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HUMAN ENDOGENOUS ELECTROMAGNETIC FIELD FLUCTUATION IN RELATION TO AN ORGANISM'S REACTION TO THE EMF OF BODY CONSTITUANT SUBSTANCES

G. Lednyiczky, O. Zhalko-Tytarenko, S. Topping, T. Buzási

Hippocampus Research Facilities
H-1092 Budapest, Ráday u. 8.#2/12, Hungary
Phone/Fax: +36-1-2145591 or +36-1-2513498
e-mail: hippocampus_kati@yahoo.com
www.hippocampus-brt.com

ABSTRACT

Extremely-low-intensity (ELI) EMFs of body constituent substances (e.g., amino acids, enzymes, co-enzymes, proteins, lipids, minerals, trace elements, micro-organisms, nutrients, etc.) are used to trigger and catalyze adaptational processes by human volunteers. This procedure is called Functional Electrodynamical Testing (FEDT). Adaptation, or any reaction, of a living system can be described as a phase change in the ongoing processes of homeostasis. FEDT is based on the existence of W.-R. Adey's notion of 'biological windows'[1, 2], and on supposition that the mechanism of EM biocommunication is resonance interaction between different subsystems of an organism [3, 4]. It has been demonstrated repeatedly (by ourselves, M.-W. Ho, F.-A. Popp, and others) that bio-chemical processes are controlled by endogenous EM activity [5-20], and indirectly controlled by exogenous EM activity [21-28]. Alterations in the phase of coherent excitation states in the body produce millivolt changes that are detectable on the surface of the skin and can be transformed into medically informative data by using FEDT. We used an ECG-like system with 12 channels that measure the dynamics of active voltage as vectors that are compared to the center point in the range of +/- 3mV with a resolution of 4096 digits. The electrodes (surface is silver on the extremities and nickel on the forehead) are placed on the forehead, wrist, ankles, and the 3rd knuckle of the middle finger. The person is serially exposed to the EMFs of the above mentioned substances (most of which are homeopathically prepared) for 40ms, with a relaxation time of 80ms between substances. The measurement of the changes in voltage starts 1ms after the exposure begins and continues for 80ms with a sampling rate of 1ms or 2ms. In this way, the device measures 480-960 data points per substance. Measurements show that changes of endogenous EMF in the range of 0-500 Hz offer the possibility of a substance specific monitoring of ongoing regulative processes, so that also complex adaptation processes can be tested. Due to the fact that extremely-low-intensity (ELI) EMF signals are used, even the short exposure can be utilized by the organism as a kind of treatment itself: in case of occurrence of matching, e.g. "biological resonance" between the substance specific signal and a metastable domain of the organism, the interference can trigger a phase change on a self-selective base ("natural selectivity" of the body) depending on the physiological status. General and specific representations of adaptational activities were elaborated to facilitate physicians work.

INTRODUCTION

A living organism and its functions cannot be reduced to a set of chemical reactions, even if it was possible to account for all of them. Yet, the dominant paradigm thinking suggests just this, that the dynamics of the whole could be understood from the parts. One of the essential points of a new paradigm is that the properties of the parts can be understood only from the dynamics of the whole [29 and references therein].

The Cerebellum Multifunction Medical Instrument (CMMI) (Hippocampus Institute, Hungary) was designed and developed to be able to estimate this dynamic relationship and hence make a diagnosis [2]. A perturbance at the cellular, tissue, organ, or system level will affect the functioning and performance of all other levels in an organism. FEDT with the CMMI is a very effective tool for estimating the condition of the body, as the entire body's conditions are measured through its constituents and hence can be treated as a whole. The CMMI is a unique synthesis of modern thinking and modern technology with ancient wisdom about the body and its relationship to the environment. The body's reactions are measured as a part of its dynamic relationship with the environment and a diagnosis can be made which will ensure a higher degree of complementarity with the environment.

Recent studies (by ourselves and many others [30-34]) have shown the crucial role of continuous information exchange within living matter up to the most subtle levels of biological functioning. This has made it possible, even obligatory from the clinical point of view, to construct a device that will allow a substance-specific monitoring of the ongoing regulative processes of the organism. With such a device, the human body is exposed to the information (stored in the endogenous electromagnetic signals) of homeopathically prepared environmental agents and body-specific constituents and is then free to respond (also by altering its endogenous electromagnetic field pattern) to any piece of this information according to the organism's own choice. This way, the organs functional states in the endogenous information processing are measurable and classifiable. As a result, the vital reserves of the body as a whole are reflected through the vital reserves of the actually tested sub-system. In this way, one can test nearly all aspects of the body (amino acids, enzymes, fatty acids, hormones, minerals, the impact of viruses and vitamins, but also pathological processes like allergy, intoxication, etc.).

