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THE INTELLECTUAL ANALYSIS OF THE STATE OF COGNITIVE AND PHYSICAL DEVELOPMENT OF CHILDREN ON MODERN BIOTECHNOLOGICAL EQUIPMENT

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Annotation: This article addresses the issues of monitoring the cognitive state of children with the help of modern biotechnological devices. With the help of these devices it is possible to analyze the kinematic parameters of the movement of children, the analysis of the health of organs charm in children based on the implementation of specific exercises by children. This allows us to assess the development of conditioned and unconditioned reflexive states of children.

Key Words: Nirvana, patients, impulse, sensor, monitoring

Introduction

After the birth of children, all intuition members are born with unconditional reflexes and increase the functional abilities of these organs throughout the child's lifetime. But when does this functional abundance increase? How will hearing, sight, smell, taste, and sensitivity change your children's age? How much degree will these members function influence on their motion system? All of these are an integral system of the body and the development of the cerebral cortex and the automatic development of the cerebral cortex, these five sensory organs and the motion system develop together in one.

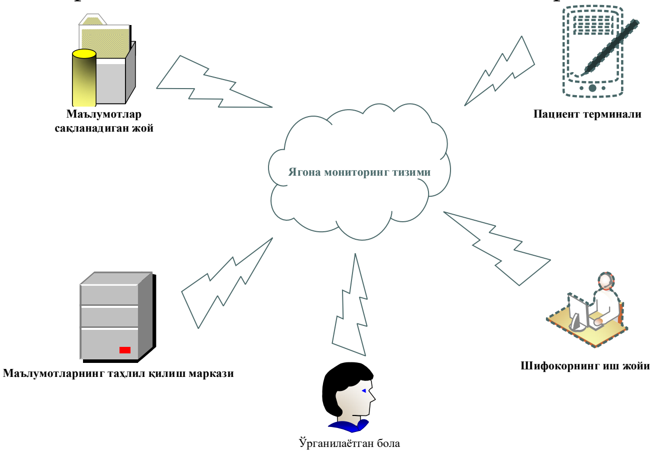
Nowadays It is being clarified how well these functions are medium and how well they are interconnected. The cortex of cerebral develops for some time after birth, and then we try to "compel" our brain. If we do not try to "force" our brains during this time, the brain will continue to develop. Anyone who has been born with a headache or develops some systematic function later on with the brain disorder may weaken any system function. All of these can certainly be achieved by certain stimulation, because the brain is an autonomous organ. When we give stimulus to "brainstorming" brain, the brain reacts to the response that we want or does not want. Although the brain is an autonomous organ, it only impulses the neural cell. These impulses pass through the nervous pathways. These impulses are transmitted in two ways.

These experiences have been repeatedly studied, but these experiments did not give us the expected results, that is, volunteering without the necessary system of action. It is possible to do an action, but this is an analysis that is not synthesized in the human brain. If we can connect this movement with five sensory organs, we will achieve the necessary effort. In addition, today the brain microchips have been created with, which, like pacemakers, impulses itself, which implements only the movement of the impulse by passing the spine-specific impulses unilaterally. Because in many patients with severe acute cerebral hemorrhage, peripheral and central paralysis and paresis arise from the microscopic system, but we can not restart intuition. In neurons, continuous analysis-synthesized impulses are formed and transmitted through the nerve pathways. The brain automatically controls a whole system, and we just add it to it.

