the E.M. spectrum, no deleterious effect takes place in the body. Unfortunately, this is not quite true. Very low frequency E.M. field can have profound influence on the body depending on the mode of coupling. It has been shown beyond doubt, by many research groups round the world that some type of low frequencies are beneficial (such as in bone healing), whereas certain other types are deleterious and produce psychosomatic imbalances in individuals. The biological effects due to electromagnetic fields depends on the orientation of the organism, field strength, fluctuations in the fields (which might be of extraterrestrial origin),

localization at the body etc. Our own researches have shown that fields which are of extremely low strength can have a *therapeutic value if the person is lying down with head aligned along East* while, the same field will have a *negative effect* (producing cardiac and brain related problems) *if the person is lying down with his head towards North direction* (1).

The effect of acoustic energy on humans is far more difficult to assess. There are reasons to believe that sound is more primordial than any other type of radiation. Even the 'Big Bang Theory' of cosmological evolution – which is the most popular theory presently- has by its very name conceded the fact that sound is the origin of all energies and it is sound that gets converted into other forms (2). Mantras, make use of the strong coupling that exists between the sound vibrations and the brain cells and hence, are potent. The vibrations of the skull, when matras are pronounced, set the brain cells into receiving mode of oscillations and the cells not only receive nutrients and better blood supply, thus rejuvenating them, they are also receptive for unusual vibrations thus achieving perceptions of extrasensory nature. That is way many of our mantras, when pronounced properly over long periods of time, give to the practitioner, occult powers that are basically physiologically correlated through higher sensitivities of the nervous system.

#### MODELS IN ENERGY MEDICINE

Energy Medical concepts can be built to provide a comprehensive, yet scientific model of the biological system that has come for scrutiny and treatment. Depending on the type of world view one has and a basic philosophy that one pursues, the model detail might vary. For the model to encompass all the ideas in all forms is difficult, if not possible. The modern allopathic model tries to reduce all events in space and time into biochemical reactions at various sites of the body. While such a model is useful under certain controlled. hypothetical conditions, its validity is limited and even in the occurrence of phychosomatic disorders-imbalances, that psychologically are precipitated and somatically expressed-the model of allopathy fails. This model is under extension due to the work of Biofeedback and Visualization wherein a control of autonomic nervous system is achieved through hightened awareness and relaxation techniques (3).

In Biofeedback, the person is provided about information his/her ongoing physiological activity through appropriated instrumentation. For example, for hear rate control, the heart rate of the persons is measured and given as a meter reading to the person. The person is thus able to observed his own heart rate and meanwhile, is taken through a relaxation procedures. As he relaxes, the heart rate goes down which is seen on the meter and forms the feedback chain of information that his relaxation procedure is indeed proceeding in the right direction. Once this procedure to lower heart rate (for a person who have initially an elevated heart rate due to stress) is learned by the person, he does not need the instrument any more; at will, he can practice the relaxation technique. Thus, the instrument is only a means to get control over one's own autonomic nervous system. While the modern man is learning such a control through instrumental procedures, Yogis could do it through a direct intervention of all energies flowing through the body. Just because the end resultnamely, autonomic control-is the same for the both the Biofeed-back practitioner and Yogi, it does not follow that both procedures

are same or even similar (4). The yogic world view is somewhat different from the paradigm of Biofeedback, though they are closer to each other than allopathic medicine is to either of them. This is so because both Biofeedback and Yoga emphasise the role of mind in precipitating and maintaining many disorders.