Metabolic activity depends on the electric properties of membrane potential and environmental EM conditions [21, 35-40]. Continuous adaptation to changing conditions, hence continuous readjustment of the parameters of the biochemical reactions inside the body, is characteristic for living matter. Any change or adjustment (with a rate exceeding a certain threshold determined by an organism's adaptability) is considered a perturbance of the system, irrespective of whether this change is intended to cause or prevent illness. Illness in general generates this communication breakdown within the organism's functional network. Since living beings are highly integrated open dynamic systems, wholeness in general is maintained by a permanent mass, energy and information exchange. The dynamics of communication are thus vital for organisms. When an organism is treated on a more general level of its functional dynamic hierarchy, it is easier to restore the physiological communication pathways within it and thus activate the endogenous healing processes. Alterations in the biophysical parameters, primarily electrophysical, occur at general levels of the organism's functional hierarchy [4]. Therefore, they are responsible for the very subtle intimate mechanisms of an organism's self-regulation and interlevel communication through resonance (tissue coupling) interactions.

Every level of an organism's hierarchy possesses a characteristic spectrum of endogenous electromagnetic oscillations originating from various processes. Intra- and interlevel resonance should occur to maintain wholeness, more or less providing correlation between these processes. From this point of view a pathology, which may be born at any level, will perturb all oscillations via wave interactions, irrespective of the origin of such waves. The distorted interference pattern of the endogenous waves of a sick organism is a reflection of its improper biochemical processes.

EXAMPLES OF FEDT RESULTS

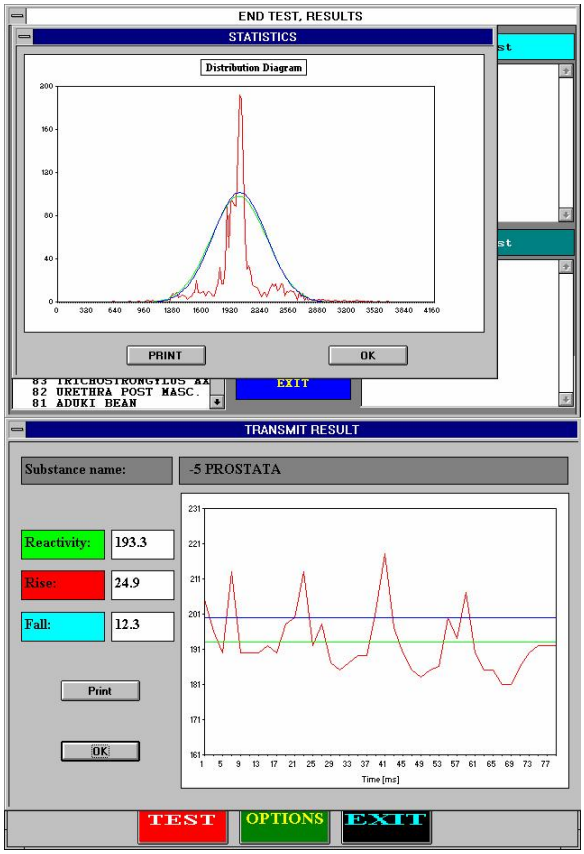
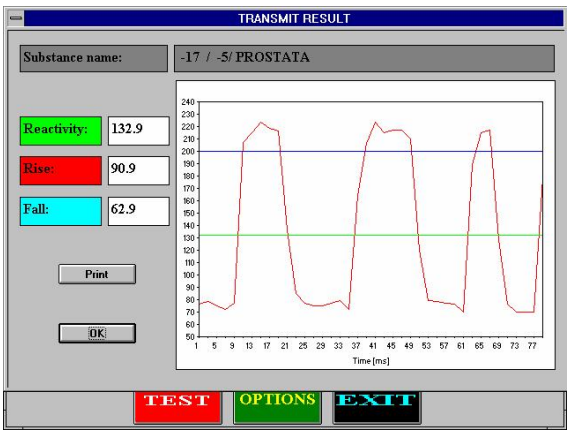


Fig. 1: As a first result after the "Automatic Measurement" whereas a general screening the patient was tested against more than 2000 test-substances the "Distribution Diagram" (number of test-substances plotted against the measured value of the electrophysiological parameter under consideration) summarizes the overall adaptational tendencies. Broad wings represent significant reactions, an over-reactiveness to environmental changes.
To estimate the pathogenic priority of the substances from the wings of the "Distribution Diagram" the so called "Adaptation Test" should be carried out.
The horizontal axis represents the absolute measurement values in digits (the middle of the scale corresponds to 0 mV), the vertical axis represents the number of substances with similar mean values.