The main part

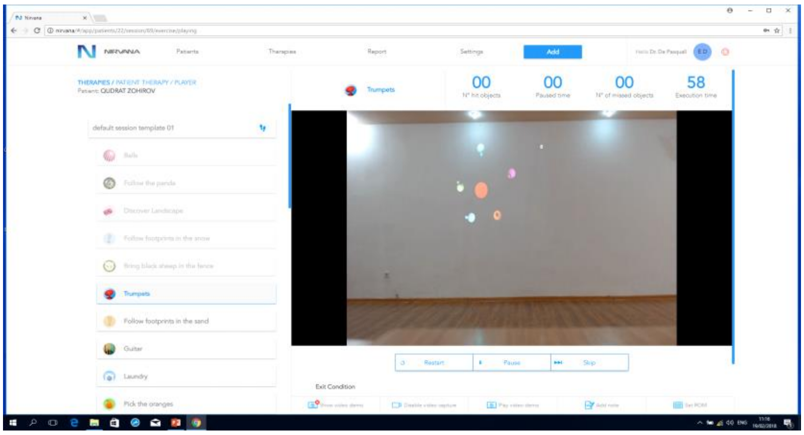
As you can see, the impulses are created only in one place and reach other places. If there is a hot object or a sharp object in our body, then the impulse also goes to the central part of the brain. But we can not say that this is an analysis-synthesized impulse. We call it a stimulus impulse. Present microchips or pacemakers are the same stimulus impulses. Here are some of the stimulus impulses that have passed the arm or leg amputation and later set up orthopedic devices to mechanically activate these devices through stimulating impulses. But these actions only need to be fulfilled, that is, to fulfill our everyday needs, or to automatically generate pulse marks or create impulses through any user button. We must get analysis-synthesized impulses. It has a great deal of benefit in patients with hemorrhagic stroke and its complications. Let's say, the neuron cell is a large factory producing machine. Let's say that the machines are impulses, and the big trail running on the car is nerve fibers. If there are no workers, the cars will not come out and on the highway there will be no parking. This means that in patients with parenchymatous hemorrhagic stroke, the neural cell dies and the impulse does not occur. Nowadays, these microchips are the only way to create a perpendicular path to the highway. These impulses are only temporal and stimulating impulses. That's why we need to create a new analysis-synthesized impulse plant, a new neural cell. To do so, we must try to use all the sensory organs and systems of action for the development of the embryonic development and subsequent growth of children in the mother's abdomen. As we have already mentioned, the stimulus impulse goes to neuron, but from there it can not be analyzed and synthesized. So we have to try to use a whole site together or create a new neural cell.

In view of this, "Biotechnical Analytical Instruments" have been developed to date to determine whether their sensory organs and movement systems are working in harmony with their age. These devices, manufactured by Nirvana, operate on the basis of distant and known patients (Figure 1).



Picture 1. Basic components of the remote monitoring system

Here, it can be seen that the vision, hearing, and motion system depend on one another in relation to monitoring. This new diagnostic device is loaded on the ground and put on the baby at the time of the discharge. In front of a kid, balls of different colors are formed. When the child grabs this spiral, the spherical "splitting" becomes a stimulus for the child to have a reflex of reflection, which is why the neurons in the center of the higher nervous system increase the function of the kidneys because the child is undesirable in the head. As a result of many impulses from these neurons, endorphins and encephalins are separated from the brain brain neurons, and the baby is able to hear it again. This apparatus is responsible for exercise in the supply based on the age of the child (Figure 2).



Picture 2. Nirvana software monitoring interface

At the same time, the child's exercise status is monitored by the camera. At the same time, the impulse exchange occurs in the communicative nerve fibers associated with the central nervous center of the hearing nervous center and associative neural fibers linking the central nervous centers of the two hemispheres.

The child's condition is assessed by multi-parameter bioinformation signals. In the analysis, the signaling model participates in the process and object. Because the signal values are variable, the experimental mathematical model and differential values are calculated by interpolation and approximation methods. The experimental transients are differentiated through the Taken's theorem. The optional signal reception source is brought to the standard form for all system modules, all its coefficients are passed to the f (t) - linear function.

In device bio signals are based on the sensors location. For example, an extended view of two bio signals entries x1 (t) and x2 (t)

$$X(t)=\left[x_1(t),\ldots,x_1(t+(n_1-1)\tau,x_2(t),\ldots,x_2(t+(n_2-1)\tau\right]$$

will be. Because we are learning dynamic processes, the vector can be as follows:

$$\begin{bmatrix} y_1 \\ \vdots \\ y_{n_1-1} \\ y_{n_1} \\ \vdots \\ y_{n_1+n_2-2} \end{bmatrix} = \begin{bmatrix} x_1(t) \\ \vdots \\ \frac{d^{n_1-1}}{dt^{n_1-1}} x_1(t) \\ x_2(t) \\ \vdots \\ \frac{d^{n_2-1}}{dt^{n_2-1}} x_2(t) \end{bmatrix},$$

$$y_{n_1} = f_1(Y); \quad y_n = f_2(Y),$$

it is $n_1 + n_2 = n$.

