

BIOENERGY

update

By Bernard Brom

The Bioenergy Association of South Africa was initiated in 1992 in order to create an interest in the subject of Bioenergy. We will attempt in these reports, which will appear bimonthly in the Journal, to keep medical doctors updated on the latest development in the field of medical bioenergy.

The Anatomical Biochemical approach, which has dominated medical thinking over the last 150 years, is only one way of examining man.

With the advances of Physics today it is clear that energy and matter are not separate. Biological systems may be 65% water but they are also 99,9% space. Quantum mechanics introduced the ideas of the Uncertainty Principle, Chaos Theory, Synchronicity, Non Local Causality etc which have given us greater insight into systems and the way things function which is very different from Newtonian Physics. Newton's theories are true, but only under certain conditions.

Quantum physics and Quantum reality have not disproved the Newtonian theories but have certainly changed the way we view the world and the reality in which we live.

The problems of human beings, of understanding the relationship of body and mind, the controlling mechanism underlying all body functions, are not fully explainable by biochemistry only.

The study of bioenergy – electrical, magnetic and

electromagnetic should open another window in the nature of man and help towards a fuller understanding of the way living systems function.

Anatomy, biochemistry and pharmacology are touching only into the more physical nature of man and are not sensitive enough to detect more subtle changes which may be appearing first in the energetic circulation. These changes are subtle even though with modern equipment they are not difficult to measure. The problem lies more in the interpretation of these measurements.

Study of acupuncture points have revealed that the skin resistance at these points is lower than elsewhere. They appear to be electrical windows into the system. According to acupuncture theory there are meridians or pathways of energy which flow along the surface of the body. Acupuncture points lie along these pathways. What is less well known and what makes this very ancient knowledge so intriguing, is that these external pathways also have internal connections and pathways. These internal pathways have been described in some detail and are not simple straight lines. The names of the external pathways such as Heart Meridian or Lung Meridian indicate their internal connections to these organs. A great deal of modern research, especially in Germany, China and Eastern Europe, has been directed to try and establish diagnostic possibilities of internal organ malfunction through measuring changes of a bioenergetic nature on the surface meridians which connect to the organs. This research is very promising and the diagnostic equipment is already circulating in the market place.

It is important to understand that such equipment cannot be compared to the more familiar diagnostic equipment which is searching for pathology. Bioenergetic equipment is measuring bioenergetic processes which

reflect much more subtle and dynamic changes in the way the system is functioning. These measurements are of function and not pathology and therefore do not substitute for the usual X-rays and other biochemical parameters. It provides insights into the regulatory systems and suggests hyperactive or hypo functioning of the system as a whole, or of a particular organ. This kind of equipment may be compared to the electronic equipment used in the motor industry, which checks the function of the motor car to assess whether it is properly tuned or not.

Dr Björn E W Nordenström, Professor of Diagnostic Radiology at the Karolinska Institute, Stockholm has recently published a book called "Biological Closed Electrical Circuits" in which he reveals his research on electricity in living systems and how they can be manipulated and affect biological functions. The book was unique in that it was forwarded by 4 eminent scientists: Professor Jacques C Hauton, Professor of Biochemistry, University d'Aix-Marseille, France; Bernard Watson, Professor of Medical Electronic, St Bartholomew's Hospital, London; Torsten Teorell, Emeritus Professor of Physiology, University of Uppsala, Sweden and Arne Ljungqvist, Professor of Pathology, Karolinska Institute, Stockholm, Sweden. Little of this work has been published in better known journals for the simple reason that most of these journals are too clinical, or accept articles based on the more solid ground of anatomy, pathology and biochemistry. I would like to quote from some of the above authors regarding Nordenström's work.

"With profound conviction, I dare assert that no vital process can be fully understood without considering this new electrophysiologic theory. Reproducing these electrical conditions *in vitro* as well as *in vivo* produced histological evidence of cellular transport of tissue water, indicating that electrical forces must be of fundamental importance to maintain eg homeostasis."

Nordenström went much further than merely measuring these electrical circuits but showed clinical application of techniques that he developed in the treatment of cancer.

The real blocks to progress in this area of bioenergy is the assumption by scientists that these electromagnetic fields are merely emanations of physical matter. The ECG and EEG for example are regarded as electrical changes of physiological events. Energy and mass are, however, not separate and nor is it a question of which came first. Rather it is a question of how they work together. To assume, for example, that the electrical emanations of the

heart, picked up on the surface of the skin, have no effect on the tissue it is passing through, is pure speculation. The same applies to brain waves.

Recent research for example has shown that energy can influence matter quite profoundly, even at very low power. The use of low energy lasers (2mw for example) and electrical stimulation in the microwatt range (MENS, not TENS which is in the mw range) has indicated what can be done when one starts to move power down to the level at which the cell can respond.

The bioenergy viewpoint is not meant to replace the biochemical viewpoint but only to enlarge the field of investigation and to stimulate new theoretical concepts in the study of man in health and disease. I believe that physicists and engineers must play a more and more responsible role in investigating man.

In our forthcoming reviews we will be focusing on various aspects of Bioenergy. The relationship of Mind and Matter for example begins to make sense when one understands the relationship between energy and matter and between the particle and the wave. Thinking about how light can have both particle and wave properties may help us to understand how man can have both a mind and body functioning together.

Acupuncture has been shown to stimulate endorphin release. New research is suggesting that using various frequencies in electrical stimulation at acupuncture points and other points on the scalp may make possible a more specific release of serotonins or prostaglandins, depending on the frequency used.

The controversy at present, over whether electrical cables, television and computer terminals are responsible for disease, will also be presented in these reviews.

Any questions should be sent to the Bioenergy Association address and every attempt will be made to answer these questions in forthcoming articles. We have a panel of Engineers and Physicists who will be able to review and answer some of the questions.

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