

## Impact of the health complex physical exercise "Anzheletika" on the functional state of the human body

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**Abstract:** As the title implies the article describes the impact of health complex physical exercise «Angeletyka» created by physical rehabilitation specialist A. Bezzubova in sanatorium «Berminvody». Much attention is given to investigation the effect of this practice complex on the health through the rhythms of brain activity and mental system of the person. It should be noted that the testing was conducted by using the modern spectral dynamical method studies of the human body – apparatus-software complex CSD – it allows you to record the spectral characteristics taken from the biological object. Spectral characteristics of the various organ systems, down to the cellular level, without affecting the object under study. The spectral and dynamic characteristics of the field structures of biological systems have the potential for complete information on the morphology and physiology of biological systems.

Conclusions are drawn to the practice of gymnastics «Angeletyka» contributes to a meditative state in which the human body restores itself. In practicing gymnastics harmonized energy system of the body also reduced activity of Coldness energy. Attention is drawn to improves emotional state - increased inner balance and joy, which promotes self-healing and recovery of the body.

**Keywords:** health complex of physical exercise «Angeletyka», the method of complex spectral dynamical diagnostic, rhythms of brain, energy.

### Introduction

According to current scientific understanding, the human body is a complex organized system of multiple and closely interrelated elements, combined in several structural levels. These levels should have been called as the levels of the organization, because they are in subordinate relations. Interrelated and normal life of all components of the human body can exist only under conditions of maintaining the comparative physical and chemical constancy of its internal environment that includes three components: blood, lymph and interstitial fluid that directly surrounds the cells. The need for movement is one of the main characteristics of the every organism. Physical exercises have a tonic and a normalizing effect on the body, improving the neuroendocrine regulation, contributing to the normalization of motor-visceral reflexes [1, 3, 4].

Health-improving gymnastics complex «Anzheletika» was developed and patented by rehabilitologist Angela Bezzubova in Ukraine [10].

The basis of this valeological physical complex is in restoration of the physiological actions of harmonizing breathing and motor activity on the functionality of various organs and tissues. The focus of action is determined by the individual needs of human organization. Muscular work has broad activating influence on all aspects of life of the organism, which is of great physiological importance: maintaining high functional activity of all physiological systems, significantly increased the overall reactivity of the organism and its immune qualities, increasing the adaptive reserves. And, as we know the movement is a necessary factor for normal physical and mental development of a person [4].

The mechanism of health-improving influence of the physical exercise is to restore the health and performance of the body and to normalize all its functions. Exercises activate various functions, are the contribution to the elimination of movement disorders. Right implementation and accurate dosage of physical exercises contributes to the normalization of the vegetative functions of the body, restores motor characteristics, the optimal functioning of all systems of the body during muscular work and leads to the normalization of all body functions as a whole.

The state of our consciousness reflects a mixed rhythms' activity of different brain waves activity and their location. Our brain is constantly in a state of activity emits weak electrical impulses. The rhythms of brain activity waves are formed in several groups, depending on their frequencies: Beta, Alpha, Theta and Delta. Each of these groups is a special type of cortical activity and relates to the different states of consciousness (anxiety, calm, dream or sleep state). Changing brainwave activity in accordance with the situation affects the state of consciousness and therefore our health [5, 12].

Research into the health complex exercise "Anzheletika" on the human body were aimed to define the interaction of exercise and mental activity of the brain and emotional activity and the energy systems of the body.

**Materials and methods**

The studies were conducted before and after school recreational gymnastics using spectral-dynamic complex (SDC). SDC device was developed basing on the well-known concepts of wave structure of the body. From the standpoint of the physical organization of biological systems (from single molecules to the body) every molecule and every structure of all higher levels of the organization is dynamic and generates around itself a field dynamic system with a typical range of vibration frequencies and typical dynamics.

Spectral Dynamic portrait of the system's field reflects the characteristics of the structure of a biological object of its integrity to the "last" hydrogen atom. This pattern reflects the peculiarities of the biosystem, the respective biological objects including the type of operation (normal or abnormal) and the functional activity of the process. This implies that the dynamic-spectral analysis of the biosystem's field in vivo or in vitro can be thin and a highly effective instrument for biological and physiological studies [1, 9, 11].

Spectral-dynamic SDC technology is protected by patents and copyright certificates (Author's certification computer program №25853 Computer's program "Family Doctor", Author's certification data base's markers number №308892, Utility Patent№19808, №30545, Patent for recording way №19807), and also it has a Certificate of state registration №9270/2010". The method of spectral-dynamic studies is performed in the form of computer hardware and software and allows to record the spectral characteristics taken from the biological object, different organs and systems, right down to the cellular level, without affecting the object under study. The spectral and dynamic characteristics of field structures have potential biosystems complete information about the morphology and physiology of biological systems [2].

Testing the mental system and its components - emotional and energetic is considered from the standpoint of the Yin-Yang theory, and U-Shin philosophical concept of oriental medicine (interaction of Five Elements). According to the law of the Five Elements of Chinese nature philosophy processes and phenomena of the world are related to five categories: Wood, Fire, Earth, Metal and Water which exist in the world.