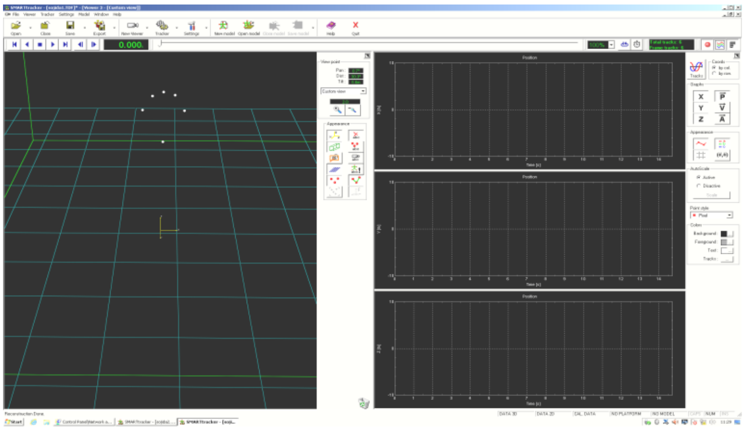
Linear functions for optional polynomial approximation f1(Y) and f2(Y) ν the polynomial is achieved:

$$f_j(Y) = \sum_{l_1,l_2,\ldots,l_n=0}^{\nu} c_{j,l_1,l_2,\ldots,l_n} \prod_{k=1}^{n} y_k^{l_k}, \qquad \sum_{k=1}^{n} l_k \le \nu,$$

Here is $c_{j,l_1,l_2,\ldots,l_n}$ - an unknown coefficient.

Age-related games are being designed for hearing seeing development of neurons in the upper nerve center of these sensory organs. One of these games is a "laptop monitor", in which the age of the child is detected and the function of central neurons is determined and improved. The child is placed on the monitor and, after putting the baby first, determines the activity of the child, and as a result determines the behavior of the child at this age, and if it is a pathological condition in the act, it is removed from the monitor. If the child is in a normal stage of development, the colored ball that forms in front of it and the neurons in the center of vision are triggered by the enkafaline and endorphins, and the acceleration of the impulse is accelerated. As a result, the child has a different colored balloon, and the baby's eyelid looks at that globe and the impulses formed in the brain's brain and hearing center transmit from the communicative fibers to the upper nerve center neuroscience. The impulse generated at the center of the upper nerve center is transmitted to the center of the spinal cord along the proximal nerve fibers. From here, the nerves are transmitted to the working system through impulse eferent fibers based on the unilateral propagation of the impulse, and the child's muscles move and move towards the sphere. The transition from these centers to one of the pulses is temporal. This monitor has not only children playing but also games that enhance the mental performance of children.

The child should be assigned a sensor device prior to the exercise. Through them, a child's 3D model is created and tracked by the trajectory of the movement (Figure 3).



Picture 3. The look of a child's 3D model

The sensory system is very important to ensure the integrity of the organism. The sensory system's unique feature is that it separates the different effects simultaneously or sequentially. Separation of the signal begins with the receptors and all neurons of the sensor system are involved in this process. In order to have a significant impact on the impact, it must be as large as the previous one. The process of transmitting and transmitting signals in the sensor system involves such important information as at the top of the brain where there is a quick and accurate analysis of information. The signal change is conditionally divided into two types: space and time. Changes in the different parts of the signals are important in space transformation. In the bone marrow section of the vision and somatosensory system, the ratio of signals is greater. For example, the central cavity, which holds only a small part of the screen, has a greater impact on the cerebrum area of the cerebral porous than the edges of the net. Changing the information over time is to convert the tonic impulse in a suitable rhythm of the receptor to a phased, invented impulse. Limiting and overriding excess information is another type of information change.

