Brain-Computer Interface Study

The Software Of Your Body

Advanced Health Research Institute A 501c3 non-profit organization Dr Richard T. Hansen, D.M.D., Director

Computers are everywhere in today's society and we have become so dependent on them that it is inconceivable to imagine life without properly functioning computers. If we think about the operation of a computer, we all know that the physical structure – the box, wires, power supply, hard drive, CPU, etc – are only part of what makes a computer function. The software and the information stored within the computer memory, while it cannot be seen or physically touched, is most critical for efficient normal operation. If the information/software becomes corrupted or the programming is off, we have software "glitches" and the whole structure may not function correctly.

In all of medicine and healthcare almost 100% of our diagnosis and treatment of disease and dysfunction is focused on the hardware of the body; the part we can physically touch, see, and measure. Yet the software of the body, the programming and patterns formed throughout life that control the physical body remain a mystery and are not adequately addressed in conventional medicine.

However recent advances in brain electrical rhythm and pattern analysis has led to profound understanding of normal brain learning, adaptation, and pattern formation in health and disease. At conception, genetic material and information from a female egg and a male sperm combine to form a genetic blueprint on which to build the trillions of cells that will form the new living being. Yet throughout life the genetic blueprint is adapted and modified with each life experience. This is by design to assist survival of the individual and the species. The more major the influence, the more major the adaptation will be.

During the last trimester of pregnancy, the birth experience, and the first few years of life there are more neural synaptic connections made in the brain than during any other period in life. Patterns may be set at an early age that alter the software programming of the brain through unwanted neural connections of a trauma response to the sympathetic nervous system. This may adversely influence the performance and function of the entire body. In addition major emotional or physical events throughout life may also create dysfunctional programming changes and unhealthy patterns. Even when the physical body has repaired itself the patterns of dysfunction and programming "glitches" may remain.

Fortunately breakthrough science and technology has uncovered mechanisms to measure the electrical activity patterns of the brain in different operational states, analyze this data against normal values, and retrain these unwanted patterns through brain function training. This has created a new field in science and medicine called Brain Computer Interface Analysis and Training, which is changing the approach to complete healing of a patient. The benefits can be profound! Patients can learn how to achieve their maximum potential, increase learning, and develop optimal performance and function of their biologic systems improving the body's ability to heal. In addition, many chronic, unresolved, and degenerative disease states may be helped by changing the "Software of Your Body" – The Brain.

The Study

The goals of our study are to research and demonstrate that the alteration of the brain rhythms and patterns throughout life have a profound effect on our health, our learning ability, and our social interactions. We also intend to study the effects of retraining these unwanted patterns and help increase the balanced performance of the brain and improve its effect on the physical body. The benefits to our society are improved health, enhanced quality of life, and reduction in health care costs. The study will be consist of four distinct groups of patients. The first group will be children between the ages of 6-12 years of age; the second group will be adolescents between 12-18 years of age; the third group will be adults between 18-50; and the fourth group will be more mature adults between 50-90 years.

The study will be conducted at four sites in Los Angeles, Ca., Boston, Mass., Fullerton, Ca., and in Minneapolis, Mn. Each site will study 25 patients from each of the four groups for a total of 400 patients. The approximate length of time to complete the study will be about three years. During the first year each patient will receive a complete evaluation including a quantitative electroencephalograph and a brain map analysis followed by multiple training sessions with the computer interface. In addition health, education, and social interaction will be evaluated. The second year a progress brain analysis will be performed as well as health, learning, and social progress with continued training and reinforcement. The third year each patient will receive a final brain map and electroencephalogram as well as assessment of health, academic, and social changes and the results of the study will be compiled and published.

Clinical Investigators

Dr. Richard T. Hansen, D.M.D. – Study Director – Dr. Hansen has helped pioneer many advanced techniques in healthcare including the clinical trials for the FDA clearance for hard tissue applications for lasers in dentistry. He is currently working on research that will help prevent root canals with laser treatment as well as studying the effects of oral electrical currents from dental metals on brain rhythm patterns. Dr. Hansen is director of research at the Advanced Health Research Institute and has been on faculty at UCLA School of Dentistry.

Dr. Denise Malkowicz, M.D. – Consulting Neurologist – Professor of Neurology at Drexel University School of Medicine and visiting Neuroligist at the Institute for Achievement of Human Potential in Philadelphia. Dr. Malkowicz has many published research papers, has performed research for the National Institutes of Health, and lectures extensively.

Dr. M. Barry Sterman, PhD. – Research Neurophysiologist – Professor emeritus in the departments of Neurobiology and Biobehaviorial Psychiatry UCLA School of Medicine, has performed research for over 40 years and is the leading pioneer in brain research, sleep medicine, and behavioral science, and has published over 100 scientific papers and is a frequent lecturer and speaker.

Dr. David Kaiser, PhD. – Research Neurophysiologist – Professor of neuroscience at the Rochester Institute of Technology in New York, Dr. Kaiser is a researcher, lecturer, and leader in the field of Cognitive Neuroscience and has published numerous scientific papers.

Dr. John Kelley, PhD. – Clinical Psychologist – Has been the head of Biola University Counseling Center for over 20 years and has been a leader in the field of brain pattern analysis and retrainment.. Having worked to improve the learning skills of students for many years, Dr. Kelley has developed many effective protocols for brain function enhancement.

Dr. Jolene Ross, PhD. – Clinical Psychologist – Dr. Ross holds a Ph.D in Psychology from Boston College and has over three decades of experience in education and psychology. She is experienced in Behavior Therapy, Applied Behavior Analysis (ABA), Curriculum Design, Identification of Learning Disabilities, Psychological Testing, Severe Special Needs, Stress Assessment, Stress Management and Behavioral Medicine. She received training in EEG assessment at Children's Hospital Medical Center in Boston and has a background in Behavioral Neurology.

> Please see the "How You Can Help" section to help with this study <u>Your help is urgently needed!!</u>