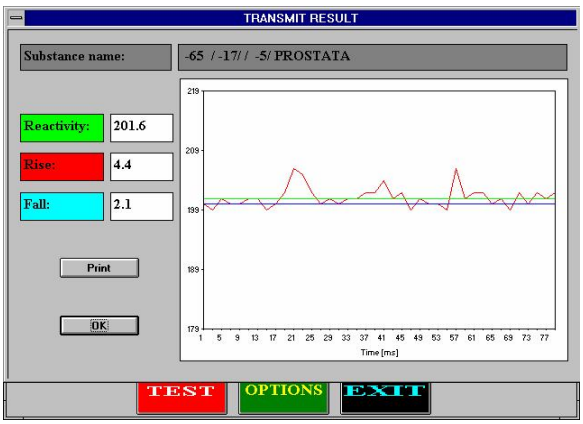
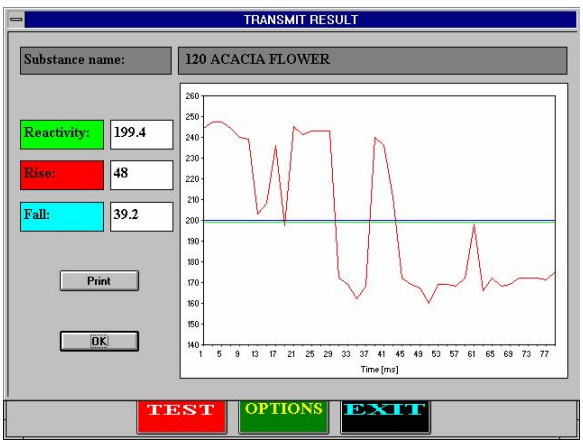
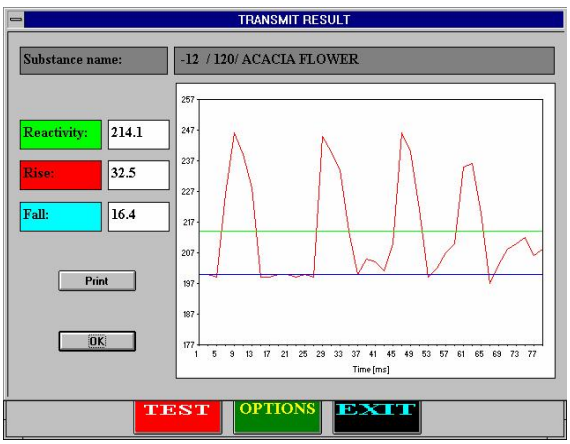


Fig. 2-4: Example for a series of "Adaptation Test" where the tested person first presented significantly high "Rise" and "Fall" values which even increased after 5 seconds adaptation time (contact with the substance specific EMF) (fig. 3.) but normalized after the next 5 seconds continuos contact. Also visible a significant variation of the mean values ("Reactivity") during the 80 ms measurement period.
Horizontal axis represents time in ms, the vertical axis represents the absolute measurement values in digits (in an autofocus mode)





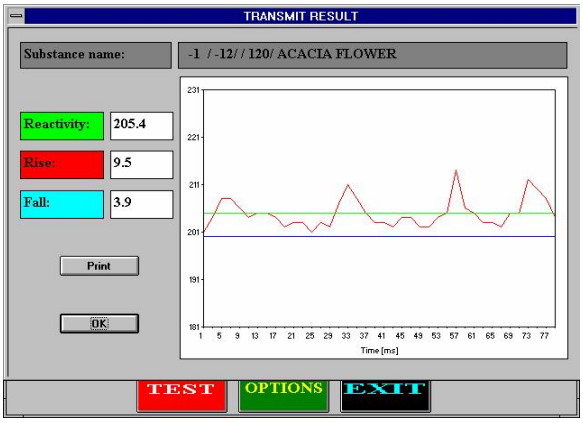
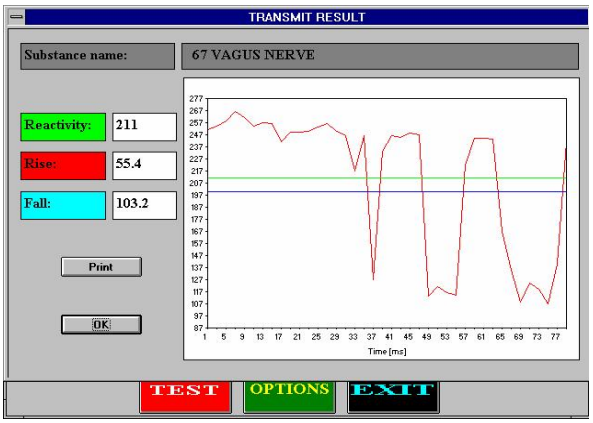


Fig. 5-7: Show high sensitivity of the tested person towards acacia flower but after 3 adaptational periods more or less satisfactory stability was achieved: mean value re-settled around the middle (2000) and "Rise" and "Fall" values diminished significantly as well.