Yoga and Acupuncture have much in common since both talk in the language of the universal energy which traverses through the human body. The beautiful concept of 'as in macrocosm, so in microcosm' emphasizes the interlink and parallel between the Universe outside and Universe inside Man. The primordial force is Prana and its manifestation, in material form, is Akasa. The former is the radiant energy; the latter is matter as we see all over the universe. There is a constant interchange between these two, now Prana manifesting as Akasa and then, going back into its prestine form. Ultimately, everything is Prana and Prana alone. (Prana is the Brahman of the Vedanta). A vogi who controls Prana controls the entire universe. Swami Vivekananda has said this about Prana and Akasha (5):

"By what power this Akasha manufactured into this universe? By the power of Prana... It is the Prana that is manifesting as motion; it is the Prana that is manifesting as gravitation, as magnetism... The sum total of all forces in the universe, mental or physical, when resolved back to their original state, is called Prana.... The knowledge and control of this Prana is really what is meant Pranayama'.

Here we have not only a cosmology-which, by the way corresponds well with the modern theories of cosmology of expanding and contracting universe – but, most importantly, a practical method of reaching highest spirituality through perfect body and mind control. Many orthodox and heterodox systems of philosophies have accepted this cosmology and each has deviced its own method of manipulation of the subtle energies in the body. Acupuncture also has similar primordial principles in Yin-Yang duality and energy flows.

In both Yoga and Acupuncture, the depletion of Pranic flow through meridians or nadis causes diseases. Yoga asanas stimulate acupoints and act on all organ meridians. Alternate pressure and relaxation of the acupoints allow the unblocked Prana to flow freely through the body. The acupoints can easily be identified through instruments, since they have lower electrical resistance as well as lower radioactive resistance. Hence, as we search for acupoints with special instruments, a beep sound is produced when the search electrodes are placed on the acupoints, while even a few millimeters displacement of the electrodes will not produce the sound. The acupoints and meridians are not directly associated with the nervous system of the modern medicine. In other words, allopathy is not aware of the changes in resistance over certain points on the skin, nor can it explain this in any manner.

The stimulation of the acupoints through asanas or through acupuncture act at many levels to alleviate pain and to rebalance the ailing body. It acts initially, at the spinal reflex level to cut off pain sensations reaching the brain. It also acts both at sub cortical an cortical levels, by releasing endomorphines which are morphine like biochemical's that are able to eliminate pain (6). Further, apart from decreasing pain, they also open the Pranic channels for therapy. These observations, fortified by the experience of therapists over many thousand years have not only proved the efficacy of these techniques, but more importantly, they have underscored the fact that the energy principles enunciated are correct and has a great relevance in treating various chronic illnesses.

There are several new techniques developed lately to stabilize the energy flow in the body and these techniques rely on the fact that the muscle activity is linked directly to energy flow in the related meridians. A weak muscle would indicate an energy imbalance in the organ related to that muscle through connected the acupuncture meridians. A technique known as Behavioural Kinesiology (B.K.) has been developed not only to test the muscles – and hence, the meridians - but also to use muscles as pumps to revitalize the weak meridian (7). Further, it has been suggested by doctors working with B.K. that the thymus gland regulates the energy flow in the meridian systems. This is an interesting proposition linking modern physiology to the ancient system of body energies.

The word thymus is derived, interestingly, from the Greek word which denotes life force or breath, in other words, Prana. The thymus activity is affected by food, physical and social environment, emotions, posture Many exercises have been and stress. devised to strengthen the thymus activity, and hence the energy flows through the One of the simplest is the body. heterolateral exercises and movements. wherein the limbs are moved forward crosswise. In other words, in crawl or normal, brisk walking, right leg and left arm is brought forward at the same time, making a heterolateral exercise. Such exercises have been found to be very useful for stabilizing left right brain activity and for improved thymus activity. This leads to a better energy flow in the body.

## Holistic Health

Thus, it is clear that there are many directions to medical therapies that are available today starting from the large body of ancient knowledge to the recent, allopathic reductionism, going further on to the minute interactions of the body with acoustic and electromagnetic fields. The human is not simply an isolated network of electrochemical environment, but a finely tuned, delicately balanced organism which is in constant interaction with the environment, with unconscious. conscious and superconscious conferring states the limitations of the material substratum to the limitless human potentials. While allopathy grudgingly accepting is some generalizations of modern psychology regarding mind related problems, almost all philosophical systems of the Orient have worked with the postulate of modifications of the mind as a primary cause of disease processes. The truth of this postulate has come to the force in the methods of treatment of psychotic and neurotic millions that abound the countries of the world today.