There is no need to transmit long-lasting impulses from the large receptive site to the sensor center. Tactical receptors, for example, are strongly entangled in the wear and tear, and report the start and end of the response. Reducing the amount of information transmitted to this type of media also occurs on other sensor systems. Analyzing second-level information from the sensor's peripheral and transmitting ports does not allow the center to overflow. Receptors should turn the brain into perfectly "clear" neuromuscular impulse, so that different sensory effects can be attributed to the sensory center of the sensor system. We should call this information coding as it must be transformed into conditional form based on certain rules.

We need to know if the effects are encoded or not. This task is carried out in my person by the "On" and "Off" neurons in the bottom of the analyzer. For example, if the light analyzer detects "On - neurons", the "Off - Neurons" will lose the light. The selection and coding of external influences, first of all, ensure the specificity of the receptors to be specific in their perception. For example, the light-sensitive analyzer is unresponsive to the sound. Modern communication systems are code-protected before they are transmitted, and are decoded after they're signed in. For example, the microphone on the phone is encoded and converted into an electric shock, at the other end of the string, the impulse is decoded and converted into a speech wave. When the decoding of the sensor systems reaches the center of the pulse receptor in the form of the impulse, it does not turn into a sound again. In these systems, detecting occurs, that is, some signs of an experimental patient are analyzed and their bioavailability is evaluated.

In this analysis, the neurons are specialized detector neurons. The sensor system can change its needs depending on the needs of the organism and the external environment. This sensor is a common feature of the system and is adaptable to long-term effects. Accordingly, rapid adaptation of the receptors does not send information about the subject to the brain after adjustment, and the slowly adapting receptors are transmitted in a weakened state. The sensory system's absolute sensitivity will be restored once the effects of the same intensity have been exhausted.

Therefore, the sounds and colors present at the same time in this device must be in different intensity and frequency. If the visible spheres are of the same color, then the motion analyzers transmit the same color to the neurons of the highest order, and then there will be adaptation when the analysis is synthesized. At the same time, the child may be less interested in seeing that color appear again. Also, the sphere of the sphere should not be too bright, as it was said that if one effect is stronger than the second one, the center will block another central task. In other words, the brighter the color of the sphere, the impulses generated by the vision neurons can imprint the impulse in the center of the hearing. Sound frequency, amplitude and intensity should be at different levels. If a baby has the same frequency and amplitude as the sound of the spine, the center of hearing may be adapted to the sound and may even cause the child to feel confused. But the intensity of the sound should not be too high, as the impulse in the center can block the neurons' impulse in the center of the eye, which can cause a child to feel a blocked reflex blockage.

Summary

The use of such biotechnological devices in monitoring the cognitive state of children allows the study and control of the phased development of children. This, in turn, can give a new direction in the diagnosis and rehabilitation of children with lesions of the constitutive states of children.

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ФОРМИРОВАНИЕ И СВОЙСТВА ЭЛАСТИЧНЫХ ЭЛЕКТРОДОВ НА ОСНОВЕ ПОРИСТЫХ МЕТАЛЛИЧЕСКИХ МЕМБРАН ДЛЯ ЭЛЕКТРОПОРАЦИИ

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Ключевые слова: пористые металлические мембраны, пористый кремний, гибкие электроды, электропорация.

Key words: porous metallic membranes, porous silicon, flexible electrodes, electroporation.

Аннотация Методом химического контактно-обменного осаждения меди и серебра на пористый кремний сформированы пористые металлические мембраны, которые характеризуются модулем Юнга, уменьшенным по сравнению с модулем Юнга поликристаллических металлов на 3 – 5 порядков, и удельным сопротивлением для меди - $2{,}65\cdot10^{-8}$ Ом·м, серебра - $2{,}41\cdot10^{-8}$ Ом·м. Разработанный метод формирования металлических мембран позволяет изготавливать эластичные электроды для электропорации, которые обеспечивают повышение площади поверхности обрабатываемой живой ткани минимум в 1,3 раза по сравнению с жесткими электродами из алюминия.

Abstract Porous metallic membranes were fabricated by chemical immersion deposition of copper and silver on porous silicon. The membranes are characterized by Young module that is 3 – 5 orders of magnitude less than that of bulk polycrystalline metals, specific resistivity for copper – $2{,}65\cdot10^{-8}$ Ω·m, silver –