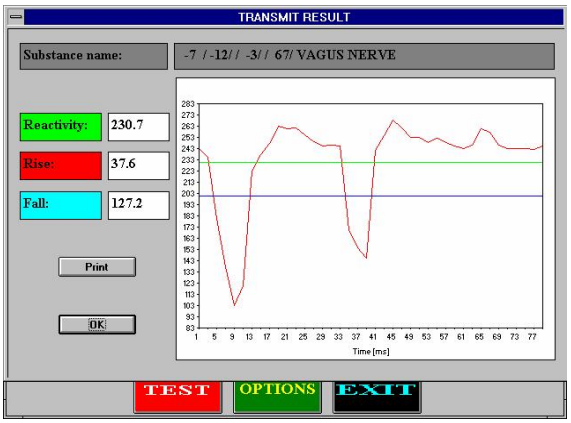
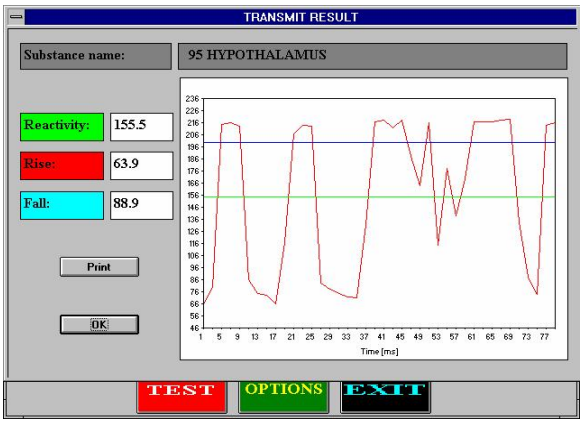
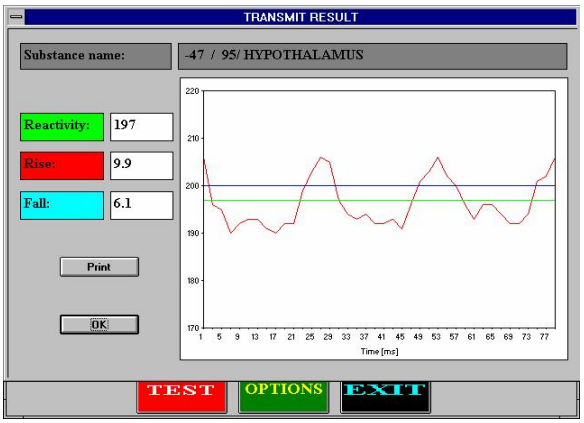
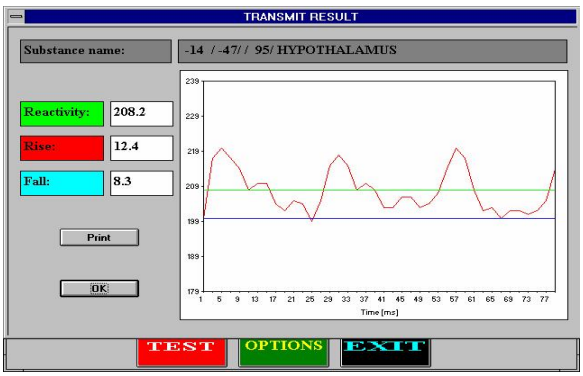


Fig. 8-9: No visible saturation from the test signal, both times extremely high amplitude by the "Rise " and "Fall" values.







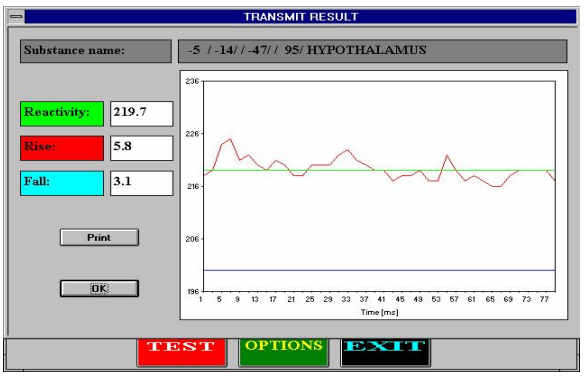


Fig. 10-13: A long, gradual normalization of the reactions.

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