Health is a dynamic on-going process, it is not simply a lack of diseases. It is a balance between the anabolic and catabolic processes that go on in the body; it is a homeostasis (constancy of the internal environment) in Yin-Yang in the body. Health is to be actively sought by the patient; it is to be actively sought by the patient; it is not a state thrust n the patient by Hence, the doctor's role is the doctor. simply to make the patient aware of the imbalance: the doctor is like the instrument in the Biofeedback experiments cited above. He should provide information regarding the deficiency in life style, mental attitude, food and nutrition, lack of proper exercises etc in

the individual. He should open up the awareness in the patient so that the patient looks within himself and is able to correct the imbalance. Once this awareness dawns on the patient and the procedures learnt for rebalancing the energies, the doctor should withdraw so that the patient cures himself.

The goal of all human endeavors is towards higher spiritual evolution. All the Indian Darsanas talk about this ultimate goal. Thus, 'a healthy body in the healthy mind' (the reversed dependence being important!) is not simply an end in itself; but is a prerequisite for the long journey in the inevitable spiritual path and final merging of the finite with the Infinite, the Jiva with Paramatma. Often, due to a lack of ultimate goal, a person loses interest in his ultimate goal; a person loses interest in his environment and - as is happening in many countries – puts an end to his own life. The spiritual dimensions gives a large measure of purpose to life itself and this dimension is lacking in allopathy. It does not even accept this as a possibility. Fortunately for us, the newer sciences of Biofeedback and selfcontrol has brought within reach of comprehension, the altered states of consciousness as well as a spiritual dimension as an alternative. Here again, all these ancient systems have clearly specified the final goal of all conceivable human activities is spiritual evolution. The higher states of consciousness that Sri Aurobindo talks so vividly, in his 'Integral Yoga' is about that all-encompassing spiritually which is the goal of human existence. In the traumatic times of today, it is necessary to provide a Body-Mind-Spirit continuum constituting the gross tamo-raja-satva gunas of Indian cosmology to all people. As Maharshi Patnajali says in his last aphorism of Yoga Sutras:

Purusarthasunyanam gunanam Pratiprasavah Kaivalyam svarupapratistava Citisakteriti / 4:33/

'The ultimate Reality, Kaivalya, is a state in which the tamo-raja-satva gunas are totally dissolved (in complete balance). It is the establishment of Purusa in its own prestine purity'. Thus, Holistic Health is not just bodily health, it is equanimity of mind. Yet it is not simply that either; it is the highest spiritual ascent of man and his merger with the cosmic consciousness. Let us hope that our physical, mental and spiritual doctors combine hands to lead us from darkness and death into Light and Immortality.

#### **ANNOTATIONS & REFERENCES**

- Sarada Subrahmanyam, P. V. Sanker Narayan, T.M. Srinivasan 'Effect of Pulsating magnetic fields on the Physiology of test animals and man' Current Science, Vol 53, 959 – 965. (1984).
- 2. Note : The 'Big Bang' Theory does not say this; however, one can conjecture this from the model of the universe at the time of its birth provided by this theory.
- 3. Elmer and Alyce Green 'Beyond Biofeedback' Delacorte Press N.Y. (1977).
- 4. T. M. Srinivasan 'Yoga and Biofeedback a comparison' NIMHANS Jr. Vol. 1. No. 1. 65 68, (1980).
- 5. Swami Vivekananda 'Raja Yoga' Advaitha Asrama, Calcutta, 37 38. (1962).
- 6. B. Pomarenz., 'Neural Mechanisms of Acupuncture Analgesia' in Persistnat Pain, (Ed) s. Lipton and J. Miles, Academic, London 241 255 (1982).
- 7. J. Diamond 'Your body doesn't lie', Warner Books, NY, (1979).