Interactions and interferences of patterns of the Primary elements are assigned to certain forces (energy), which determine the properties of objects and phenomena in the framework of these five categories. To designate them the names Wind, Heat, Humidity, Dryness and Cold are used. These energies are contained in any object and determine the course of any process in nature, which must pass all these stages consecutively: Wind, Heat, Humidity, Dryness and Cold. Harmony of community and the interaction of these energies is the basis of life [6, 7]. In accordance with the ideas of Oriental Medicine Wind energy provides any movement, including the movement of internal organs (heart, diaphragm, stomach, etc.). Heat supports the required level of metabolic activity and defines a living organism. Humidity creates an optimal living environment (70% of body weight - moisture), and Dryness is responsible for the structures, saving the shape of the body. Heat and Cold govern all life manifestations, influencing them from the opposite direction [7, 8]. To analyze the effects of the exercises, that are included in the recreational complex "Anzheletika", following parameters were selected from the SDC database: Brain rhythms (alpha-, beta-, tetra- and delta rhythms) which characterize mental brain function. Energy: Cold, Humidity, Wind, Dryness, Heat (they characterize energy part of psychicsystem). Statistical analysis of the results was performed using X<sup>2</sup> test and the measure of strength and direction of the distributionchangingand the significance of Somers' Dmeasure D - p (D).

**Results**

With the SDC were recorded brain activity rhythms and energies of the body from the ones who practice gymnastics "Anzheletika". Measurements were taken before and after gymnastics.

Analyzing the data, we saw that gymnastics had almost no impact on the activity of the alpha and beta rhythms in practicing gymnastics "Anzheletika". However, the number of participants, who observed the activity of the delta, and especially theta rhythms, wasincreased. This fact indicates that when the brain gymnastics adjusted to your ideal range, that provides it the best meditative state - internal activity with relaxation and contemplation (Figure 1). The increasing of delta activity rhythms usually associates with a state of sleep or deep trance state, but in this state, the body self-healing and self-healing processes have the most activeness.

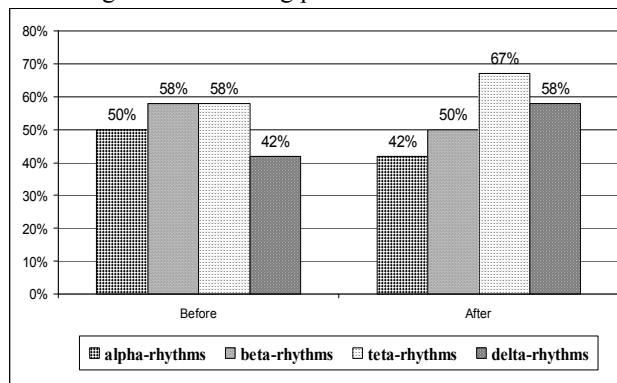


Fig. 1. Distribution of the brain rhythms activity of people who practice gymnastics "Anzheletika". Note: hereinafter \* - significant values are marked (p (D) ≤ 0,05)

Analysis of changes in energy activity results showed that after gymnastics can be observed decrease in the number of participants from Wind energy activity. Wind Energy - a moving element. Physiologically this energy is related to the liver and gallbladder. Emotionally wind power is associated with anger, so decreasing in the activity of this energy is important from the point of view of the harmonization of the physiological and psychological human system (Figure 2).

After gymnastics was increased the number of participants in the experiment, who stepped up the energy of Dryness. This fact testifies to the activation of the respiratory system. This ensures harmonious interplay of the systems the human body and the environment.

Also has been noticed a significant increase in the number of participants with the activation of heat energy (58%). This energy is connected with the organs of the body - the heart, small intestine, emotionally connected with the feeling of joy. Increasing the activity of heat energy contributes to the manifestation of positive emotions (joy, happiness, confidence, etc.).

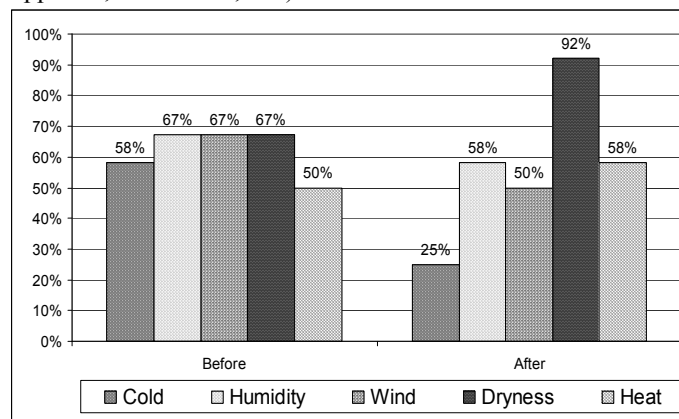


Fig. 2. Distribution of the brain rhythms activity of people who practice gymnastics "Anzheletika" The positive fact should be noted that 75% of participants in gymnastics after the gymnastics have a lack of Cold energy activity that affects all body systems, causing them to compress. There is also a decrease in the activity of Humidity energy, that ensures the correction of all other systems.

### Conclusions

Based on the results of studies of the effect of gymnastics "Anzheletika" on the human body, that were obtained by means of hardware and software SDC, we can conclude that the practice of gymnastics "Anzheletika" contributes to a meditative state in that human body restores itself.

The studied gymnastics promotes redistribution of the body's energies: reducing the activity of Cold energy and increasing Heat energy activity, correlated with the emotional state of joy.

Gymnastics "Anzheletika" causes the body's adaptation to the increasing stress by improving the regulatory functions and autonomic systems and the musculoskeletal system, so it leads to a normalization of all body functions as a whole.

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